

**THE LIVELIHOOD IMPACTS OF
COMMERCIALIZATION IN EMERGING SMALL-
SCALE IRRIGATION SCHEMES IN THE
OLIFANTS CATCHMENT AREA OF SOUTH
AFRICA**

BARBARA NOMPUMELELO TAPELA



A thesis submitted in partial fulfilment of the requirements for the degree of Doctor Philosophiae in the Institute for Poverty Land and Agrarian Studies (PLAAS), School of Government, University of the Western Cape.

Supervisor: Professor Benjamin Cousins

August 2012

THE LIVELIHOOD IMPACTS OF COMMERCIALIZATION IN EMERGING SMALL-SCALE IRRIGATION SCHEMES IN THE OLIFANTS CATCHMENT AREA OF SOUTH AFRICA

BARBARA NOMPUMELELO TAPELA

KEY WORDS

Livelihoods

Agricultural commercialization

Smallholder irrigation schemes

Contract farming

Strategic partnerships

Joint ventures

Sustainability

Revitalization

Poverty

Rural development



ABSTRACT

This thesis examines livelihoods in the wake of agricultural commercialization under the Revitalization of Smallholder Irrigation Schemes (RESIS) Programme and similar revitalization initiatives within the Olifants River Basin in Limpopo Province. The focus is on contractual joint ventures and strategic partnerships implemented within selected smallholder irrigation schemes. The thesis is based primarily on in-depth empirical studies conducted between October 2003 and March 2009 in three sites located in two Integrated Sustainable Rural Development Programme (ISRDP) poverty nodes namely, Greater Sekhukhune and Vhembe Districts. To a lesser extent, the thesis draws on findings from rapid appraisals of five additional study sites in Greater Sekhukhune District.

Research findings showed that the performance of joint ventures and strategic partnerships had so far largely fallen short of expectations. With the exception of a minority of smallholders involved in RESIS-Recharge strategic partnerships, the promise of higher incomes and improved livelihoods had often remained elusive, while debts and potential losses of often meagre household assets loomed large, threatening to erode existing livelihoods and undermine government interventions. This was mainly because 'viability' in both the RESIS and RESIS-Recharge phases was narrowly seen in economic and technical terms, such that reduction of transaction costs often entailed the divesting of responsibilities to address issues of rural poverty and inequality. Subsistence production had largely given way to commercially-orientated farming, and weak monitoring of contract formulation and implementation meant that voices of marginalized poor and vulnerable people, particularly women and the elderly, were not being heard.

Research findings further revealed that while RESIS-Recharge strategic partnerships increased incomes for a minority of smallholders, such arrangements did not meaningfully improve the productive, managerial and marketing skills of smallholders to ensure their effective participation in agriculture. Rather, strategic partnerships were creating a small class of black 'arm-chair' farmers, who played little or no active role and obtained few or no skills in commercial farming but perpetually depended upon and drew incomes from agri-business initiatives run by externally-based agents. Adjunct to questions of sustainability for these farmers' ability to participate in commercial farming, the thesis raises the question: What is the rationale for joint ventures and strategic partnerships in the context of South Africa's Agricultural Sector Strategy objectives for support to black farmers?

Contracts lacked mechanisms for equitable distribution of costs and benefits between contracted private partners and targeted smallholders, on the one hand, and the rest of members of local communities, on the other hand. Contracts also lacked provisions for post-project recapitalization of infrastructure and rehabilitation of degraded land. This raised questions about the longer term sustainability of productivity, natural resource base and livelihood security in smallholder irrigation schemes. The conclusion of this thesis is that the challenge of reducing rural poverty and inequality in smallholder irrigation schemes might not be resolved through existing institutional approaches to agricultural commercialization.

November 2011

DECLARATION

I declare that *Livelihoods and Agricultural Commercialization in Smallholder Irrigation Schemes in Limpopo Province, South Africa* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Barbara Nompumelelo Tapela

May 2011

Signed:.....



ACKNOWLEDGEMENTS

Research towards this thesis was made possible through funding from several sources. Firstly, the Institute for Poverty Land and Agrarian Studies (PLAAS) at the University of the Western Cape and the Centre for International Environmental and Development Studies (NORAGRIC) at the Norwegian University of Life Sciences collaboratively provided the major source of funding, under auspices of the 'Human Rights in South Africa's Land Reform' Project of the Norwegian Centre for Human Rights (NCHR). Secondly, a doctoral fellowship award by the International Water Management Institute (IWMI) covered a significant portion of the research costs on RESIS case studies and, in particular, enabled the expansion of primary research into Makuleke rural community. PLAAS and IWMI collaboratively availed additional funding for research on RESIS-Recharge Strategic Partnerships under auspices of a CGIAR Challenge Programme project entitled 'Water Rights in Informal Economies' (CP66). Towards enhancing on-going research in Makuleke, the Transboundary Protected Areas Research Initiative (TPARI) provided a small grant to explore and develop, through community engagement, guidelines for best practice in social research in rural communities neighbouring the Kruger National Park.

I am particularly indebted to Professor Ben Cousins for his guidance throughout the research. My thanks also go to colleagues at PLAAS for their generous support. Various other institutional actors gave generous assistance during the research. These include persons affiliated to NORAGRIC, IWMI, the Water Research Commission (WRC), Greater Sekhukhune District Council, Ephraim Mogale Local Municipality (formerly Greater Marble Hall LM), Elias Motswaledi Local Municipality (formerly Greater Groblersdal Local Municipality), Thulamela Local Municipality, Limpopo Provincial Department of Agriculture (LDA), Mpumalanga Provincial Department of Agriculture and Land Administration (DALA), Department of Water Affairs and Forestry (DWAF), Department of Land Affairs (DLA) office in Witbank, Limpopo Provincial Department of Local Government and Housing, Independent Development Trust (IDT), Africare, Sekhukhune Farmers Development Trust (SFDT), Hereford Farmers Association, Hereford Irrigation Board, Upper Arabie Balemi Irrigation Scheme Trust, Phetwane Farmers Association, Noordelike Sentrale Katoen (NSK), Makuleke Farmers Association, Arthur Creighton, Temong cc, Ndzalo Consulting, WOMIWU

Consultants, Tobacco Institute of South Africa (TISA), Tobacco RSA and Limpopo Tobacco Processors (ex-MKTV). Special thanks go to Mrs Pearl Moruasui (formerly) of Africare, Dr Barbara van Koppen of IWMI, Marna de Lange (formerly) of Ndzalo, Dr Massoud Shaker and Mr Rex Mtileni (both formerly) of LDA, Mr Tshikolomo of LDA and Mr Jan Venter of DALA. I am also grateful to Elma Molobela, Michael Marotla, Emmanuel Masemola, Metla Mabye, Elmon Chauke, Attorney Hlongwane and Edward Maluleke for their assistance with the fieldwork.

To my husband Nigel and son Mbongeni, I thank you for holding the fort and for your unwavering support throughout the research and writing up of this thesis. Last but not least, I acknowledge the foundational struggles by my parents, Florence Phathekile (nee Ntasi) and Maccabees Bailey Poyah; and my late grandparents namely, Diana Judith (nee Tshabangu) and James Poyah Jele, and Ellen (nee Ngwenya) and Jonathan Molopo Ntasi. I also humbly dedicate this work to the many women in my extended families and elsewhere in Southern Africa, who were never able to fully realise their aspirations throughout their own lifetimes owing to the multiple constraints they faced as black women living in difficult moments of our history. Without the collective sacrifices of all the above and His support in holding the whole framework of our existence together, this work would not have been possible.

ACRONYMS AND ABBREVIATIONS

AgriBEE	Broad Based Black Economic Empowerment Framework for Agriculture
ANC	African National Congress
ARC	Agricultural Research Council
BAT	British American Tobacco
BEE	Black Economic Empowerment
BBBEE	Broad Based Black Economic Empowerment
CAP	Common Agricultural Policy (of the European Union)
CASP	Comprehensive Agricultural Support Programme
CBDM	Cross Border District Municipality
CBOs	Community Based Organizations
CBPWP	Community Based Public Works Programme
CCAWs	Coordination Committees for Agricultural Water
CLRA	Communal Land Rights Act
CLRB	Communal Land Rights Bill
CMAs	Catchment Management Agencies
DALA	Department of Agriculture and Land Administration (Provincial)
DBSA	Development Bank of Southern Africa
DLA	Department of Land Affairs
DPLG	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
ESKOM	Electricity Supply Commission
GEAR	Growth Employment and Redistribution Strategy
HDIs	Human Development Indices
HFA	Hereford Farmers Association
HVGA	Hereford Vegetable Growers Association
IDP	Integrated Development Plan
IDT	Independent Development Trust
IDTT	Inter-Departmental Task Teams
IGR	Inter-Governmental Relations
IMT	Irrigation Management Transfer
IPCC	Inter-Provincial Coordination Committees
ISRDP	Integrated Sustainable Rural Development Programme
ISRDS	Integrated Sustainable Rural Development Strategy
IWRM	Integrated Water Resources Management
JVs	Joint Ventures
LED	Local Economic Development
LDCs	Less Developed Countries
LRAD	Land Redistribution for Agricultural Development
MKTV	Magaliesberg Kooperatiewe Tabak Vereeniging
MTEF	Medium Term Expenditure Framework
MWID	Major Water Infrastructure Development
NAFU	National African Farmers Union
NDA	National Department of Agriculture
NDPW	National Department of Public Works
NEPAD	New Partnership for Africa's Development

NGOs	Non-Governmental Organizations
PDoA	Provincial Department of Agriculture
PDW	Provincial Department of Public Works
RDP	Reconstruction and Development Programme
REAP	Rural Enterprise and Agribusiness Programme
RESIS	Revitalization of Smallholder Irrigation Schemes
SAGL	South Africa Gold Leaf
SFDT	Sekhukhune Farmers Development Trust
StatSA	Statistics South Africa
TFA	Tafelkop Farmers Association
TISA	Tobacco Institute of South Africa
UNDP	United Nations Development Programme
UP	University of Pretoria
WAR	Water Allocation Reform
WRC	Water Research Commission
WSDP	Water Services Development Plan
WUAs	Water User Associations



TABLE OF CONTENTS

KEY WORDS.....	2
ABSTRACT.....	3
DECLARATION	4
ACKNOWLEDGEMENTS.....	5
ACRONYMS AND ABBREVIATIONS.....	7
TABLE OF CONTENTS.....	9
LIST OF FIGURES.....	18
LIST OF TABLES.....	20
CHAPTER ONE	22
INTRODUCTION	22
1.1 BACKGROUND.....	22
1.2 RESEARCH PROBLEM	27
1.3 RESEARCH AIMS AND OBJECTIVES	28
1.4 CONCEPTUAL FRAMEWORK	29
1.4.1 SUSTAINABLE LIVELIHOODS CONCEPT	29
1.4.2 SUSTAINABLE LIVELIHOODS APPROACHES.....	30
1.4.3 SUSTAINABLE LIVELIHOODS FRAMEWORK	34
1.4.3.1 Contexts, Conditions and Trends.....	35
1.4.3.2 Livelihood Assets	35
1.4.3.3 Institutions.....	37
1.4.3.4 Institutional Arrangements	38
1.4.3.5 Livelihood Strategies	39
1.4.3.7 Vulnerability to Shocks and Trends	39
1.4.3.8 Livelihood System	42
1.4.3.9 Conclusion	42
1.4.4 POVERTY, POWER, AGENCY AND RIGHTS	43
1.4.5 CAPABILITY APPROACH.....	44
1.4.6 ENTITLEMENTS ANALYSIS	48
1.4.7 INTEGRATED FRAMEWORK FOR GOVERNABILITY.....	49
1.5 METHODOLOGY	52
1.5.1 INTRODUCTION.....	52
1.5.2 RESEARCH FRAMEWORK	53
1.5.3 DATA COLLECTION	56
1.5.4 ANALYTICAL METHODS.....	58
1.5.4.1 Stakeholder Analysis and Participation	58
1.5.4.2 Gender Analysis	60
1.5.5 CHALLENGES ENCOUNTERED DURING RESEARCH	61
1.5.5.1 Issue of Relevance	61
1.5.5.2 Issue of Bureaucracy.....	62
1.5.5.3 Ethical Issues.....	63
1.5.6 METHODOLOGICAL CHALLENGES.....	65
1.5.6.1 Livelihood Outcomes	66
1.5.6.2 Community	66
1.5.6.3 Livelihood Sustainability	66
1.5.6.4 Livelihood Impacts.....	67

1.6	THESIS STRUCTURE	70
CHAPTER TWO	.....	73
	INTEGRATING SMALL-SCALE FARMERS INTO MAINSTREAM COMMERCIAL AGRICULTURE:	
	THE CONTEXT.....	73
2.1	INTRODUCTION.....	73
2.2	DEFINITION OF CONCEPTS.....	73
2.2.1	CONTRACT FARMING.....	73
2.2.2	CONTRACT FARMING MODELS.....	74
2.2.3	THE CONCEPT OF 'SMALLHOLDER'	76
2.3	RESURGENCE OF CONTRACT FARMING: GLOBAL AND REGIONAL BACKGROUND.....	78
2.3.1	HISTORICAL DEVELOPMENT OF CONTRACT FARMING AND EMERGENCE OF NEW AGRI-FOOD SYSTEMS: GLOBAL OVERVIEW	79
2.3.2	THE RESURGENCE OF CONTRACT FARMING IN SOUTHERN AFRICA: REGIONAL OVERVIEW.....	81
2.3.3	SMALL-SCALE FARMERS' INTEGRATION INTO GLOBALIZED AGRI- FOOD SYSTEMS: INTERNATIONAL DEBATES.....	84
2.4	SOUTH AFRICAN INSTITUTIONAL CONTEXT: OVERVIEW	88
2.5	INTEGRATED SUSTAINABLE RURAL DEVELOPMENT PROGRAMME	92
2.5.1	INTRODUCTION.....	92
2.5.2	ISRDP VISION AND ARTICULATION	92
2.5.3	ISRDP OBJECTIVES.....	93
2.5.4	IMPLEMENTATION OF THE ISRDP: OVERVIEW.....	93
2.5.5	HISTORICAL ORIGINS OF THE ISRDP: POST-1994 RECONSTRUCTION	96
2.5.6	CONCEPTUAL FOUNDATIONS OF THE ISRDP.....	97
2.5.6.1	World Bank Approach: Economic Liberalization	98
2.5.6.2	Van Zyl's Vision for Agriculture and Management of the Transition: Liberalization	101
2.6	OVERVIEW OF SOUTH AFRICAN DEBATES ON ENHANCING RURAL DEVELOPMENT	104
2.6.4	WATER SECTOR PERSPECTIVES ON PROSPECTS FOR SMALLHOLDER IRRIGATION FARMERS	112
2.6.5	CONCLUSION	115
2.7	ISRDP IN THE CONTEXT OF SMALLHOLDER FARMER SUPPORT IN GREATER SEKHUKHUNE DISTRICT	115
2.7.1	HISTORICAL BACKGROUND	116
2.7.2	GEOGRAPHICAL SETTING.....	117
2.7.3	ISRDP IMPLEMENTATION IN GREATER SEKHUKHUNE: CHALLENGES	121
2.7.3.1	Overview.....	121
2.7.3.2	Challenges of Smallholder Irrigation Farmer Support.....	123
CHAPTER THREE	.....	126
	REVITALIZATION OF SMALLHOLDER IRRIGATION SCHEMES PROGRAMME (RESIS):	
	LIMPOPO PROVINCE	126
3.1	INTRODUCTION.....	126

3.2	PRECURSOR OF RESIS PROGRAMME: RESURGENCE OF CONTRACT FARMING IN SOUTH AFRICA	127
3.3	RESIS PROGRAMME IN LIMPOPO PROVINCE: ORIGINS	129
3.4	PROGRAMME IMPLEMENTATION FRAMEWORK	133
3.5	EARLIER PHASES OF RESIS IMPLEMENTATION	135
3.5.1	ENABLING POLICY AND INSTITUTIONAL ENVIRONMENT.....	135
3.5.2	IDENTIFICATION OF INNOVATIVE BEST PRACTICE	136
3.5.3	LEARNING OF LESSONS FROM THE PAST	136
3.6	SHIFT FROM RESIS TO RESIS-RECHARGE PHASE.....	137
3.7	DEFINITION AND TARGETING OF IRRIGATION FARMER CATEGORIES	138
3.8	RESIS-RECHARGE PHASE: IMPLEMENTATION OF PILOT PROJECT	143
3.9	RESIS-RECHARGE PHASE: OVERVIEW OF PROGRAMME IMPLEMENTATION	144
3.9.1	INSTITUTIONAL ARRANGEMENTS	144
3.9.2	ANALYSIS OF RESIS-RECHARGE 'EMPOWERMENT' CONTRACTS	146
7.2.2.1	Statement of 'Historical Background'	147
7.2.2.2	Objectives of Strategic Partnerships	147
7.2.2.3	Main Agreement.....	148
7.2.2.4	Parties to the Contract	149
7.2.2.5	Rights, Roles and Responsibilities	149
3.10	SUMMARY OF ISSUES RAISED BY SMALLHOLDERS	153
3.11	CONCLUSION	154
CHAPTER FOUR		155
HEREFORD IRRIGATION SCHEME		155
4.1	INTRODUCTION.....	155
4.2	LOCATION	156
4.2.1	SITUATION	156
4.2.2	SITE AND BIOPHYSICAL CHARACTERISTICS.....	156
4.3	HISTORICAL BACKGROUND	157
4.3.1	ORIGINS OF HEREFORD IRRIGATION SCHEME: 1926 TO THE 1980s... ..	157
4.3.2	NON-VIOLENT OCCUPATION AND THE PROCESS TOWARDS FORMALIZATION OF LAND RIGHTS: FROM 1997 TO 2000	158
4.4	LAND ALLOCATION	162
4.5	SOCIO-ECONOMIC PROFILE	165
4.5.1	INTRODUCTION.....	165
4.5.2	CHARACTERIZATION OF HOUSEHOLDS	166
4.5.2.1	Language Composition	166
4.5.2.2	Gender Composition.....	166
4.5.2.3	Definition of 'Community' and 'Household': Challenges	166
4.5.2.4	Crop Production.....	169
4.5.2.5	Employment	169
4.5.2.6	Income	171
4.5.2.7	Household Material Resources.....	171
4.5.3	SELECTED LIVELIHOOD STRATEGIES AND CHALLENGES.....	174
4.5.3.1	On-Farm Livelihood Diversification Strategies	174

4.5.3.2	Debts	176
4.5.3.3	Vulnerability.....	177
4.5.3.4	Shortage of Irrigation Water	179
4.5.4	SUMMARY.....	183
4.6	FARMER ORGANIZATION	184
4.7	REHABILITATION AND 'REVITALIZATION' OF THE HEREFORD IRRIGATION SCHEME: STAKEHOLDER INTERESTS AND RESOURCES	187
4.8	HEREFORD TOBACCO PROJECT: PRIVATE INVESTOR-LED JOINT VENTURE, 2003/2004	189
4.8.1	ORGANIZATION OF THE PROJECT	189
4.8.2	JOINT VENTURE PERFORMANCE: 2003/2004.....	192
4.8.3	SMALLHOLDER PERSPECTIVES ON JOINT VENTURE PERFORMANCE: ORAL TESTIMONY	195
4.8.3.1	Refilwe Monageng*: Plot J	195
4.8.3.2	Pinkie Dube* - Plot R	196
4.8.3.3	Kabelo Mabalane*: Plot W	197
4.8.3.4	Phineas Sithole*: Plot L	198
4.8.3.5	Elsie Maphala, daughter of Kereng Maphala*: Plot P.....	198
4.8.4	JOINT VENTURE PERFORMANCE: PERSPECTIVES BY OTHER STAKEHOLDERS	199
4.8.4.1	DALA Projects Officer, Maloeskop Local Office.....	199
5.8.4.2	Stephanus Van Meulen*: Local commercial farmer and member of Hereford Irrigation Board management committee	201
5.8.4.3	Marie Van Niekerk*: Commercial farmer formerly resident in the Greater Groblersdal area	201
5.8.4.4	Gerhadus Booyens: Local respondent with links to the Hereford commercial farming sector.....	201
4.8.5	PERSPECTIVES FROM SENIOR MANAGERS OF TOBACCO RSA AND TISA	202
4.8.5.1	Issue of Joint Venture Losses.....	202
4.8.5.2	Issue of Irregular Harvesting of Monageng's Prime Tobacco Crop	202
4.8.5.3	Issue of Debts	203
4.8.5.4	Issue of Profile and Status of MKTV	203
4.8.5.5	Envisaged Way Forward	204
4.8.7	SUMMARY.....	204
4.9	OVERVIEW OF A MULTI-STAKEHOLDER PROCESS TO PROMOTE SMALLHOLDER ENTRY INTO GLOBALIZED VEGETABLE AGRI- BUSINESS	205
4.9.1	INTRODUCTION.....	205
4.9.2	HEREFORD VEGETABLE PACK HOUSE: ORIGINS	206
4.9.3	REAP PROJECT IMPLEMENTATION: CONTESTATION OVER LOCATION OF PACK HOUSE	208
4.9.3.1	Overview of the Multi-Stakeholder Decision-Making Process and Contestation	208
4.9.3.2	Perspectives of Hereford Smallholders on the Multi-Stakeholder Process: Resource Capture	211

4.9.3.3	Perspectives of other Key Stakeholders on the Multi-Stakeholder Process: Power Dynamics	212
4.9.4	AFTERMATH OF MULTI-STAKEHOLDER DECISION MAKING PROCESS	213
4.9.4.1	Failure and Despondency: 2003 to 2004.....	213
4.9.4.2	Resurgence of Contract Farming: Hereford Packaging House and Farmer- Led Vegetable Joint Venture	215
4.10	DISCUSSION OF KEY ISSUES	217
4.10.1	SMALLHOLDERS AND BIG BUSINESS: A QUESTION OF POWER ...	217
4.10.2	GENDER ISSUES.....	220
4.10.3	RISKS ASSOCIATED WITH CAPITAL-INTENSIVE CROPS.....	222
4.10.4	JOINT VENTURE RISKS IN THE CONTEXT OF RURAL POVERTY AND INEQUALITY.....	224
4.10.5	COST AND BENEFITS SHARING ISSUES IN JOINT VENTURES	227
4.10.6	INSTITUTIONAL COORDINATION AND MONITORING	228
4.10.7	MONITORING.....	229
4.11	CONCLUSION	230
CHAPTER 5	.....	234
PHETWANE IRRIGATION SCHEME	.....	234
5.1	INTRODUCTION.....	234
5.2	LOCATION	235
5.2.1	SITUATION	235
5.2.2	SITE AND BIOPHYSICAL CHARACTERISTICS.....	237
5.2.3	POPULATION.....	237
5.2.4	WATER SOURCES AND USES.....	238
5.3	HISTORICAL BACKGROUND	240
5.4	LAND ALLOCATION AND TENURE RIGHTS	242
5.5	SOCIO-ECONOMIC PROFILE OF PHETWANE COMMUNITY	248
5.5.1	INTRODUCTION.....	248
5.5.2	CHARACTERIZATION OF HOUSEHOLDS	248
5.5.2.1	Language Composition	248
5.5.2.2	Gender Composition.....	248
5.5.2.3	Employment	249
5.5.2.4	Income	255
5.5.2.5	Household Material Resources.....	256
5.5.2.6	Crop production.....	257
5.5.2.7	Food Consumption	258
5.5.3	SELECTED LIVELIHOOD STRATEGIES AND CHALLENGES.....	260
5.5.3.1	Informal Fishing by the Unemployed and Landless	260
5.5.3.2	Debts	262
5.5.3.3	Livelihood Shocks.....	262
5.5.3.4	Coping Strategies.....	263
5.5.3.5	Health Issues.....	265
5.5.4	CONCLUSION	266
5.6	PRELIMINARY PHASE OF AGRICULTURAL COMMERCIALIZATION IN PHETWANE: 2001 TO 2004.....	267

5.6.1	INFRASTRUCTURE REHABILITATION	267
5.7	OVERVIEW OF RESIS IMPLEMENTATION PROCESS: 2003 TO 2004....	
	.....	271
5.7.1	INSTITUTIONAL ROLES AND RESPONSIBILITIES	271
5.7.2	INSTITUTIONAL COORDINATION AND INTEGRATION	272
5.7.3	ENGAGEMENT WITH SMALLHOLDERS	273
5.7.4	PRE-DEVELOPMENT SURVEY	274
5.7.5	ORGANIZATION OF INSTITUTIONS	275
5.7.5.1	Project Management Structure and Organization	276
5.7.6	CHALLENGES TO DEVOLUTION: WUA REGISTRATION FAILURE ...	281
5.7.2	CONCLUSION	282
5.8	RESIS: COTTON JOINT VENTURE, 2003 TO 2004	284
5.8.1	INCEPTION PHASE: SEPTEMBER TO DECEMBER 2003.....	284
5.8.2	COTTON GROWING PHASE: JANUARY TO MAY.....	287
5.8.3	COTTON PICKING PHASE: JUNE TO AUGUST 2004.....	291
5.8.4	POST-PRODUCTION PHASE: SEPTEMBER 2004 TO JULY 2006	295
5.9	RESIS-RECHARGE: STRATEGIC PARTNERSHIP, 2008	299
5.9.1	INCEPTION OF STRATEGIC PARTNERSHIP.....	299
5.9.2	INSTITUTIONAL ARRANGEMENTS	301
5.9.3	CONTRACTUAL FLAWS.....	302
5.9.4	DISSATISFACTION OVER POWER AND FINANCIAL ACCOUNTING	
	ISSUES	303
5.9.5	IMPLEMENTATION OF CONTRACT.....	304
5.10	SUMMARY.....	305
CHAPTER 6	.....	307
MAKULEKE IRRIGATION SCHEME	.....	307
6.1	INTRODUCTION.....	307
6.2	LOCATION	309
6.2.1	SITUATION	309
6.2.2	SITE AND BIOPHYSICAL CHARACTERISTICS.....	311
6.3	COMMUNITY PROFILE	311
6.3.1	POPULATION.....	311
6.3.1.1	Population Distribution.....	311
6.3.1.2	Population Growth	312
6.3.1.3	Migration	312
6.3.2	HISTORICAL BACKGROUND	313
6.3.3	DEFINING 'COMMUNITY'	315
6.3.4	SOCIAL AND POLITICAL ORGANIZATION	316
6.3.5	POWER DYNAMICS	319
6.3.6	LAND USE AND TENURE.....	322
6.3.7	SOCIAL SERVICES AND INFRASTRUCTURE	323
6.3.8	SOCIO-ECONOMIC CHARACTERISTICS OF SMALLHOLDER	
	HOUSEHOLDS.....	325
6.3.8.1	Household Size	326
6.3.8.2	Education	326
6.3.8.3	Employment Status	327
6.3.8.4	Income	330

6.3.8.5	Crop Production.....	332
6.3.8.6	Household Material Asset Ownership.....	333
6.4	MAKULEKE IRRIGATION SCHEME: HISTORICAL BACKGROUND ...	336
6.5	PRELIMINARY PHASE OF AGRICULTURAL COMMERCIALIZATION IN MAKULEKE: 1999 TO 2002.....	339
6.5.1	PRE-DEVELOPMENT SURVEYS	339
6.5.2	RESTRUCTURING OF LAND DISTRIBUTION CRITERIA	339
6.5.3	LAND RE-ALLOCATION AND USAGE.....	340
6.5.3.1	Overview.....	340
6.4.3.1	Allocation of Food Plots.....	341
6.4.3.2	Allocation of Commercial Plots	341
6.4.3.3	Allocation of Orchard Plots.....	342
6.4.3.4	Allocation of Smallholdings by Gender	343
6.5.4	INSTITUTIONAL RE-ORGANIZATION	344
6.5.5	CAPACITY BUILDING	345
6.5.6	RESUSCITATION OF DBSA LOAN	346
6.5.7	REHABILITATION OF INFRASTRUCTURE	347
6.6	EARLY PHASE ONE OF RESIS: JOINT VENTURE WITH NSK	349
6.6.1	INSTITUTIONAL ARRANGEMENTS	349
6.6.2	JOINT VENTURE PERFORMANCE AND FARMER'S RESPONSES.....	356
6.6.3	CONCLUSION	362
6.7	RESIS-RECHARGE PHASE: STRATEGIC PARTNERSHIP WITH AWC.	363
6.7.1	INSTITUTIONAL ARRANGEMENTS	363
6.7.1.1	Modification of Equity Labourer and Private Investor Relationship.....	363
6.7.1.2	Contributions by Parties	364
6.7.1.3	Organization of Equity Labourers.....	364
6.7.1.4	Duration of Contract.....	365
6.7.1.5	Roles, Responsibilities and Obligations.....	365
6.7.1.6	The Issue of Power	366
6.7.1.7	Exit Strategy.....	367
6.7.2	IMPLEMENTATION OF STRATEGIC PARTNERSHIP ARRANGEMENT: 2007 to 2009.....	367
6.7.2.1	Crop Production Approach	367
6.7.2.2	Roles in Crop Production	368
6.7.2.3	Performance: Crop Production and Income for Emerging Commercial Farmers.....	368
6.7.2.4	Exclusion of Subsistence Food Producers	369
6.7.2.5	Distribution of Compensatory Benefits.....	371
6.7.2.6	Conclusion	373
6.8	LIVELIHOOD IMPACTS: METHODOLOGICAL APPROACH AND CHALLENGES	373
6.9	CONTRACT FARMING ARRANGEMENTS AND LIVELIHOODS OF SELECTED INDIVIDUAL FARMERS, 2008/2009.....	378
6.9.1	RENIAS CHAUKE: EQUITY LABOURER WITHIN IRRIGATION SCHEME AND MARKET-ORIENTATED RIVERSIDE GARDENER.....	378
6.9.1.1	Introduction.....	378
6.9.1.2	Historical Background.....	378

6.9.1.3	Interaction with RESIS and RESIS-Recharge Interventions: Livelihood Outcomes.....	380
6.9.1.4	Water Use	383
6.9.1.5	Discussion and Conclusion.....	385
6.9.2	MR T. G. PHOSA: MARKET-ORIENTATED GARDENER WITH PRIVATE BOREHOLE IN RAIN-FED CROPPING AREA.....	387
6.9.2.1	Introduction	388
6.9.2.2	Historical Background.....	388
6.9.2.3	Interaction with RESIS and RESIS-Recharge Interventions: Livelihood Outcomes.....	388
6.9.2.4	Water Use	395
6.9.2.5	Discussion	396
6.9.3	FARMER F: EQUITY LABOURER WITHIN IRRIGATION SCHEME AND MARKET-ORIENTATED RIVERSIDE GARDENER	399
6.9.4	TOBIAS HLONGWANE: EQUITY LABOURER WITHIN IRRIGATION SCHEME AND MARKET-ORIENTATED RIVERSIDE GARDENER	401
6.9.5	FARMER 'G': EQUITY LABOURER IN IRRIGATION SCHEME.....	403
6.9.6	MR WILBERT RENDANI HLONGWANE AND MR PHILLIP DUMAS MALULEKE: INFORMAL 'STRATEGIC PARTNERSHIP' FOR SUBSISTENCE RIVERSIDE GARDENING.....	405
6.9.6.1	Introduction	405
6.9.6.2	Background to the Informal 'Strategic Partnership'	406
6.9.6.3	Livelihoods Generation Process, Strategies and Outcomes.....	407
6.9.6.4	Water Use: Quantity.....	409
6.10	OVERVIEW OF EFFECTS OF CONTRACT FARMING ON LIVELIHOODS IN MAKULEKE COMMUNITY	410
6.10.1	EMPLOYMENT.....	410
6.10.2	INCOME	414
6.10.3	SOCIO-ECONOMIC DIFFERENTIATION	415
6.10.4	LAND TENURE INSECURITY	418
6.10.5	PROBLEMS OF SHARING WATER	424
6.11	COPING STRATEGIES.....	426
6.11.1	RELIANCE ON SOCIAL NETWORKS	427
6.11.1.1	Social Networks among Equity Labourers.....	427
6.11.1.2	Social Networks among Displaced Subsistence Food Producers.....	429
6.11.2	LIVELIHOOD DIVERSIFICATION: OVERVIEW OF INFORMAL IRRIGATION FARMING	430
6.11.2.1	Introduction	430
6.11.2.2	Informal Commercial Irrigation in Riverside Gardens.....	431
6.11.2.3	Informal Subsistence Irrigation in Riverside Gardens	433
6.11.2.4	Homestead Gardens	434
6.12	DISCUSSION OF KEY ISSUES	436
6.12.1	REPRESENTATIVE PARTICIPATION: LEGITIMACY ISSUE	436
6.12.2	CAPACITY BUILDING	439
6.12.3	GENDER AND DECISION-MAKING.....	440
CHAPTER SEVEN	.....	441
SYNTHESIS OF KEY FINDINGS AND ISSUES	.....	441

7.1	INTRODUCTION.....	441
7.2	EARLIER RESIS PHASES: DISCUSSION OF SELECTED KEY FINDINGS FROM JOINT VENTURES IN HEREFORD, PHETWANE AND MAKULEKE	442
7.2.1	LIVELIHOOD CONTEXTS: OVERVIEW.....	442
7.2.2	OVERVIEW OF INTERACTIONS BETWEEN SMALLHOLDERS AND JOINT VENTURES.....	448
7.2.3	RISKS ASSOCIATED WITH CAPITAL INTENSIVE FARMING.....	451
7.2.4	DEBT.....	452
7.2.5	FARM WORKER WAGES.....	454
7.2.6	SOCIAL AND POLITICAL CONFLICT AND MARGINALIZATION	455
7.3	RESIS-RECHARGE PHASE: DISCUSSION OF KEY FINDINGS FROM STRATEGIC PARTNERSHIPS IN LIMPOPO PROVINCE	457
7.3.1	GENERAL APPROACH	457
7.3.2	PROJECT INCEPTION	458
7.3.3	CROP PRODUCTION	459
7.3.4	INCOME AND 'SUCCESS'	460
7.3.5	SKILLS DEVELOPMENT AND TRAINING	461
7.3.6	LOCAL EMPLOYMENT OPPORTUNITIES.....	462
7.3.7	DISPOSAL OF SURPLUS CROP	462
7.3.8	EXCLUSION OF INDIVIDUALS AND GROUPS	463
7.3.9	GOVERNANCE ISSUES	463
7.3.10	EMPOWERMENT FRAMEWORK.....	465
7.3.11	MONITORING.....	467
7.4	KEY ISSUES IN INTERACTIONS BETWEEN AGRICULTURAL COMMERCIALIZATION AND RURAL LIVELIHOODS IN SMALLHOLDER IRRIGATION SCHEMES IN LIMPOPO PROVINCE: DISCUSSION	468
7.4.1	ISSUE OF POWER	468
7.4.3	ISSUE OF VIABILITY	473
7.4.4	DIVERSITY OF SMALLHOLDER INTERESTS.....	474
7.4.5	EMPOWERMENT ISSUES.....	475
7.4.6	CHALLENGES OF CO-MANAGEMENT	477
7.4.7	ISSUE OF SUBSIDIZED PRIVATIZATION	483
	CHAPTER EIGHT	485
	AGRICULTURAL COMMERCIALIZATION AND RURAL LIVELIHOODS IN SMALLHOLDER IRRIGATION SCHEMES IN LIMPOPO: DISCUSSION AND CONCLUSION	485
8.1	INTRODUCTION.....	485
8.2	INSTITUTIONAL AND LIVELIHOOD CONTEXTS FOR RESURGENCE OF CONTRACT FARMING IN LIMPOPO PROVINCE: SUMMARY	486
8.3	CONTRACT FARMING AND RURAL LIVELIHOOD SECURITY	489
8.4	JOINT VENTURE AND STRATEGIC PARTNERSHIP CONTRACTS	492
8.5	NURTURING RURAL LIVELIHOOD SECURITY WITHIN A HYBRID NEO-LIBERAL AND SOCIAL DEVELOPMENT POLICY CONTEXT: DISCUSSION	495
8.6	TOWARD ENHANCED DECISION MAKING IN SMALLHOLDER IRRIGATION SCHEME INTERVENTIONS: EXPLORATORY POLICY OPTIONS.....	496

8.7	CONCLUSION	500
APPENDIX 1	MAP SHOWING MAKULEKE WATER SOURCES AND USES, 2009..	506
	CITED REFERENCES AND BIBLIOGRAPHY	507

LIST OF FIGURES

FIGURE 1	SIZE CATEGORIES OF IRRIGATION SCHEMES IN SOUTH AFRICA	26
FIGURE 2	SUSTAINABLE LIVELIHOODS FRAMEWORK	35
FIGURE 3	INTEGRATED FRAMEWORK FOR GOVERNABILITY.....	51
FIGURE 4	LOCATION OF STUDY AREAS.....	53
FIGURE 5	RESEARCH FRAMEWORK	55
FIGURE 6	AMALGAMATED EXPENDITURE ENVELOPE FOR FUNDING THE ISRDP.....	94
FIGURE 7	GREATER SEKHUKHUNE DISTRICT: DEMARCATION OF MUNICIPAL BOUNDARIES.....	118
FIGURE 8	RELATIONSHIP BETWEEN RESIS AND ISRDP.....	132
FIGURE 9	PHASES OF RESIS PROGRAMME IN LIMPOPO	134
FIGURE 10	LOCATION OF HEREFORD IRRIGATION SCHEME	157
FIGURE 11	HEREFORD IRRIGATION SCHEME: PERCENTAGE FREQUENCY DISTRIBUTION OF SMALLHOLDINGS BY GENDER, 2004.....	164
FIGURE 12	HEREFORD: CROP PRODUCTION, 2004	169
FIGURE 13	HEREFORD: PERCENTAGE FREQUENCY OF ADULT MEMBERS OF HOUSEHOLDS BY EMPLOYMENT STATUS.....	170
FIGURE 14	HEREFORD: ABSTRACTION POINT AND CANVAS-PROTECTED TANKS FOR TEMPORARY SUPPLY OF RAW WATER FOR DOMESTIC USE, 2004	178
FIGURE 15	HEREFORD IRRIGATION SCHEME: WATER STORAGE DAM AND ABSTRACTION POINT ALONG LINED PORTION OF HEREFORD CANAL, 2004	181
FIGURE 16	HEREFORD: UNLINED SECTION OF HEREFORD CANAL, 2004.....	181
FIGURE 17	HEREFORD IRRIGATION SCHEME: STAKEHOLDER SUPPORT NETWORKS FOR SMALLHOLDER MARKET ENTRY	189
FIGURE 18	LOCATION OF PHETWANE IN THE CONTEXT OF UPPER ARABIE BALEMI IRRIGATION SCHEME TRUST AREA, 2009.....	236
FIGURE 19	PHETWANE: ALLOCATION OF PLOTS THROUGH PTOs BY GENDER AND AGE, 2004	243
FIGURE 20	EFFECT OF SHARING ARRANGEMENTS ON ACCESS TO PLOTS ALLOCATED THROUGH PTOs, BY AGE, 2004.....	247
FIGURE 21	PHETWANE COMMUNITY: ADULT POPULATION DISTRIBUTION BY GENDER AND AGE, 2004.....	249
FIGURE 22	PHETWANE: EMPLOYMENT STATUS OF ADULT POPULATION, 2004 250	
FIGURE 23	UNEMPLOYMENT BY AGE GROUP, 2004	251
FIGURE 24	UNEMPLOYMENT OF WORKING-AGE POPULATION EDUCATION, 2004	252

FIGURE 25	PHETWANE: EMPLOYMENT STATUS OF ADULT POPULATION BY GENDER, 2004.....	254
FIGURE 26	PHETWANE: MATERIAL ASSET OWNERSHIP BY HOUSEHOLD, 2004	256
FIGURE 27	PHETWANE COMMUNITY: CONSUMPTION OF SELECTED FOOD, 2004	259
FIGURE 28	PHETWANE: PERCENTAGE FREQUENCY OF DISCLOSED ILLNESSES AND DISABILITY, 2004.....	266
FIGURE 29	GEOGRAPHICAL LOCATION OF PHETWANE IRRIGATION SCHEME RELATIVE TO SIMILAR SCHEMES IN RESIS CLUSTER 11, 2009	269
FIGURE 30	PHETWANE IRRIGATION SCHEME: PROPOSED MANAGEMENT STRUCTURE, 2004	277
FIGURE 31	LOCATION OF MAKULEKE COMMUNITY	309
FIGURE 32	SITUATION OF MAKULEKE COMMUNITY, 2008	310
FIGURE 33	MAKULEKE: PERCENTAGE FREQUENCY OF COMMERCIAL PLOT HOLDERS BY EDUCATION AND AGE, 2005.....	327
FIGURE 34	MAKULEKE: COMPARISON OF EMERGING FARMER AND FOOD PLOTHOLDER HOUSEHOLDS BY EMPLOYMENT STATUS, 2005	328
FIGURE 35	MAKULEKE: EMPLOYMENT STATUS OF EMERGING COMMERCIAL FARMERS BY GENDER, 2005	329
FIGURE 36	MAKULEKE COMMUNITY: OCCUPATIONAL STATUS OF PRODUCTIVE POPULATION BY GENDER, 2000	330
FIGURE 37	MAKULEKE COMMUNITY: DISTRIBUTION OF EMPLOYED HEADS OF HOUSEHOLDS BY MEAN MONTHLY INCOME, 1997	331
FIGURE 38	MAKULEKE: DISTRIBUTION OF COMMERCIAL FARMING HOUSEHOLDS BY MEAN MONTHLY INCOME, 2005	332
FIGURE 39	MAKULEKE: MATERIAL ASSET OWNERSHIP BY COMMERCIAL FARMING HOUSEHOLDS, 2005	335
FIGURE 40	MAKULEKE LAND USE: 1970 TO 2009	337
FIGURE 41	MAKULEKE: PERCENTAGE ALLOCATION OF PLOTS BY GENDER...	343
FIGURE 42	MAKULEKE IRRIGATION SCHEME: PERCENTAGE FREQUENCY OF ALLOCATION OF COMMERCIAL PLOTS BY AGE AND GENDER, 2005	344
FIGURE 43	MAKULEKE: EXAMPLES OF MEAN MONTHLY INCOME FOR CATEGORIES OF SMALL-SCALE IRRIGATION FARMERS, 2008	417
FIGURE 44	MAKULEKE: SOME OF THE WOMEN SUBSISTENCE FARMERS WHO LOST WITHOUT COMPENSATION ACCESS TO RAIN-FED CROP FIELDS DURING IRRIGATION SCHEME DEVELOPMENT IN THE LATE 1980S	419
FIGURE 45	SOCIO-ECONOMIC DIFFERENTIATION OF SMALLHOLDER IRRIGATION SCHEMES: PERCENTAGE FREQUENCY OF OWNERSHIP OF MATERIAL ASSETS BY HOUSEHOLDS, 2004 TO 2005	446

LIST OF TABLES

TABLE 1	SIZE CATEGORIES OF IRRIGATION SCHEMES IN SOUTH AFRICA	26
TABLE 2	TYPES OF LIVELIHOOD ASSETS.....	36
TABLE 3	TYOLOGY OF PARTICIPATION	60
TABLE 4	TYOLOGY OF CONTRACT FARMING MODELS	75
TABLE 5	VAN ZYL'S VISION FOR INCREASING LAND ACCESS FOR SMALL- TO MEDIUM-SIZED COMMERCIAL FARMERS, 1996.....	102
TABLE 6	GREATER SEKHUKHUNE: SUMARY OF SELECTED LIVING CONDITIONS, 2002	119
TABLE 7	TYOLOGY OF FARMERS IN SMALLHOLDER IRRIGATION SCHEMES TARGETED BY RESIS PROGRAMME.....	141
TABLE 8	OVERVIEW OF RESIS-RECHARGE STRATEGIC PARTNERSHIP CONTRACTS, 2009.....	152
TABLE 9	GENDER ALLOCATION OF SMALLHOLDINGS IN HEREFORD IRRIGATION SCHEME, 2004	163
TABLE 10	HEREFORD IRRIGATION SCHEME: DISTRIBUTION OF SMALLHOLDINGS BY GENDER, 2004	164
TABLE 11	HEREFORD: EMPLOYMENT STATUS OF ADULT MEMBERS OF HOUSEHOLDS RESIDENT IN THE IRRIGATION SCHEME, 2004	170
TABLE 12	MATERIAL ASSET OWNERSHIP BY HOUSEHOLDS IN HEREFORD IRRIGATION SCHEME, 2004	172
TABLE 13	HEREFORD IRRIGATION SCHEME: FREQUENCY OF DISCLOSED ILLNESSES IN SMALLHOLDER HOUSEHOLDS, 2004.....	179
Table 14	HEREFORD: KEY FUNDING FOR REHABILITATION AND UPGRADING OF INFRASTRUCTURE AND REVITALIZATION OF FARMING, 2000 - 2006	187
TABLE 15	HEREFORD: SMALLHOLDER FINANCIAL ACCOUNTS FOR TOBACCO PRODUCTION, 2003 - 2004	194
TABLE 16	SMALLHOLDER ACCOUNTS FOR TOBACCO PRODUCTION PARTNERSHIP BETWEEN FOUR SMALLHOLDERS AND LOCAL COMMERCIAL FARMER JOPPIE GRAHAM, 1999.....	200
TABLE 17	PHETWANE IN THE CONTEXT OF UPPER ARABIE BALEMI IRRIGATION SCHEME TRUST AREA, 2009	237
TABLE 18	PHETWANE: ALLOCATION OF PLOTS THROUGH PTOs BY GENDER AND AGE, 2004	243
TABLE 19	EFFECT OF SHARING ARRANGEMENTS ON ACCESS TO PLOTS ALLOCATED THROUGH PTOs, BY AGE, 2004.....	247
TABLE 20	PHETWANE COMMUNITY: ADULT POPULATION DISTRIBUTION BY GENDER AND AGE, 2004.....	249
TABLE 21	PHETWANE: EMPLOYMENT STATUS OF ADULT POPULATION, 2004.	250
TABLE 22	UNEMPLOYMENT BY AGE GROUP, 2004.....	251
TABLE 23	UNEMPLOYMENT OF WORKING-AGE POPULATION EDUCATION, 2004	252
TABLE 24	PHETWANE: EMPLOYMENT STATUS OF ADULT POPULATION BY GENDER, 2004.....	254

TABLE 25	PHETWANE: PERCENTAGE FREQUENCY OF CONSUMPTION OF SELECTED FOOD, 2004.....	259
TABLE 26	CONSOLIDATED FUNDING FOR INFRASTRUCTURE REHABILITATION AND OVERHEAD COSTS ON THE UPPER ARABIE IRRIGATION SCHEME	268
TABLE 27	PHETWANE COMMUNITY: PERCEPTIONS ON SOCIO-ECONOMIC PROBLEMS, NEEDS AND ASPIRATIONS, 2003.....	275
TABLE 28	PHETWANE: EARNINGS PER FARMER FOR IRRIGATION-RELATED LABOUR, 2004.....	289
TABLE 29	PHETWANE: EARNINGS FROM COTTON PICKING AT R0.40 PER KILOGRAM, 2004	293
TABLE 30	CLUSTER FOUR OF RESIS PROGRAMME SCHEMES IN LIMPOPO..	307
TABLE 31	STRATEGIC PARTNERS IN MAKULEKE IRRIGATION SCHEME, 2002 TO 2009.....	308
TABLE 32	MAKULEKE COMMUNITY: POPULATION DISTRIBUTION BY NUMBER OF HOUSEHOLDS, 2008	311
TABLE 33	MAKULEKE COMMUNITY: COMMUNAL AND INDIVIDUAL PIPED DOMESTIC WATER SUPPLIES, 2008	324
TABLE 34	MAKULEKE: PAIRWISE RANKING BY GENDER OF COMMUNITY NEEDS PERCEIVED AS MOST IMPORTANT, 1998.....	339
TABLE 35	MAKULEKE IRRIGATION SCHEME: DISTRIBUTION OF PLOTS BY TYPE OF USE AND AREA, 2008.....	340
TABLE 36	MAKULEKE IRRIGATION SCHEME: TOTAL LOAN REQUESTED FROM DBSA, 2000	347
TABLE 37	MAKULEKE IRRIGATION SCHEME: REHABILITATION OF INFRASTRUCTURE, 2000 TO 2003.....	348
TABLE 38	MAKULEKE: COTTON PICKING ALLOWANCES, 2005	359
TABLE 39	CAPITAL INVESTMENTS BY MR T. G. PHOSA, 2003	391
TABLE 40	PART OF PHOSA'S FARM BUDGET, 2008	394
TABLE 41	EXAMPLES OF JOB CREATION BY MAKULEKE COMMUNITY DEVELOPMENT INITIATIVES, 2000 TO 2003	412

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Small-scale irrigation farming is envisaged to play a progressively larger role in rural development and in reducing some of the inequalities inherent in South Africa's space economy (South Africa, 1998b). A prevailing view within South African government circles is that increased involvement in commercial agriculture by resource-poor black small-scale farmers, who are mostly located in the marginal former homeland areas, is a viable strategy towards redressing the poverty, inequality, food insecurity and unemployment that pervade these areas largely as a legacy of the country's colonial and apartheid history. This fact is demonstrated by the targeting of agricultural investment towards providing support to livelihoods, infrastructure, irrigation, services and skills development in the country's poverty nodes, which were identified by the erstwhile Integrated Sustainable Rural Development Programme (ISRDP) (South Africa, 2001b). Smallholder irrigation farmers are among the range of small-scale producers that have been targeted by government interventions.

Since the late 1990s, the South African government has implemented a nationwide programme to 'revitalise' state-owned smallholder irrigation schemes, which fell into disuse following sudden withdrawal of government subsidies in 1994. Of the 302 smallholder irrigation schemes found in South Africa (Van Averbeké et al, 2011), most are located in Limpopo Province (Figure 1; Table 1). Within the province, many of the schemes are located in impoverished former homelands and a smaller proportion consists of former white farmer settlement schemes located in commercial farming areas.

The RESIS Programme in Limpopo Province focuses on at least one hundred and twenty-six (126) existing smallholder irrigation schemes and aims at "re-building socially uplifting [and] profitable agribusiness" through "a comprehensive programme to structure, train and capacitate smallholder farmers to run their scheme profitably and sustainably" (De Lange, 2004). Many of the irrigation schemes were developed after publication in 1955 of the

Tomlinson Commission report on 'Socio-economic Development of the Bantu Areas within the Union of South Africa' (Tomlinson Commission Report, 1955).

The Tomlinson Commission was tasked "to conduct an exhaustive inquiry into and report on a comprehensive scheme for the rehabilitation of the Native areas with a view to developing within them a social structure in keeping with the culture of the Natives and based on effective socio-economic planning." The commission sought to clarify the complexity of administration and civic life in the African reserves through detailed data about African people, their eroding "tribal past" and their adaptation to the market economy in the white areas. Of significance was the fact that the Tomlinson Commission report was concerned with three inter-dependent primary policies.

The first was the separation of farmers from non-farmers, which was done by calculating the minimum income from agriculture that would be capable of sustaining a farming household. The second was a land rehabilitation policy, for which the Tomlinson report sought to provide, as required by a 1943 report of the Social and Economic Planning Council on the Native Reserves, the "fundamental scientific knowledge on which to base wise land use so as to ensure that the productivity of the land will be increased and maintained". The third policy addressed by the Commission related to the industrialization of native reserves.

The main recommendations of the Commission were that government should consolidate the native reserves into seven Bantustans; acquire the 6 million acres set aside in terms of the 1936 Land Act; spend £104 million in the first ten years on socio-economic development, with 50 000 jobs created each year. The Tomlinson report further stated that if the homelands policy was to be viable, there would have to be the necessary infrastructure, land and money to make it work.

Furthermore, on the basis of a survey of 111 peasants, who subsisted from farming alone, the Tomlinson Commission concluded that "£56 p.a. is large enough to attract a Bantu to full-time farming in mixed farming and pastoral areas, and to bind him permanently to the land." From this conclusion, the Commission advocated that £60 per annum would be the minimum gross income required by individual rural households in the entire black farming population. The Tomlinson Commission further commented that "the Bantu will have to

raise his income of £60 to higher levels—by his own efforts.” The report recommended, among other things, that irrigated holdings of between 1.3 and 1.7 ha could adequately “provide a family with a living that would satisfy them” (Ibid.).

While the foregoing concerns were basic components of government plans for native reserves during the apartheid era, what distinguished the Tomlinson report from others was that it provided quantitative measurement of socio-economic classes, as well as detailed proposals that made increased agricultural productivity dependent on the large-scale removal of “inefficient” peasants from the land. The result of recommendations such as these was that a significant proportion of the black population in the native reserves was subsequently forcibly removed from their land (see Platzky & Walker, 1985) to accommodate selected minorities within the farming population, who the report termed “economic farming units” (EFUs). The nation-wide tide of forced removals was linked to the Promotion of Bantu Self-Government Act (Act 46) of 1959 and the accelerated implementation of ‘Betterment’ schemes, which characterized many homeland areas and the so-called ‘independent states’. Following the Tomlinson report and the subsequent Promotion of Bantu Self-Government Act, efforts were made to industrialize the administrative centres of homeland areas and ‘independent states’ and to develop smallholder irrigation schemes, which contributed to bolstering the apartheid architecture in the native reserves. However, the apartheid government seems to have known, from the Tomlinson Commission report, that the economic viability of both the smallholder irrigation schemes and the ‘self-governing’ states was extremely unlikely.

Former homeland-based smallholder irrigation schemes became dysfunctional following sudden withdrawal of state subsidies by the post-apartheid government after 1994. This seems to have led to a deepening of food and livelihood insecurity within rural local communities. Large schemes were particularly affected, since these were often centrally-managed and therefore heavily dependent on government support (Van Averbeke & Mohamed, 2006). By contrast, the breakdown of former white farmer settlement schemes appears to have been tenuous, varied and context-specific.

While the RESIS Programme might therefore be construed to be an attempt to reverse adverse consequences of subsidy withdrawals, it is also true that the RESIS Programme has

been a response to an international drive to reduce transaction costs of operating state-sponsored irrigation schemes and enhance efficiency in agricultural water use, productivity and marketing. Prescriptions for achieving this include the development of infrastructure, technology and farmer skills, irrigation management transfer (IMT) to farmers and implementation of agricultural commercialization, often through various permutations of contract farming. Under the rubric of 'black economic empowerment' (BEE), the RESIS Programme and similar initiatives have spawned various joint ventures and strategic partnerships. Within such enterprises, 'contracts' are principal institutional mechanisms to coordinate linkages between smallholders and agri-business firms and to facilitate entry by smallholders into commercial agriculture.

The adoption of contract farming as a mechanism to govern linkages between small-scale farmers and agri-business firms or promote small-scale farmers' entry into mainstream commercial agriculture is not new in developing countries (Glover & Kusterer, 1990:1; Kirsten & Sartorius, 2002a) and South Africa (Kirsten & Sartorius, 2002b). What is new is the unprecedented level of complexity in the globalization and integration of industrial agri-food systems, and the large number of actors and institutions that farmers have to interact and transact with. Such development is associated with the emergence since the 1980s of "new agricultures" that are geared towards high-value crops (Little & Watts, 1994), an increasing involvement of small-scale farmers in contract farming in developing countries and a reduction of state roles in farmer support as private sector roles increase (Da Silva, 2005:4). The net effect has been a strengthening and expansion of market penetration into rural areas that have hitherto been characterized by subsistence forms of production.

Beyond global and regional influences, the RESIS Programme in South Africa has emerged against a backdrop of national macro-economic policy shifts away from the focused anti-poverty strategies of the Reconstruction and Development Programme (RDP) towards a dual emphasis on both poverty reduction and national economic goals espoused by the Growth Employment and Redistribution (GEAR) Strategy. The RESIS Programme has also emerged in tandem with the erstwhile government-led Integrated Sustainable Rural Development Programme (ISRDP), which was a key national framework for rural development from 2001 to 2009 before it was replaced by the Comprehensive Rural Development Programme (CRDP) (see Section 2.5). Support to emerging farmers by various sectors, in particular,

derives from the core objectives of the Agricultural Sector Strategy (South Africa, 2001b) namely, to:

- Enhance equitable access and participation in the agricultural sector;
- Improve global competitiveness and profitability;
- Ensure sustainable resource management; and
- Ensure food security.

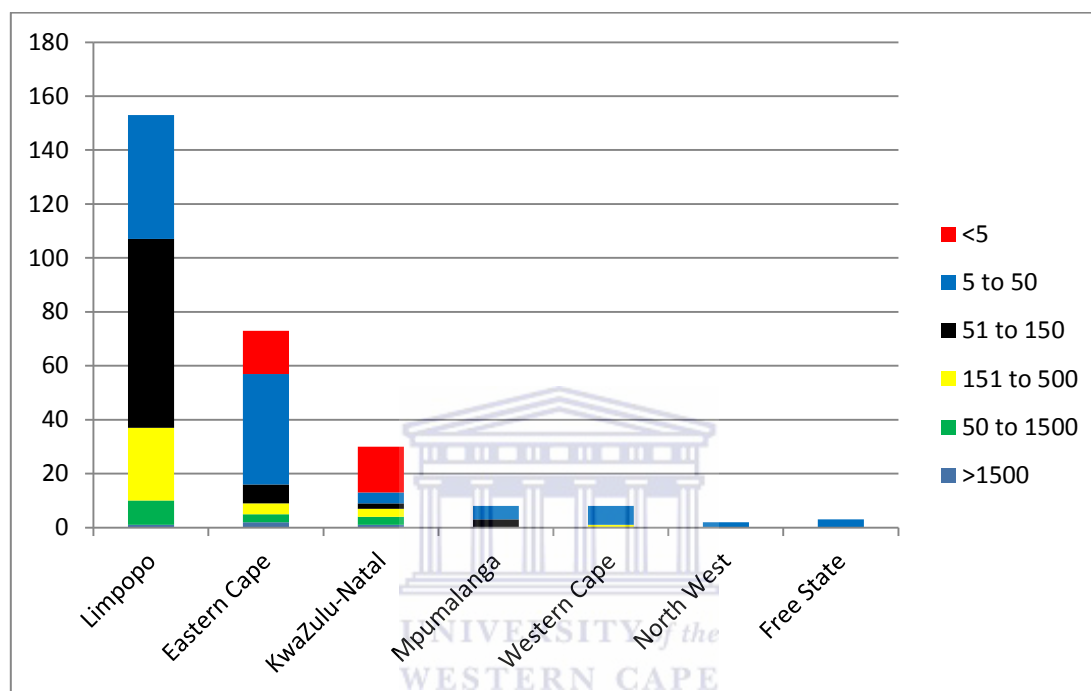


FIGURE 1 SIZE CATEGORIES OF IRRIGATION SCHEMES IN SOUTH AFRICA

TABLE 1 SIZE CATEGORIES OF IRRIGATION SCHEMES IN SOUTH AFRICA

Size in Ha	Limpopo	Eastern Cape	KwaZulu-Natal	Mpumalanga	Western Cape	North West	Free State
>1500	1	2	1	0	0	0	0
50 to 1500	9	3	3	0	0	0	0
151 to 500	27	4	3	0	1	0	0
51 to 150	70	7	2	3	0	0	0
5 to 50	46	41	4	5	7	2	3
<5	0	16	17	0	0	0	0
Total <i>n</i>	153	73	30	8	8	2	3

Source: Shaker, 2005

The Broad Based Black Economic Empowerment Framework for Agriculture (Agri-BEE) addresses the first two objectives, and joint ventures and strategic partnerships are considered a key strategy for promoting entry by emerging irrigation farmers into the commercial sector. Strategic initiatives that complement Agri-BEE include Irrigation Management Transfer (IMT), Water Allocation Reform (WAR), DWA Policy on the Financial Assistance to Resource Poor Irrigation Farmers, Land Reform Policy, the Comprehensive Agricultural Support Programme (CASP) and municipal Integrated Development Plans (IDPs) and Local Economic Development (LED) frameworks, among others.

Within Limpopo Province, revitalization objectives articulate the aforementioned national institutional frameworks as well as the Provincial Growth and Development Strategy (PGDS) (Limpopo Provincial Government, 2004). The PGDS is premised upon a view that resolving challenges of poverty, unemployment, food insecurity and rural development in the province will depend largely on investment and growth in the agricultural sector.

While objectives of the RESIS Programme have resonated with national macro-economic policy objectives, implementation of revitalization initiatives in Limpopo Province has tended to promote agricultural commercialization rather than subsistence production by smallholders. Increasingly, since 2005, the RESIS Programme in Limpopo Province has become focused on black economic empowerment, 'strategic partnerships' and irrigation infrastructure development. A pertinent question for the study was whether or not success or failure of the ISRDP, as a key institutional framework for rural development from 2001 to 2009, would ultimately be reckoned by the extent to which global rather than local imperatives and economic rather than livelihood interests had influenced conceptualization of the interventions such as the RESIS Programme.

1.2 RESEARCH PROBLEM

The research problem for the study was captured in the following overarching question:

- Does agricultural commercialization of smallholder irrigation schemes in South Africa, as articulated mainly through contractual joint ventures and strategic partnerships, provide an adequate construct for achieving rural livelihood security within selected impoverished local communities in Limpopo Province?

Subsumed within this overarching question were four broad sets of questions relating to:

- Institutional contexts
- Institutional arrangements;
- Livelihood assets, strategies, impact factors, outcomes and vulnerability to shocks and trends; and
- Policy and institutional issues.

Specific research questions were:

- In what institutional and livelihood context has the resurgence of contract farming occurred in selected smallholder irrigation schemes in Limpopo Province?
- How have contracts for joint ventures and strategic partnerships been formulated and implemented in selected smallholder irrigation schemes in Limpopo Province?
- How have agricultural commercialization initiatives affected livelihoods of petty commodity producers, subsistence farmers and other people in smallholder irrigation scheme communities?
- What are the key policy and institutional issues for government interventions in smallholder irrigation schemes?

1.3 RESEARCH AIMS AND OBJECTIVES

- The research aim was to determine whether or not agricultural commercialization of smallholder irrigation schemes in South Africa, as articulated mainly through contractual joint ventures and strategic partnerships, provided an adequate construct for achieving rural livelihood security in selected impoverished local communities within Limpopo Province. In pursuing this aim, a key concern was whether or not institutional arrangements reflected interests of the poor and vulnerable in such communities. Such examination was predicated on detailed analyses of livelihood portfolios and strategies in selected case study sites.

Research objectives were to:

- Characterize the institutional and livelihood context for the resurgence of contract farming in selected smallholder irrigation schemes in Limpopo Province;
- Examine the institutional arrangements for joint ventures and strategic partnerships in selected smallholder irrigation schemes in Limpopo Province;

- Examine the effects of agricultural commercialization initiatives on livelihoods of petty commodity producers, subsistence farmers and other people in local communities associated with selected small-scale irrigation schemes; and
- Identify key policy and institutional issues for government interventions in smallholder irrigation schemes.

1.4 CONCEPTUAL FRAMEWORK

This section presents the conceptual framework for the study. Firstly, the background to sustainable livelihoods approaches is presented. This is followed by an outline of the Sustainable Livelihoods Framework (SLF), which is a key conceptual framework for the study. Towards overcoming the observed shortcomings of the SLF (Scoones, 2009), the section proceeds to present a brief outline of other relevant analytical concepts and conceptual and methodological frameworks. Concepts of poverty, power, agency and rights are briefly outlined before the presentation of overviews of the Capability Approach and Entitlement Analysis (e.g. Amartya Sen) and the Integrated Framework for Governability (Kooiman, 2008). This blended conceptual framework enables a more rigorous examination and synthesis of complex institutional aspects of agricultural commercialization and their impacts on livelihoods associated with smallholder irrigation schemes in Limpopo Province.

1.4.1 SUSTAINABLE LIVELIHOODS CONCEPT

‘Livelihoods’ have been defined in terms of the capabilities, assets and activities required for a means of living (Chambers & Conway, 1992: 7). ‘Sustainable livelihoods’ are those that can cope with, recover from and adapt to stresses and shocks, maintain or enhance their capabilities and assets and provide net benefits to other livelihoods locally and more widely, both at present and in the future, without undermining the natural resource base (Ibid.).

In his earlier work, Scoones (1998) observed that the term ‘sustainable livelihoods’ often embraced “uneasy compromises” that were embedded within the same definition, and existing literature often gave little clarity about how contradictions are addressed and trade-offs assessed. Scoones (Ibid.) linked this ambiguity of definition and methodological vagueness to difficulties with ‘sustainable development’. Sustainable development, as defined in the Bruntland Commission’s 1987 Report *Our Common Future* (WCED, 1987:43),

has been subject to robust debate over the meanings and articulation of sustainable development (Hall, 2000; Hoff, 1998:5; O’Riordan, 1998; Chatterjee & Finger, 1994; Seidman & Anang 1992; MacNeill *et al*, 1991). Criticism that the concept of sustainable development fails to specify how sustainability should be achieved (Dietz, 1996; Cole, 1994; Chatterjee & Finger, 1994) and embodies ideological and conceptual inconsistencies (Chatterjee & Finger, 1994; Vivian, 1995; Blaikie, 1985) echoes Scoones’ (1998) point about the contradictions and ambiguity of the sustainable livelihoods concept.

In his latter work, Scoones (2009: 172) comments that the term livelihoods is mobile and flexible, and “can be attached to all sorts of other words to construct whole fields of development enquiry and practice”. These relate to ‘locales’ (rural or urban livehoods), occupations (crop farming, pastoral or fishing livelihoods), social difference (gendered, age-defined livelihoods), directions (livelihood pathways and trajectories), dynamic patterns (sustainable or resilient livelihoods) and many more (*Ibid.*).

1.4.2 SUSTAINABLE LIVELIHOODS APPROACHES

Since the 1990s sustainable livelihoods approaches have become increasingly central to debates around rural development, poverty reduction and environmental management (Scoones, 1998; Farrington *et al*, 1999). The sustainable livelihoods approach has been used by donor organizations, such as the United Kingdom Department for International Development (DFID), United Nations (UN) Development Programme (UNDP), Food and Agriculture Organization (FAO), World Food Programme, Oxfam, CARE International Khanya and others (Knutsson, 2006; Hussein, 2002; Farrington *et al*, 1999).

While the proliferation of rural development initiatives guided by the approach appears to have followed the late 1990s burgeoning of theoretical work on sustainable livelihoods by various scholars (Carswell, 1997; McDowell & De Haan, 1997; Carney, 1998; Hussein & Nelson, 1998; Scoones, 1998), some scholars (Ellis, 2002 in Hussein, 2002; Clark, 2005) assert that the late 1990s explosion of interest in sustainable livelihoods did not constitute a significant innovation in development practice. Ellis & Biggs (2001) trace origins of the sustainable livelihoods approach to strands of ideas developed through the 1980s and 1990s by scholars such as Chambers (1983), Chambers & Conway (1992) and Bernstein *et al* (1992) and from famine analysis of the 1980s (Sen, 1981; Swift, 1989). Concepts that prefigured

sustainable livelihoods have been used since the 1980s to address issues of famines and food insecurity (Ellis 2002 in Hussein, 2002). Clark (2005) states that sustainable livelihoods approaches build upon 'basic needs' approaches, which were pioneered by Paul Streeten et al (1981) and Frances Stewart (1985).

Basic needs approaches came to the fore following failure by many African countries to achieve industrial development and economic growth during the Industrial Development era (Friedmann, 1992). At that time, development approaches were premised upon the notion of regional convergence and tended to assume similar paths of development for both developed and Third World countries (Daly, 1996 in Hoff, 1998). At independence many Less Developed Countries (LDCs) therefore entered the world economy with the goal of achieving industrial development and economic growth, but their export-based economies and the heavy financial debts soon militated against this aim (Chatterjee & Finger, 1994). Centrally planned, capital-intensive aid projects and integrated rural development (IRD) projects failed to alleviate poverty and resulted in environmental degradation and further erosions of rural livelihoods, food security and incomes (Darkoh, 1996). Such failure constituted a crisis that forced a re-examination of the mainstream development models in the 1970s and adoption of basic needs approaches (Friedmann, 1992).

Scoones (2009) refutes claims by some genealogies of livelihoods thinking that associate the emergence of such perspectives with an influential paper by Chambers & Conway (1992). By asserting that the history of a cross-disciplinary livelihoods perspective has influenced rural development thinking for the past 50 or more years, Scoones (Ibid.) also implicitly questions the claims by some scholars (e.g. Ellis & Biggs, 2001; Ellis 2002 in Hussein, 2002; Clark, 2005, among others) that origins of livelihoods approaches can be traced to the 1980s and 1990s. He cites Fardon's (1990 in Scoones, 2009) work, which documented a cross-disciplinary collaboration involving ecologists, anthropologists, agriculturalists and economists who since the 1950s sought to change rural systems and their development challenges in the Rhodes-Livingstone Institute in Zambia. Scoones comments that although such work was not labeled as such, it was quintessentially livelihoods analysis.

Scoones asserts that the reason why such work did not come to dominate development thinking in the decades following the Second World War was that policy advice was increasingly influenced by professional economists. This was linked to the emergence of post-war institutions for development namely, the World Bank, the UN system, bilateral development agencies and national governments of newly-independent countries across the world. The hegemonic framing of development discourses by economists and associated specialists from technical disciplines from the natural, medical and engineering sciences pushed social science expertise and cross-disciplinary livelihoods perspectives, in particular, to the periphery. Scoones surmises that while alternative radical Marxist perspectives engaged at the macro-level on the political and economic relations of capitalism, they rarely delved into the particular, micro-level contextual realities on the ground. There were exceptions, however, such as works by economists and Marxists in the fields of agricultural economics and geography. These offered a more nuanced view through, for example, empirically-based village studies that were alternative to economic analyses of rural situations (Lipton & Moore, 1972 in Scoones, 2009), studies of diverse impacts of the Green Revolution in India (e.g. Farmer 1977 in Scoones, 2009; Walker & Ryan 1990 in Scoones, 2009) and Norman Long's (1984 in Scoones, 2009) actor-orientated approach, which referred to livelihood strategies in Zambia.

The resurgence of interest in sustainable livelihoods in the late 1990s is attributed to rising concerns over the persistence of poverty despite interventions by governments, donors and non-governmental organizations (Farrington et al, 1999; Ellis, 2002 in Hussein, 2002). There was a shift in development theory in the mid-1990s, which gave rise to the emergence of the 'Post-Washington Consensus' (Béné et al, 2010:6; Baulch, 1996; Lipton & Ahmed, 1997; Gore, 2000). This shift led to a renewed interest in interventions aimed at people centered poverty reduction, for example, through the World Bank Poverty Reduction Strategy initiative, through debt cancellation and through recognition of the importance of 'voices of the poor' (Narayan et al 2000 in Béné et al, 2010:6). Concepts such as self-esteem, vulnerability and social exclusion began to gain attention (Beck, 1994 Béné et al, 2010:7; Atkinson 1998 in Béné et al, 2010:7) along with issues related to well-being, human and gender rights, civil society and social movements (Béné et al, 2010:7; Friedman, 1996; Chambers, 1997; Sen, 1999). Renewed focus on poverty appears to have influenced the

renewed interest in livelihoods in rural contexts, such as smallholder irrigation schemes. Farrington et al (1999) further ascribes such interest to increasing donor commitment to tackling poverty, which made the search for answers on how to best address poverty more urgent.

Application of the sustainable livelihoods approach has tended to be varied and flexible, but permutations of the approach share certain core principles (Farrington et al, 1999). Such principles include:

- Putting people at the centre of development;
- Shifting away from the traditional focus on income and consumption criteria for assessing poverty towards more comprehensive criteria that capture the diversity of poverty aspects; and
- Recognizing relationships between micro-level and macro-level characteristics and processes.

Carswell et al (1997 in Scoones, 1998) observed that despite the widespread adoption of sustainable livelihoods approaches, “definitions of sustainable livelihoods were often unclear, inconsistent and relatively narrow” and without clarification there was a risk of simply adding to the conceptual muddle. While trade-offs between productivity, equity and sustainability were critical to the achievement of sustainable livelihoods (Carswell, 1997: 3), practical difficulties remained in understanding how, in practice, to handle trade-offs (Farrington *et al*, 1999).

While the sustainable livelihoods approach has been hailed as enabling a comprehensive understanding of poverty and synthesis of many issues into a single framework (Ashley & Carney, 1999), scholars have also pointed to a number of fundamental flaws. Criticism has been that the approach and framework overall can “convey a somewhat cleansed and neutral approach to power issues”, which starkly contrasts with the fundamental role that power imbalances play in causing poverty (Ibid.). Related criticism has been that the sustainable livelihoods approach and framework do not give attention to rights (Carney, 2003) and implicitly accept the status quo of poverty and inequality (Budlender & Dube, 1998).

1.4.3 SUSTAINABLE LIVELIHOODS FRAMEWORK

The study's conceptual framework was based on the Sustainable Livelihoods Framework (SLF) (Figure 2), which was developed by various scholars (Scoones, 1998; Farrington et al, 1999; Carswell, 1997; McDowell & De Haan, 1997; Carney, 1998; Hussein & Nelson, 1998; Chambers & Conway, 1992). The SLF shows how, in different contexts, sustainable livelihoods are achieved through access to a range of livelihood assets, which are combined in the pursuit of different livelihood strategies (Scoones, 1998). A central tenet within the framework is the analysis of the range of formal and informal organizational and institutional factors that influence sustainable livelihood outcomes (Ibid.). The study was mainly concerned about the policies and institutions that mediate livelihood opportunities, and examined whether or not policies and institutions reflected interests of the poor. Such examination was predicated on detailed analyses of livelihood portfolios and strategies, and their linkages to institutions and institutional arrangements.

In using the SLF, however, the study was mindful of the challenges and limitations associated with the framework, particularly with regard to issues of power (Ashley & Carney, 1999), rights (Carney, 2003; Norton & Moser, 2001 in Carney, 2003; Ashley & Carney, 1999), social capital (Bourdieu, 1980; Coleman, 1988; Putnam, 2001), agency (Giddens, 1979) and governance and governability (Kooiman, 2008; Kooiman & Jentoft, 2009). Chambers & Scoones (2009) state that key issues that livelihoods approaches have failed to address include processes of economic globalisation; power, politics and links between livelihoods and governance; long-term environmental change; long-term shifts in rural economies; and wider questions about agrarian change. Hence, the SLF was complemented by elements of methodologies such as Entitlement Analysis and the Capability Approach (Sen, 1981, 1984, 1999; Gasper, 2006; Nussbaum, 2003) and the Integrated Framework for Governability (Kooiman, 2008) and Stakeholder Analysis (Overseas Development Administration (Bryson, 2004), among others. This thesis does not delve into a detailed review of such frameworks and approaches, but draws from them to strengthen the SLF used by the study.

Based on the SLF, key concepts for the study's conceptual framework included 'contexts', 'livelihood assets', 'institutions', 'institutional arrangements', 'power', 'rights', 'agency',

‘livelihood strategies’, ‘livelihood outcomes’, ‘vulnerability to shocks and trends’ and ‘livelihood system’ (UNDP, 1999).

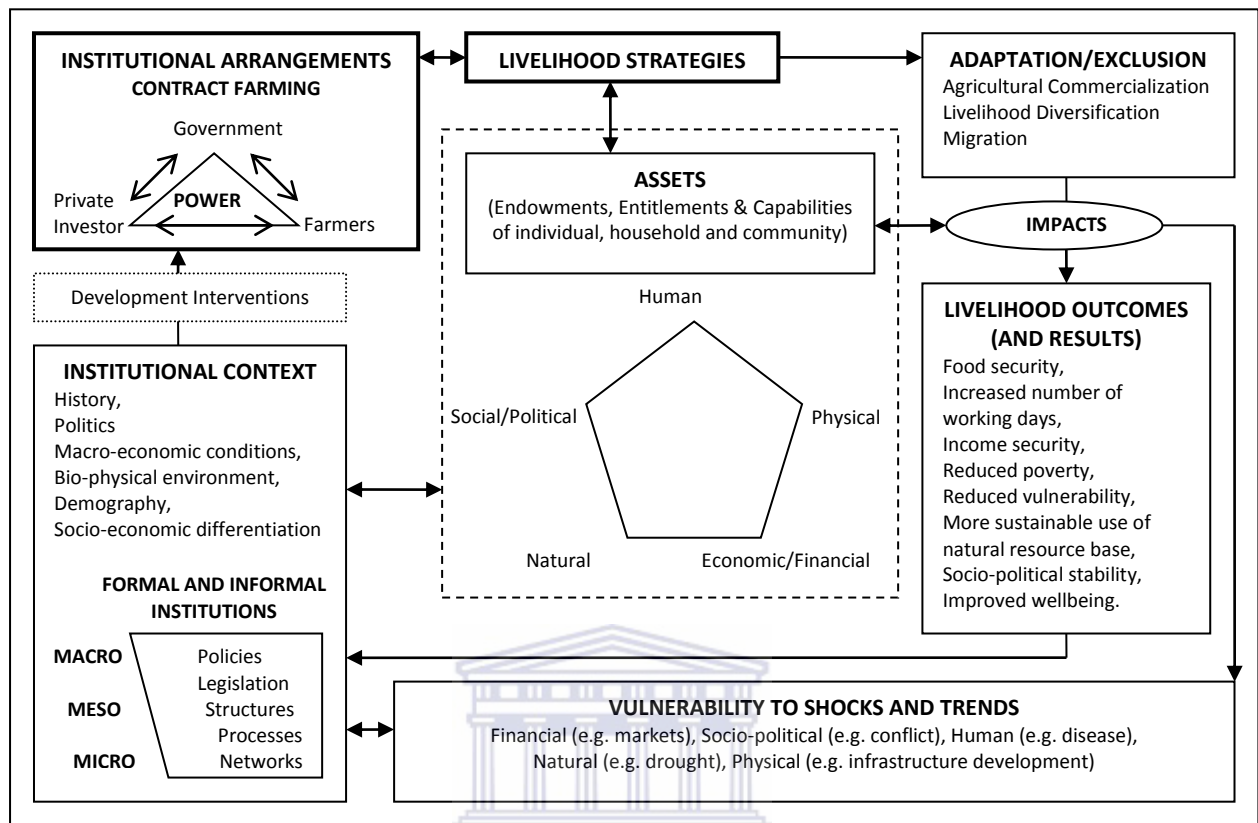


FIGURE 2 SUSTAINABLE LIVELIHOODS FRAMEWORK

1.4.3.1 Contexts, Conditions and Trends

‘Context’ referred to the historical, political, policy, legislative, programmatic, macro-economic, environmental, demographic, economic and social backdrop against which RESIS Programme era contractual joint ventures and strategic partnerships have emerged in smallholder irrigation schemes in Limpopo Province. Since these contractual arrangements intersected with livelihoods of people living in irrigation scheme communities, institutional context encompassed ‘livelihood contexts’, which is the totality of people’s surroundings. The study analysed institutional and livelihood contexts, conditions and trends.

1.4.3.2 Livelihood Assets

Livelihood assets are also synonymously termed ‘resources’ or ‘capitals’. In explaining the meaning of ‘resource’, Zimmermann (1971 in Mitchell, 1979) states that resources “are not,

they *become*; they are not static but expand and contract in response to human wants and human action". According to Omara-Ojungu (1992), Zimmermann's philosophical view is that objects or attributes become resources when they are considered to be capable of satisfying human needs and objectives. Amenability to human use rather than mere physical presence therefore appears to be a key underlying criterion guiding definitions of livelihood resources or assets. The study considered therefore that livelihoods assets broadly refer to the endowments, entitlements and capabilities available to individuals, households and communities.

Livelihood assets are often classified into five main types namely, natural, physical, human, social and economic or financial assets (Table 2). 'Natural' assets refer to natural 'stocks', such as land, water, soils and genetic resources, and environmental 'services', such as the hydrological cycle, nutrient cycling and pollution sinks (Scoones, 1998). 'Physical' assets include irrigation infrastructure, housing, electricity, roads and fences, among others. 'Financial' assets include, for example, incomes, savings and access to credit. 'Human' assets refer to knowledge, information, skills, labour, culture, sound health and similar attributes. 'Social' capital or assets include extent of social organization, social cohesion and social relations such as kinship, friendship, membership of interest groups and, in particular, access to networks and platforms for socio-political engagement and collective action, among others.

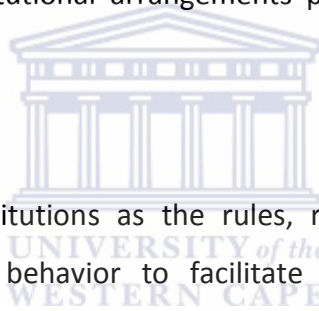
TABLE 2 TYPES OF LIVELIHOOD ASSETS

Type of Resource	Description
Natural	Natural <i>stocks</i> , such as soil, water, air and genetic resources, and environmental <i>services</i> , such as the hydrological cycle and pollution sinks.
Physical	Physical infrastructure, such as irrigation, housing, roads, communications, power supplies.
Human	Skills, knowledge, ability to labour, good health and physical capability.
Social	Social cohesion, conflict resolution, customs, social networks.
Economic or Financial	Cash, credit or debt, savings, borrowing; Input and labour costs, demand; Credit and financial management; Market prices, stability and transaction costs

Source: Adapted from Scoones (1998) and Lankford (2003)

The study considered that all five types of assets were critical components of rural people's 'baskets' of diverse livelihood strategies. However, for rural individuals, households, communities and smallholders among these, social capital was particularly important. Social

capital included social organization, social cohesion, conflict resolution, customs and social networks. Combined with other livelihood assets, social capital contributed to the effectiveness of engagements with diverse stakeholder interests and power dynamics, and the ability of people to claim their rights, access their entitlements, enhance their capabilities, exercise freedoms of choice, obtain desired outcomes and reduce their vulnerability to shocks and trends. Through access to platforms for socio-political engagement and collective action, social capital potentially strengthened the reckoning position of the rural poor against domination by the more powerful local elites and external agents, who might collude to capture access to bases of productive wealth and social power. In each case study site, individual, household and community profiles were constructed and analysis was made of livelihood assets, trade-offs, combinations, sequences and trends. Such analysis took into account the background contexts, conditions and trends as well as institutions and institutional arrangements pertaining to adopted agricultural commercialization approaches.



1.4.3.3 Institutions

Institutional theory defines institutions as the rules, regulations and conventions that impose constraints to human behavior to facilitate collective action (North, 1990). Institutions “provide stability and meaning to social behavior”, operate at multiple levels of jurisdictions and are transported by various carriers, such as cultures, structures and routines (Scott, 1995). By providing structure and stability to social relations and access to bases of social power and productive wealth, institutions determine the endowments, entitlements and capabilities of local communities and households. Institutions operate at multiple levels of jurisdictions and are transported by various carriers, such as cultures, structures and routines (Scott, 1995).

The term ‘institution’ in the study broadly referred to formal and informal frameworks, structures and networks. Institutional frameworks included policies, legislation, guidelines, regulations, rules, norms and standards, which range from local, provincial, national and regional to global level. Institutional structures included relevant government departments, non-governmental organizations (NGOs), municipalities, private investors, civic society

organizations (CSOs), traditional leadership structures and community based organizations (CBOs) and farmers' associations.

At smallholder irrigation scheme level, informal institutions also included unwritten and/or uncodified rules, norms and standards, such as *de facto* rules and practices regarding access to resources, which fall outside the ambit of formal legislation and customary rules but are widely recognized as legitimate by members of local communities. While some of these were rooted in long-standing traditional governance systems and cultural rules and norms, others were routinely crafted by people as they grappled with day-to-day social challenges and uncertainty.

The study recognized that while institutions are intended to provide stability and structure, power dynamics could result in institutions positively or negatively affecting livelihood assets, strategies, outcomes and vulnerability to shocks and trends, particularly for people at the local level. Conversely, affected people could use their assets and agency to influence institutions, provided they possess sufficient assets and, in particular secure rights.

The study also recognized that the multiple levels of institutional jurisdictions and the diversity of stakeholders implied that, within smallholder irrigation scheme contexts, there could be coexistence of plural formal and formal institutions. Such pluralism could lead to convergence or disjuncture between local and externally-driven institutional arrangements.

1.4.3.4 Institutional Arrangements

'Institutional arrangements' refer to organizational systems, processes, procedures and mechanisms. The study was particularly interested in institutional arrangements pertaining to agricultural commercialization and, in particular, contractual joint ventures and strategic partnerships. Specific attention was given to the analysis of contracts governing relationships between petty commodity producers and private investors. Beyond these agents, the study also examined the ways in which such contracts affected subsistence farmers and others within local communities. This latter analysis was informed by insights about linkages between farm-based and non-farm incomes (Reardon et al, 2001; Ellis, 1998) and that "...extremely poor people live in rural areas and have livelihoods which are bound closely to smallholder agriculture as farmers, labourers, transporters, marketers and

processors of produce and as suppliers of non-agricultural services to households whose income is principally agriculture-derived” (Kydd, 2002:1). Effectively, therefore, the effect of contracts extended beyond the contracting agents.

1.4.3.5 Livelihood Strategies

Livelihood strategies refer to the tactics that people use to safeguard themselves against vulnerability to risks (Ellis, 1998). In agrarian contexts, such strategies include agricultural intensification or extensification, livelihood diversification and migration (Scoones, 1998). The efficacy of risk-averse strategies depends on livelihood assets and institutions that they interact with (Chapman & Tripp, 2004).

The notion of diversification helped the study to conceptualize how rural people behaved in response to perceived risks associated with contractual joint ventures and strategic partnerships. Diversification, according to Bryceson’s (2000 in Chapman & Tripp, 2004) typology, is characterized by three main types of activities. These are, firstly, ‘local services’ that are commonly provided in remote areas, such as beer brewing and brick making; secondly, ‘trade’ of both agricultural and manufactured products that occurs between rural and urban areas; and thirdly, ‘transfer payments’, which in areas with mobile populations working in both rural and urban areas includes remittances and pensions from absent family members.

1.4.3.7 Vulnerability to Shocks and Trends

Although various attempts have been made to define and capture the meaning of ‘vulnerability’, there is no universally accepted single definition (Du Toit & Ziervogel, 2004). However, it is possible to distinguish between two broad categories of definitions namely, those that are depoliticised and technicist, on the one hand, and those that are grounded in political economy and/or political ecology. It is important to highlight this distinction so as to avert the possible pitfall of viewing vulnerability of the rural poor as ‘something that is only perpetuated by the processes and dynamics that can be grasped at the micro-level of individual or household level resources or strategies’ (Du Toit & Ziervogel, 2005). Such processes are themselves sustained and perpetuated by the broader and thoroughly historical systems of social relations in which they are embedded (Ibid.). In light of this, the assertion by this thesis is that definitions of vulnerability in the context of historically

marginalized South African communities, such as those associated with smallholder irrigation schemes in Limpopo Province, necessarily have to take cognizance of the historical and contemporary political economy and political ecology underpinning much of the evident vulnerability within livelihood systems in impoverished contexts. Such an approach enables a clearer articulation of the linkage and interactions between the micro-level of individual or household level resources or strategies and meso- and macro-levels of policy, planning and resource allocation.

At a very basic level, Chambers (1989) provides a simplified definition that “Vulnerability refers to exposure to contingencies and stress and difficulty in coping with them...” Chambers distinguishes between two facets of vulnerability namely, an ‘external side of risks, shocks and stress to which an individual or household is subject’ and an ‘internal side which is defenselessness, meaning a lack of means to cope without damaging loss’. External vulnerability refers to the structural elements that determine sensitivity and risk to exposure (Moser, 1998 in Hart, 2009), whereas internal vulnerability concerns the ability of households to respond and cope with stressors and the actions required to overcome, or at least reduce, the undesirable effects of exposure to processes of environmental, economic, political and social change (Bohle, 2001 in Hart, 2009).

From the perspective of vulnerability to global climatic change, Liverman (1990) distinguishes between two broad strands of definitions, wherein vulnerability is defined as a biophysical condition and as an aspect of political economy. The former class of definitions considers the most vulnerable people to be those who live in the most precarious physical environments. In Malthusianist fashion, such definitions link the problem to demographic drivers, such as population growth and attendant resource demands, which exceed the ‘carrying capacity’ of given landscapes. The latter class of definitions provide a strong critique of both physical and demographic determinism. Liverman states that this political economy or neo-Marxist framework defines vulnerability in terms of the political, social and economic conditions. From this perspective, Susman et al (1984 in Ibid.) define vulnerability as “the degree to which different classes in society are differentially at risk”. Proponents of the political economy definition employ the theory of social marginalization to demonstrate how underdevelopment (i.e. flows of resources out of a region, land expropriations,

exploitative labour conditions, political oppression, and other processes associated with colonialism and capitalism has made people, especially the poor, to more vulnerable and forced them to degrade their environments (p. 30). As Liverman points out, such critique resonates with similar views expressed with respect to vulnerability to the 1972 Sahel drought (e.g. Darkoh, 1996).

Du Toit & Ziervogel (2005) assert that vulnerability cannot simply be understood, as econometric studies sometimes do (e.g. Borat et al 2001 in *ibid.*), in terms of poverty-sensitive segmentation of the labour market in order to identify who is 'vulnerable to poverty'. Such an approach is highly non-dynamic and misses the longitudinal and temporal aspects of vulnerability, reducing it simply to the likelihood of someone being in a particular income segment at a particular moment. Du Toit & Ziervogel (*ibid.*) assert that a much more rigorous approach comes from the literature on natural hazards and epidemiology, within which scholars argue that vulnerability needs to be understood as a condition of exposure and sensitivity to shocks and stresses - it characterises those who are 'at the tipping point,' where a small push can cause an irreversible or hard-to-recover-from decline in welfare (Devereux 2002 in *Ibid.*; Alwang et al 2001 in *Ibid.*). Furthermore, the scholars argue that vulnerability is best conceptualised as a property of systems or networks, not individuals, and hence reference to vulnerable groups effectively says something about the systems upon which they depend. Ultimately, such an approach to defining vulnerability is a complex judgement about the sensitivity of those networks to particular impacts and their resilience or the ability to recover (Du Toit & Ziervogel, 2004).

The study considered that the vulnerability of livelihood systems to possible negative effects of neo-liberal agricultural interventions can result in shocks and risks that test the resilience of affected livelihoods and possibly exacerbate the antecedent impacts of historical resource alienation and social marginalization. Risks and hazards were associated with the negative effects of exogenous agricultural commercialization policies, unequal power relations within contractual joint ventures and strategic partnerships, as well as the vulnerability profile of socially-differentiated individuals, households and communities. Vulnerability was conceptualized in terms of 'livelihood systems' within which petty

commodity producers, subsistence farmers and ordinary members of selected irrigation scheme communities lived, and particular attention was given to the poorest and most vulnerable individuals and groups.

1.4.3.8 Livelihood System

The UNDP (1999: 3) defines a livelihood system as a dynamic realm that integrates both the opportunities and assets available to a group of people for achieving their goals and aspirations as well as interactions with and exposure to a large range of beneficial or harmful ecological, social, economic and political influences that may help or hinder the group's capacity to make a living.

1.4.3.9 Conclusion

In outlining the foregoing Sustainable Livelihoods Framework, the study took cognizance of Scoones (2009) more recent critique of the application of the SLF and sustainable livelihoods approaches. Scoones decries the focus on 'capitals' and the 'asset pentagon' as an "unfortunate diversion" that kept the discussion firmly in the territory of economic analysis. He concedes that there were merits in the discussion about how assets could be combined, substituted and switched, with diverse portfolios emerging over time for different people in different places. Scoones also concedes that the discussion on how changes in natural capital could be linked to social and economic dimension was an important step forward and, similarly, advocacy of a broader view of assets. However, a problem was that it was the more instrumental economic focus that remained at the centre of the discussion and defined much of the subsequent interventions on the ground. Consequently, other critical work on sustainable livelihoods was sidelined. Such work stressed features such as the notion of institutions and organizations as mediating livelihood strategies and pathways, socio-cultural and political processes which explained how and why diverse asset inputs linked to strategies and outcomes. Such features were subject to power and politics and were the locus of questions of rights, access and governance. Implicit within Scoones's critique is a view that the elevation of economic perspectives detracted from contributions by an alternative explanatory angle that "emphasized complex processes requiring in-depth qualitative understandings of power, politics and institutions, and so a very different type of field research" (p. 178). The study made a conscious effort to adopt such dimension of the

SLF to examine agricultural commercialization and livelihoods in impoverished rural contexts.

1.4.4 POVERTY, POWER, AGENCY AND RIGHTS

Carney (2003) states that while poverty has many dimensions and causes, many of the world's poor lack power and influence. This can be a cause of poverty, since the voice of the poor is rarely heard in allocation decisions. Lack of power and influence can also be an aspect of poverty, since lack of voice is a condition of being poor (Ibid.). It can also be an effect of poverty, whereby low levels of human capital, in particular, can result in limited ability to exert influence (Ibid.). Carney's conception of power resonates with Bourdieu's (1992) concept of 'capital' and Giddens's (1979) concept of 'agency'.

According to Bourdieu (1992), economic, social, political and cultural forms of capital combine to confer power over instruments of production or reproduction. Giddens (1979) views power as agency or the capacity of an agent to make a difference. Contrary to views that power vests with dominant groups, subordinates possess counter-hegemonic power that they exercise through 'hidden transcripts' of offstage resistance (Scott, 1990). Subordinates can also exercise power by collectively mobilizing social capital to publicly engage with institutions on the need for change or claim socio-political power, entitlements and 'rights' of access to bases of social power and productive wealth (Tapela et al, 2011a).

Rights can be understood as "claims that have been legitimized through social structures and norms" (Norton & Moser 2001 in Carney, 2003). Rights approaches emphasize 'equity' (of treatment and opportunities, rather than of outcomes), inclusiveness, accountability and governance (Carney, 2003). Rights can strengthen local people's claim-making power and capacities (Dalal-Clayton, 1997). This thesis acknowledges the usefulness of rights-based approaches and concepts of capital and agency, but considers that these do not sufficiently resolve the problematic elevation of economic perspectives (Scoones, 2009). Such perspectives often interpret class differences in monetary terms under economic rationality, with wealth-based approaches emphasizing self-interested utility maximization through rent-seeking behaviour while welfarist approaches revolve around numerical metrics such as income. Since the income approach to well-being does not account for the diversity in human beings and for the heterogeneities of contingent circumstances (Grasso, 2002), there

is a need to further broaden the SLF to take into account other important dimensions to the flourishing of human well-being that income doesn't account for. These include health, education, social relationships, longevity, employment, environmental conditions, housing conditions (Grasso, 2002), as well as the governability of such dimensions.

Du Toit & Ziervogel (2005) provide a particularly useful analysis of meanings and understandings of poverty. The scholars allude to ongoing debates about the nature of poverty and the relation between monetary and 'capability' poverty. Their research on 'chronic poverty' highlights some of the key features of the local political economies and social power relations within which livelihoods are pursued. The scholars assert that understanding why poor people stay poor for long periods of time requires a close look at the underlying structural dimensions that may undermine people's attempts to escape poverty. Du Toit & Ziervogel assert that poor people have agency, but their agency is undermined through processes of poverty and vulnerability. These create a corrosive and dispiriting context that saps people's ability to make a lasting escape from poverty and undermines their ability to make use of whatever resources they do possess and also radically diminishes the circle of their impact on the world around them. Access to resources and capitals clearly also play a key role in shaping what kind of agency is open to poor people (Carter & May 2001 in Ibid.; Adato, Carter & May 2004 in Ibid.), but there also seems to be a crucial element contributed by the experience of poverty and the ways in which people understand, make sense of, and take on their lived conditions.

This section proceeds to complement the SLF with an overview of selected alternative explanatory viewpoints and frameworks namely, the Capability Approach, Entitlement Analysis and the Integrated Framework for Governability. These take cognizance of issues of poverty, power, agency and rights, as well as emphasize the complexity of institutional and livelihood structures, contexts and processes as well as require in-depth qualitative understandings of power, politics and institutions.

1.4.5 CAPABILITY APPROACH

Beginning with the 1979 *Tanner Lecture* on 'Equality of What?' delivered at Stanford University and, subsequently, in many articles and several books that tackle a range of economic, social and ethical questions, Professor Sen (1980; 1984; 1985; 1987; 1992; 1999)

has developed, refined and defended a framework that is directly concerned with human capability and freedom (Clark, 2005). Amartya Sen's Capability Approach (CA) has emerged as the leading alternative to standard economic frameworks for thinking about poverty, inequality and human development generally (Ibid.) and a critique of the largely utilitarian strand of thinking in welfare economics and welfarist approaches more generally (Ibid.; Mehta, 2006).

According to (Clark, 2005), the theoretical roots of the CA can be traced back to Aristotle, Classical Political Economy and Karl Marx, as well as more recent theoretical works, such as Rawls's *Theory of Justice* (1971) and his emphasis on 'self-respect' and access to primary goods (Sen 1992:8). From the start Sen acknowledged strong connections with Adam Smith's (1776) analysis of 'necessities' and living conditions and Karl Marx's (1844) concern with human freedom and emancipation. Later on Sen (1993:46) recognised that 'the most powerful conceptual connections' relate to Aristotle's theory of 'political distribution' and his analysis of *eudaimonia*, which is 'human flourishing' (Nussbaum, 1988; 1990). Conceptual foundations of the CA can be found in Sen's critiques of traditional welfare economics, which typically conflate well-being with either opulence (income, commodity command) or utility (happiness, desire fulfilment) (Mehta, 2006; Clark, 2005; Grasso, 2002).

Sen's approach clearly requires "a broader informational base, which focuses particularly on people's capability to choose the life they have reason to value" (Sen 1999:63 in Grasso, 2002), to highlight the social and economic factors which give them the opportunity to do, and to be what they consider valuable for their fulfilment (Grasso, 2002). As such, the CA focuses directly on the substantive 'freedoms' of the individuals involved. In this sense, therefore, Sen suggests that well-being (or the standard of living) should be considered in terms of human 'functionings' and 'capabilities' (Ibid.; Clark, 2005).

Clark explains that Sen begins by considering income or commodity command. Like Adam Smith, Sen (1983) emphasises that economic growth and the expansion of goods and services are necessary for human development. However, like Aristotle, he reiterates the familiar argument that 'wealth is evidently not the good we are seeking, for it is merely useful and for the sake of something else' (Sen, 1990, p.44). Sen therefore argues that in judging the quality of life we should consider what people are able to achieve. He then

observes that different people and societies typically *differ* in their capacity to convert income and commodities into valuable achievements. In comparing the well-being of different people, therefore, not enough information is provided by looking only at the commodities each can successfully command. Hence it is necessary to consider how well people are able to function with the goods and services at their disposal (Clark, 2005).

Functioning is an achievement of a person, in other words, what she or he manages to do or be (Clark, 2005). It reflects, as it were, a part of the 'state' of that person (Sen, 1985:10 in Ibid.). Functionings relate to what a person may value doing or being, they are the living conditions achieved by an individual and represent a set of interrelated activities and states ("doings" and "beings") that form her life (Grasso, 2002). Achieving a functioning with a given bundle of commodities depends on a range of personal and social factors (Clark, 2005). A functioning therefore refers to the use a person makes of the commodities at his or her command. Capability reflects a person's ability to achieve a given functioning (Saith, 2001:8 in Ibid.). In Marco Grasso's analysis, capabilities concern the ability of an individual to achieve different combinations of functionings, and define the freedom to choose the life that she prefers. Although these two concepts are complementary they are distinctly different in that a functioning is an achievement, whereas a capability is the ability to achieve. While functionings are more directly related to living conditions, capabilities are notions of freedom, in the positive sense, about "what real opportunities you have regarding the life you may lead" (Sen, 1987:36 in Grasso, 2002).

Given that capabilities refer to substantive 'freedoms' or the ability to choose the life one has reasons to value, the CA allows focus to go beyond the primary goods that an individual holds (after Rawls) and thereby embrace the characteristics that govern the conversion of commodities "into the person's ability to promote her ends" (Sen 1999:75 in Mehta, 2006). From such perspective, therefore, Sen's CA suggests that in order to overcome poverty and inequality, it is not sufficient for people to possess livelihood assets, endowments and capacities. What is critical is their ability to exercise substantive freedoms to turn such resources or commodities into functionings and capabilities (Grasso, 2002; Clark, 2005).

Capabilities also accommodate the diversity of human experiences and situations, as well as multidimensional understandings of poverty, inequality, wellbeing, development and

freedom (Mehta, 2006). For this thesis, the value of Sen's CA lies in its amenability to the development of a rigorous methodological approach to operationalize the study aim and objectives within the context of complexity in interactions between institutions and livelihoods. Indeed, a distinctive characteristic of Sen's CA is that it does not provide a formula or "path" to carry out welfare measurements and comparisons, and such 'incompleteness' approximates the ambiguity and complexity of human life and values (Grasso, 2002) and thereby allows for flexibility in the handling of diverse contexts. This is consistent with the widespread acceptance by economists nowadays that the traditional utilitarian notion of welfare can render only a partial picture of human well-being (Grasso, 2002) and that human development is interested not only in economic growth, but also in expanding human capabilities and in human choice (Anand & Sen 2000 in Mehta, 2006). Despite this, there persists a dominance of economic growth based approaches and rent-seeking behaviour in agricultural sector interventions within impoverished contexts (Bene et al, 2010). Meanwhile, welfarist approaches seem to continue to grapple with identifying effective ways of achieving alignment between institutional interventions and with local people's livelihood needs.

Clark's view (2005) is that the CA probably has the most in common with the Basic Needs Approach to development, which was pioneered by Paul Streeten et al (1981) and Frances Stewart (1985) among others. However, Sen argues that basic needs approaches tend to lapse into 'commodity fetishism'. While such argument is considered a valid criticism of the original formulation of basic needs, proponents of the latter generation of basic needs approaches have refuted the contention on the basis that the concept of basic needs was not centred on the possession of commodities. Despite this criticism, it is now widely recognised that the CA manages to bring together many of the concerns of basic needs theorists (originally expressed in a rather ad-hoc manner) into a single coherent philosophical framework (Clark, 2005). Furthermore, unlike the basic needs approaches, the CA extends beyond the analysis of poverty and deprivation and largely concerns itself with well-being generally. Alkire (2002:170 in Ibid.) observes that 'the single most important function of the CA is to make *explicit* some *implicit* assumptions in the basic needs approaches about the value of choice and participation (and the disvalue of coercion)'. In this regards, Sen's conceptualization of freedom is particularly useful.

Sen's concept of freedom involves "both the processes that allow freedom of action and decisions, and the actual opportunities that people have, given their personal and social circumstances" (Sen, 1999:17 in Boykoff, 2003). Sen devotes much attention to various interconnected elements of instrumental freedoms, concerned with "the way different kinds of rights, opportunities, and 'entitlements' contribute to the expansion of human freedom in general, and thus to promoting development" (Sen, 1999:37 in Ibid.).

1.4.6 ENTITLEMENTS ANALYSIS

According to Boykoff (2003), Amartya Sen first framed the concept of entitlements in his 1981 seminal work on *Poverty and Famines: An Essay on Entitlement and Deprivation*. This was written as an effort to expand upon and improve the narrow economic conceptions of hunger, famine and deprivation that dominated western development model perspectives. Sen challenged the 'conventional' conceptions of poverty (as food per capita) in his statement that "...starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there being not enough food to eat. While the latter can be cause of the former, it is but one of many possible causes..." (Sen, 1981:1). Sen further defined the exchange of entitlements as the trading for collections of commodities, or producing them, and the function that specifies the set of alternative commodity bundles that the person can command respectively for each 'endowment' bundle. Endowments referred to the ownership bundle. Such bundles were considered to be mediated and determined by many factors, including employment opportunities, race, caste, gender, and power inequality. At the time of Sen's postulation of the Entitlement Analysis, this was a significant departure from orthodox and hegemonic thinking regarding poverty. By placing activities such as food production within a network of relationships, Sen 'offered a new approach to poverty and deprivation analyses', which was effectively an entitlement and endowment approach (Boykoff, 2003).

From Sen's work, "entitlement" of an individual can be defined as the set of alternative commodity bundles that such person can acquire through legal means available in society. The entitlement approach considers that a person will go hungry if he or she fails to establish command over a commodity bundle with enough food. While the ways through which people establish command over a bundle of commodities vary in each society,

depending on the prevailing legal, political, social and economic environment, within a market economy a person's entitlements characteristically depend on two factors. Firstly, entitlements are governed by his endowment or initial ownership of resources, such as labor power or land. Secondly, they are determined by his 'exchange entitlement mapping', which is defined as the relation that specifies what he can acquire through exchange, be it in the form of trade (exchange with others) or production (exchange with nature), for each given endowment. Factors influencing a person's exchange entitlement mapping include, among others, employment opportunities, wage rate, the cost of productive resources, the value of what he can sell, the price of what he may wish to buy, social security and taxation provisions, among other things.

Boykoff (2003) observes that when Sen produced his seminal work of 1981, the scholar reflected on some of the limitations to his entitlement approach. He admitted that there were ambiguities in the specification of entitlements. These included, for example, the concentration on rights within the given legal structure in a society whereas some activities were illegal and the assumption that perfect information dictated people's food choices. Such limitations elicited much criticism, notably by scholars like Gore, who promoted a 'broadened extended entitlements analysis'. According to Boykoff, Gore contended that while Sen's philosophical arguments were sound, key shortcomings of his analysis made it incapable of adequately analyzing hunger and famine. Drawing from a range of literary works, Gore brought moral, ethical, and legal issues to the fore, along with gender issues and questions of access, in both theory and in practice. Among the eleven points of critiques and improvements that Gore suggested were the needs to pay more attention to illegal practice in entitlement analyses, to further analyze contestation and communication of meaning, to further explore the notion and practice of negotiation, and to adopt a more detailed disaggregated look at local level processes.

1.4.7 INTEGRATED FRAMEWORK FOR GOVERNABILITY

Du Toit (2005) observes that the landless unemployed, the marginal working class, workers and employers do not encounter each other as abstract *homo economicus* but as individuals and groups drawing in all their decision-making on cultural repertoires, political and ideological resources, frameworks of identity and assumptions thoroughly structured by

more than 300 years of violent, racist, exploitative and brutalising history. Such context necessarily has to be taken into account (e.g. Terreblanche, 1998; Makgetla 2004 in Du Toit, 2005; May, Carter & Padayachee 2004 in Du Toit, 2005). In light of observations such as this, the study considered that the complexity of South African institutional and livelihood contexts, structures, processes and interactions requires a thorough examination of issues of governance and 'governability' (Kooiman & Jentoft, 2009; Chuenpagdee & Jentoft, 2009; Kooiman, 2008). The governability of any societal system or entity is the propensity for its successful governance (Kooiman, 2008). The concept of governability can also be used as a methodological framework operationalizing governance efforts, deepening the systemic awareness of impact chains and designing analytical tools for assessing the impacts or effects of governance chains (Kooiman, 2008). An integrated focus on these two integrated and inter-linked concepts was seen as potentially able to strengthen the SLF's examination of the contexts of and interactions between institutions and livelihoods, thus yielding more useful results for policy and research.

The Integrated Framework for Governability (Figure 3) derives from lessons learnt in international contexts elsewhere about the failure of great policy and management efforts by public authorities to slow down the rate of resource depletion in 'common property resources' (CPR) contexts (Kooiman, 2008). Such lessons suggest that institutional failure is not only due to inadequate policies but also to the facts that the institutions formulating and implementing these policies are weak or lack capacity, and value bases of the various governance efforts are often contradictory (Ibid.). The governability framework is also informed by a growing realization that social, economic, ecological and cultural attributes of 'Systems-to-be-Governed' (SG) have become increasingly diverse, complex and dynamic, while 'Governance Systems' (GS) have become dispersed away from the traditional state centre and nested within hierarchical systems, resulting in a complex array of elements, orders and modes of State, Markets and Civil Society, as well as hybrid forms of these.

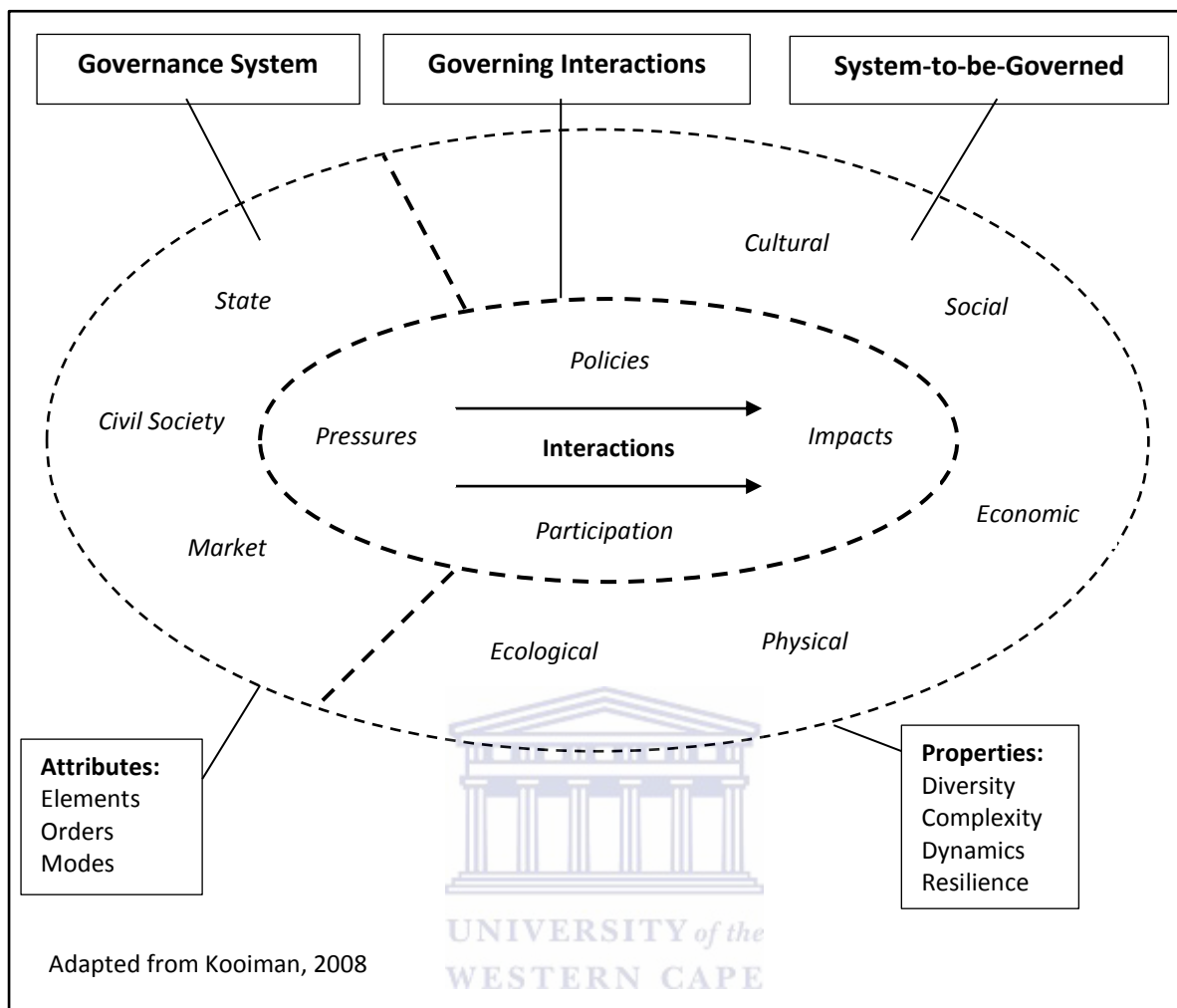


FIGURE 3 INTEGRATED FRAMEWORK FOR GOVERNABILITY

The GS perspective acknowledges that societies are governed by a combination of governing efforts from all kinds of actors and entities both public and non-public (Kooiman, 2003; Kooiman & Jentoft, 2009). It calls for the joint and interactive responsibilities of state, market and civil society and proposes a shift from *problem-solving* approach to approaches that emphasize *opportunity creation* and the effective handling of the tensions that arise within the natural resource systems (Kooiman & Bavinck, 2005). The governance perspective also acknowledges that natural resource systems are characterized by ‘diversity’, ‘complexity’ and ‘dynamics’ (Kooiman & Jentoft, 2009; Kooiman & Bavinck, 2005). The Governance System (GS) approach is commonly seen as conducive to addressing these challenges and concerns in order achieve positive outcomes in terms of healthy ecosystems, improved justice, improved livelihoods, and better food security.

Furthermore, lessons show that Interactions between SG and GS are a basic element of Governance (GI) (Kooiman, 2008). Modalities of GI include participation, collaborations (e.g. partnerships), and policy and management interactions. The manner in which these arrangements are formulated and implemented determines governance outcomes, in terms of Pressures and Impacts on sub-systems of the System-to-be-Governed (i.e. social, economic, ecological and cultural sub-systems) and sub-systems of the Governance System (i.e. the State, Markets and Civil Society) (Ibid.). Governability is therefore the sum of all three aspects namely, GS, SG and GI, whose contributions vary. Although the study examined all three aspects of governability, particular attention was given to GI with agricultural commercialization interventions in smallholder irrigation schemes in Limpopo Province.

Critically for the study was the observation that power relationships and socio-political cultural traditions find their expression in Governance Interactions (Kooiman & Jentoft, 2009; Chuenpagdee & Jentoft, 2009; Kooiman, 2008). From such perspective, it was therefore important to develop understandings about three key modalities, among others, which relate to institutions and livelihoods. Firstly, how socio-political entities (often termed 'stakeholders') participate in governing interactions. Secondly, why collaborative forms of governance are growing, wherein socio-political entities are willing to do things together instead of doing them alone, including cases where shared motives are evident (e.g. interdependence) and where motives differ (e.g. partnerships between companies and farmers' organizations). Thirdly, it was important to develop clear understandings that policies and 'management' are key collective variables for all hierarchical interactions; policies being the frameworks that public authorities at all levels use to bring about politically preferred change; while management is a means of organizing interactions according to criteria of 'effectiveness' and 'efficiency' (e.g. through interventionist tools like 'Stakeholder Identification').

1.5 METHODOLOGY

1.5.1 INTRODUCTION

The study adopted an empirical approach to examine the interaction between livelihoods and agricultural commercialization, as articulated mainly through contractual joint ventures

and strategic partnerships, in smallholder irrigation schemes. Particular attention was given to contract farming arrangements under the RESIS Programme and similar initiatives in two poverty nodes identified by the ISRDP. Case study sites for in-depth research included Hereford and Phetwane Irrigation Schemes in Greater Sekhukhune District and Makuleke Irrigation Scheme in Vhembe District (Figure 4).

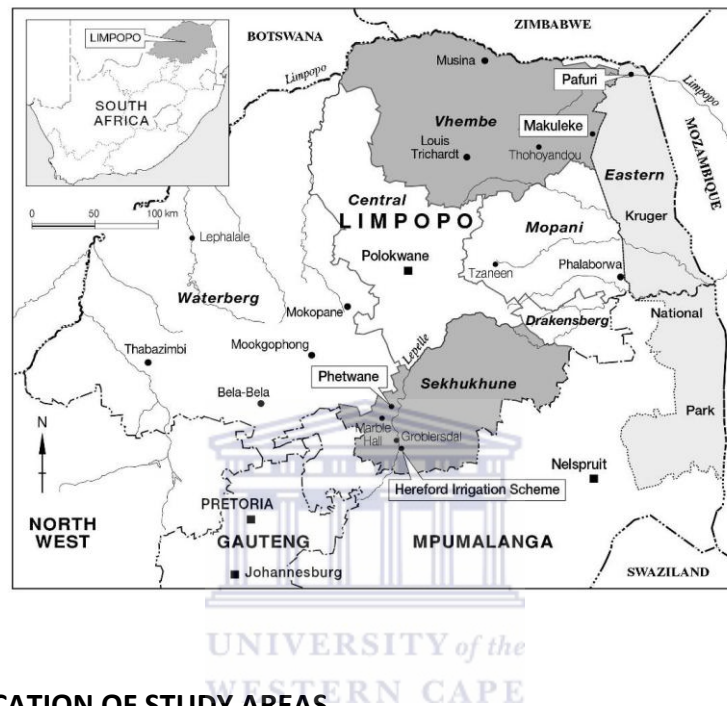


FIGURE 4 LOCATION OF STUDY AREAS

1.5.2 RESEARCH FRAMEWORK

Towards operationalizing research objectives, the research framework (Figure 5) was centred on two axes of enquiry namely: institutional arrangements and livelihoods. The research examined the institutional and livelihood *context* for the resurgence of contract farming; *institutional arrangements* for joint ventures and strategic partnerships; and effects of agricultural commercialization initiatives on *livelihoods* of petty commodity producers, subsistence farmers and other people in local communities. The study also identified key *policy and institutional issues*. Such examination was predicated on a review of pertinent literature as well as detailed analyses and rapid appraisals of livelihood portfolios and strategies in selected case study sites. Site selection criteria included targeting of site for revitalization and agricultural commercialization, existence of joint

ventures and/or strategic partnerships, representativity and geographic location within an identified ISRDP poverty node, whether or not such site was gazetted.

The study adopted a two-tier approach to empirically examine smallholder irrigation schemes in two poverty nodes identified by the erstwhile ISRDP in Limpopo Province, specifically, Greater Sekhukhune and Vhembe Districts. From October 2003 to March 2009, in-depth research revolved around three case studies namely, Hereford and Phetwane Irrigation Schemes in Greater Sekhukhune District and Makuleke Irrigation Scheme in Vhembe District. These sites were purposively selected on the basis of literature review findings, feasibility survey and consultations with actors in key stakeholder institutions. From May 2008 to April 2009, in-depth research was complemented by rapid appraisals of an additional five similar cases within Greater Sekhukhune District. These were Elandskraal-Balemi/EBIS, Elandskraal-Kgotlelelo, Tswelelopele, Strydkraal A and Krokodilheuwel. Such longitudinal and 'dispersed intensive' method of micro-level investigation enabled the livelihoods research to transcend, to a certain extent, the boundaries of time and space (according to Murray, 2002). The research method was combined with deliberate efforts to link the terms of reference of the study to prevailing policy processes and political contexts, in a bid to offer evidence-based recommendations for appropriate strategies of state intervention. However, the extent to which the research could influence policy depended on a much more complex set of factors that were largely beyond the scope of the study.

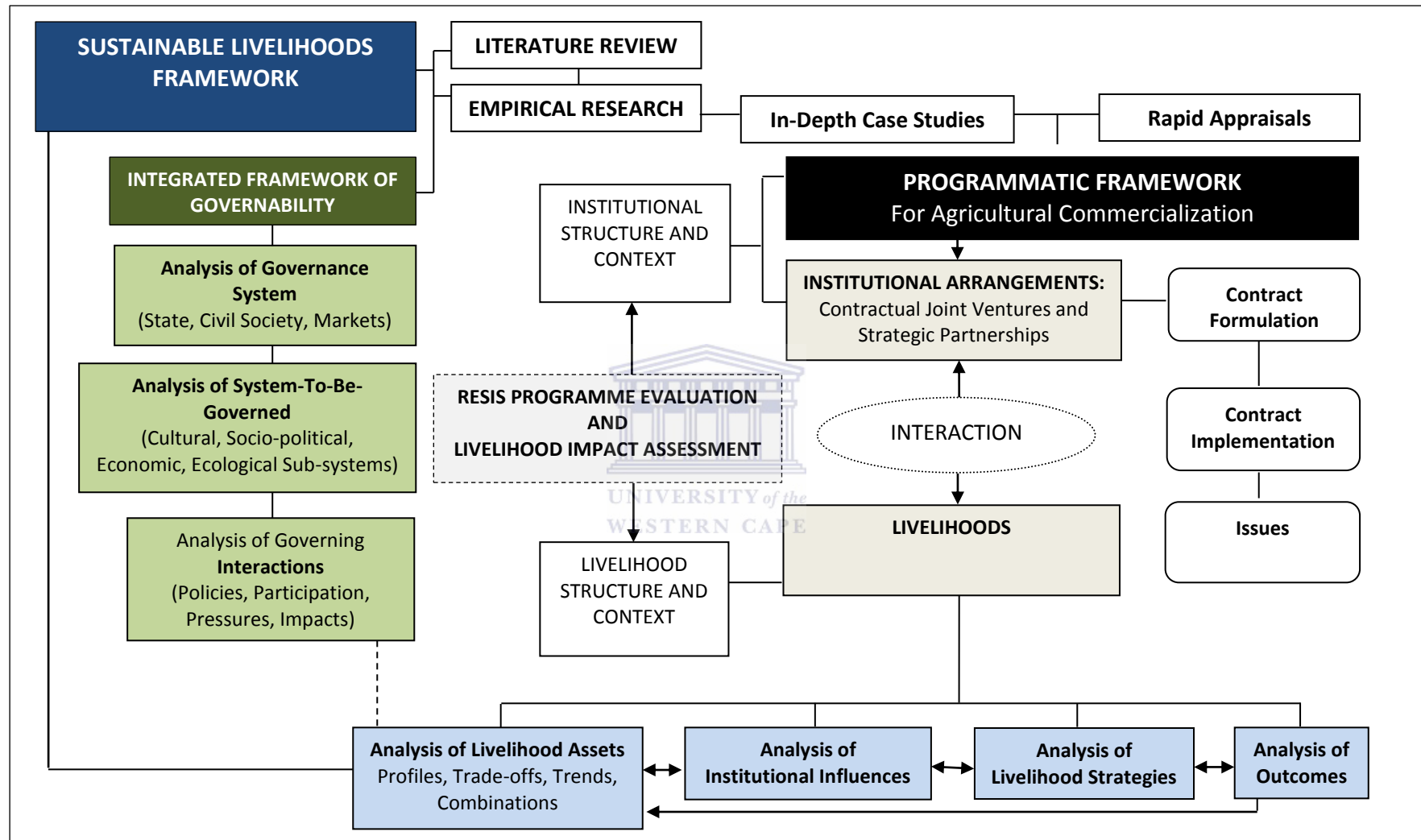


FIGURE 5 RESEARCH FRAMEWORK

The rationale for the two-tier research approach was that, while rapid appraisals of a relatively large number of cases afforded the broad overview needed to make generalized inferences, the likelihood that such appraisals might miss critical nuances and thereby fall short of providing clear understandings of issues necessitated in-depth research on a narrower selection of case studies.

1.5.3 DATA COLLECTION

A principle that guided the research was that data collection should result in clearer understandings of the intersection between agricultural commercialization, contract farming arrangements and rural livelihoods. This required investments in time and other resources for in-depth data collection, analysis and triangulation. The researcher developed a common framework for the collection and handling of data in ways that enabled comparisons across different case study contexts. The framework was flexible enough to allow the research to effectively respond to context-specific requirements and peculiarities. Since effects of externally-induced interventions, such as agricultural commercialization, often traverse a broader range of livelihoods than those pertaining to petty commodity producers within joint venture and strategic partnership entities, data collection was extended to subsistence food producers and other members of irrigation scheme communities.

Primary and secondary methods were used to collect qualitative and quantitative data. Secondary data sources included maps, historical records, community records, published and unpublished scientific and popular papers, research reports, statistical survey reports, municipal integrated development plans (IDPs) and documents compiled by government institutions, private investors, NGOs, project implementing agents (PIAs), professional service providers (PSPs) and other identified stakeholders. For joint ventures and strategic partnerships, secondary data sources included official records, business plans, project reports, constitutions of smallholder organizations, joint venture and strategic partnership contracts and, where available, financial records. Primary data sources generally included direct observation, questionnaire surveys, in-depth and semi-structured interviews with key resource persons and respondents, informal conversations, workshops and focus group discussions. At local community and interest group levels, primary research relied on

Participatory Rural Appraisal (PRA) techniques, such as oral testimony, geographical mapping, issues mapping, time lines, trend lines, field surveys, focus group discussions and community workshops.

For in-depth primary research, data collection was staggered into two phases. The initial phase involved collection of baseline data on livelihood profiles using questionnaire surveys. The second phase entailed in-depth interviews, focus group discussions and workshops with a limited number of purposively selected key resource persons and respondents from the entire community spectrum. This strategy enabled views and voices of women, the youth and the poorest and most vulnerable people to be heard, alongside views of petty commodity producers and the more vocal and powerful members of the community.

An adapted version of the PLAAS Chronic Poverty Questionnaire (see Appendix 1) was used to collect data at the household unit of analysis. The questionnaire enabled compilation of individual and collective livelihood profiles, and disaggregation of data according to gender, age, literacy, employment and income. However, the scale at which questionnaire data was collected meant that livelihood profiles could only be generalized overviews. Data collection in the second phase therefore sought to elicit, through in-depth interviews and primary observation, in-depth understandings and greater nuances on livelihoods. The second phase also attempted to triangulate information gathered within the three irrigation schemes with data possessed by externally-based institutions. Such triangulation entailed surveys of secondary data sources, such as official records, reports and municipal integrated development plans (IDPs), as well as interviews with key resource persons from formal institutional structures.

A challenge was that the questionnaire survey often could not pick up discrepancies in income data. For example, there were instances of discrepancy between income sources and disclosed livelihood strategies. There were also discrepancies between disclosed incomes and actual expenditure, particularly in cases where the latter significantly exceeded the former. Although probing questions were asked during questionnaire administration, respondents sometimes did not provide sufficient explanation. Clarity was often obtained much later on, when sufficient trust had been established between respondents and the researcher.

A second challenge related to inevitable deviations from questionnaire survey plans, particularly the intention to survey entire (100 per cent) populations of Hereford and Phetwane Irrigation Schemes. This level was achieved only in Hereford, which had a relatively small population (32) of households that 'straddled' the irrigation scheme and villages elsewhere in the rural hinterland. In Phetwane, 72 per cent of all households and 98 per cent of smallholder households were surveyed. Constraints were largely due to absence of prospective respondents, owing to labour migration, commuting and other reasons. In Makuleke, the survey covered all (100 per cent) of petty commodity producers (locally termed "commercial plotters"), 16 per cent of subsistence food producers and a consortium (100 per cent) of four commercial vegetable producers. Except for the consortium, which was initially invisible or hidden at research planning stage, the Makuleke survey met the planned objectives of 100 per cent of petty commodity producers and between 15 per cent and 20 per cent of subsistence food producers. The rationale here was that the study should not exacerbate the observed research fatigue in the community, which was due to the plethora of studies and research tourism that followed the settlement of a land restitution claim against the South African National Parks Board (SANParks) in 1998.



1.5.4 ANALYTICAL METHODS

Various methods were used to analyse qualitative and quantitative data. Among these, this thesis highlights Stakeholder Analysis.

1.5.4.1 Stakeholder Analysis and Participation

Stakeholder Analysis (ODA, 1995; Bryson, 2003; World Bank, 1996) was found particularly useful for identifying, characterizing and engaging with various categories of stakeholders. The methodology helped to develop clearer understandings of stakeholder interests, capacities, resources, roles, responsibilities, relationships, priority, power and influence, issues and modes of 'participation' (see Table 2 for typology). Stakeholder Analysis clarified the dynamics around 'power' and 'influence', which determine decisions around adopted interventions, institutional arrangements and who gets included, excluded and/or adversely included in what benefit stream or decision making platform. Stakeholder Analysis also assisted the researcher to structure and adapt the study on an on-going basis, depending

on emerging issues, insights, needs and other circumstances. For enhanced rigour, Stakeholder Analysis was closely interwoven with elements of the Capability Approach and Entitlements Analysis framework (Sen, 1981, 1984, 1999; Gasper, 1984; Nussbaum, 2003).

A 'stakeholder' was defined as an interested individual, group or institution that may or may not be affected by decisions or actions pertaining to interventions and contractual arrangements within selected smallholder irrigation schemes, and may or may not be part of decision-making about such interventions arrangements. 'Primary stakeholders' were those ultimately affected, either positively (i.e. beneficiaries) or negatively (i.e. losers) by decisions or actions pertaining to agricultural commercialization and contractual arrangements. 'Secondary stakeholders' were the intermediaries in the project design and implementation processes. 'Key stakeholders' were those who could significantly influence, or were important to the success of a project. These definitions included winners and losers, as well as those involved or excluded from decision making processes.

'Participation' has been variously defined. For the study, useful definitions included, firstly, Cernea's (1985) definition that participation is "Empowering people to mobilize their own capacities, be social actors rather than passive subjects, manage resources, make decisions, and control decisions that affect their lives..." A second definition was the World Bank's (1998) definition that participation is "a process through which stakeholders influence and share control over development initiatives and the decisions and resources which affect them..." A third useful definition was the Southern African Sustainable Use Study Group's (SASUSG, 1997) definition that participation is "The process whereby all valid stakeholders are able to pursue their interests with a minimum of mutually subtractive influences..." It was noted that while these definitions emanated from varying ideological perspectives and institutional objectives, the rhetoric was broadly resonant.

The diversity of stakeholders required clear understandings of modes of participation with respect both to contract farming arrangements and the study's research process. For such insights, the study drew from Pimbert & Pretty's (1994 in IIED, 1994:19) Typology of Participation (Table 3). The typology provides clear definitions of various modes of participation. Combined with Stakeholder Analysis and elements of the Capability Approach,

Entitlements Analysis and the Integrated Framework for Governability (Figure 3), the typology strengthened the analysis of observed phenomena as well as the research process.

TABLE 3 **TYPOLGY OF PARTICIPATION**

Typology	Components of each Type
Passive Participation	People participate by being told what is going to happen or has happened. It is a unilateral announcement by an administration or project management without any listening to peoples' responses. The information being shared belongs only to external professionals.
Participation in information giving	People participate by giving answers to questions posed by extractive researchers and project managers using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research or project design are neither shared nor checked for accuracy.
Participation by Consultation	People participate by being consulted, and external agents listen to views. These external agents define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process does not concede any share of decision-making and professionals are under no obligation to take on board people's views.
Participation for material incentives	People participate by providing resources, for example labour, in return for food, cash, or other material incentives. Much <i>in situ</i> research falls in this category, as rural people provide the fields but are not involved in the experimentation or process of learning. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentives end.
Functional Participation	People participate by forming groups to meet pre-determined objectives related to the project, which can involve the development or promotion of externally initiated social organisation. Such involvement does not tend to be at early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external structures, but may become independent in time.
Interactive participation	People participate in joint analysis, which leads to action plans and the formation of new local groups or the strengthening of existing ones. It tends to involve interdisciplinary methods that seek multiple perspectives and make use of systematic and structured learning processes. These groups take control over local decisions, so that people have a stake in maintaining structures or practices.
Self-mobilisation/ active participation	People participate by taking initiatives independent of external institutions to change systems. Such self-initiated mobilisation and collective action may or may not challenge existing distributions of power and wealth.
Source: Pimbert and Pretty (1994 in IIED, 1994:19)	

1.5.4.2 Gender Analysis

Gender Analysis related to similarities and differences between women and men at the community level in terms of access to decision-making, land rights, benefits and costs deriving from agricultural commercialization and capacity building within joint ventures and strategic partnerships. Gender Analysis went beyond issues of equity by attempting to make explicit the opportunities and constraints that affected the ability of women and men to respond to joint ventures and strategic partnetships. The analysis also examined the ways in

which women and men perceived the usefulness of agricultural commercialization initiatives.

1.5.5 CHALLENGES ENCOUNTERED DURING RESEARCH

1.5.5.1 Issue of Relevance

An important underlying principle for the study was that the research should be relevant to policy. A difficulty was that the study emerged independent of formal institutional processes for agricultural commercialization. Despite this, the researcher made a conscious effort to secure support from selected key stakeholders. Stakeholder Analysis was a useful tool for this. Individual consultations were held with a number of institutional actors prior to site selection. Although the researcher assumed ultimate responsibility for the selection of specific sites for in-depth study, there was broad consensus on the selected sites. By contrast, site selection for the rapid appraisals relied largely on collective decision making and expediency. The reason was that, owing to the study's logistical constraints, appraisals necessarily had to "piggy back" on external funding and processes by institutional stakeholders within the researcher's informal 'core support group'. This concession did not pose any difficulty though, since site selection criteria closely approximated the criteria earlier used by the researcher to select sites for in-depth research.

Another difficulty was that significant financial resources were required to fund a study that was deep and broad enough to be of relevance to policy and practice. The study began with funding to examine two in-depth case studies namely, Hereford and Phetwane. However, these two cases were too limited to be representative of the nationwide RESIS Programme, which in Limpopo encompassed more than 126 smallholder irrigation schemes. Towards enhanced rigour, therefore, the researcher sought and obtained additional funding to cover in-depth research on a third case study namely, Makuleke. In-depth case studies provided the desired richness of data, owing to time spent and trust relationships built over relatively longer time. However, contestations in Makuleke, Phetwane and Hereford posed threats and required adaptation of the research design in order to secure the requisite research space. Furthermore, results of these studies could not be sufficiently extrapolated to a broader scale. For greater representativity and relevance, there was a need to complement in-depth research with a rapid appraisal of a number of similar cases.

PLAAS provided valuable assistance in availing a large proportion of funding, mostly from the Norwegian Centre for Human Rights (NCHR), and strengthening links with the International Water Management Institution (IWMI). The researcher obtained further support from key stakeholders within a 'core support group' composed of intermediary institutions namely, the Water Research Commission (WRC), IWMI and, for the special case of Makuleke¹, the Transboundary Protected Areas Research Initiative (TPARI). Through these organizations, the researcher mobilized additional research funding, convened workshops and actively engaged with stakeholders, particularly smallholders and rural communities. Such strategy accelerated the process of data collection, particularly for rapid appraisals, and enabled the researcher to meaningfully engage with stakeholders who would otherwise have been difficult to access. For example, where study sites were characterized by contestations, such as in Makuleke, the research became subject to the danger of being cast into particular 'camps' merely on the basis of the researcher having communicated with certain persons belonging to those camps. TPARI-funded community engagement workshops enabled the researcher to bring all key local stakeholders to one platform, facilitate discussions about relational issues between researchers and researched communities, reach a consensus on acceptable protocols of engagement and thereby obtain collective commitment of support.

1.5.5.2 Issue of Bureaucracy

A challenge was that bureaucratic red tape often encumbered communication and information flow between the researcher and stakeholders identified for the core support group. Officials often required the researcher to submit prior formal requests for information and superiors from above to give authorisation for them to provide it. Despite measures to formally inform key decision makers about the research and to request support, responses varied according to specific circumstances during programme processes and personal disposition of individual officials. Consequently, certain key documents were either delayed or inaccessible to research for reasons that were sometimes unclear. Furthermore, while some of the government officials were helpful others did not feel obliged to support the research. A few of the latter cited the government's Performance

¹ Makuleke case was special in the sense that the community was considered and considered itself to have been 'over-researched' owing to the precedent-setting 1998 Settlement Agreement with the South African National Parks (SANParks) Board, following their restitution claim for land within the Kruger National Park.

Management System (PMS) as a hindrance to time spent attending to research issues, which were not part of their Key Performance Areas (KPA) and therefore not recognized by accounting systems. The net effect of such constraints was that the research process often became bogged down by insufficient information.

1.5.5.3 Ethical Issues

The study was underpinned by an awareness of the ethical imperative for research to avoid entrenching the legacy of historical injustices in rural communities. These included the undermining of rural people's rights and freedoms, silencing of local voices, extractive research practice and lack of accountability. The following principles therefore guided the research:

- Principle of respect
- Principle of historical awareness
- Principle of reciprocity, mutual benefit and equitable sharing
- Principle of process
- Principle of full disclosure
- Principle of differential needs and objectives
- Principle of communication and due acknowledgement
- Principle of acknowledgement of different types of knowledge

During the course of research, the researcher found it necessary to strengthen the proposed ethics of the study. This was due to observations that power dynamics, contestations and a general sense of disillusionment about prospects for amelioration of deprivation were increasing in most of the study sites. The last phenomenon seemed to be related to the broader national wave of violent social protests that gripped mostly urban informal localities and were highly publicized in the media (Tapela et al, 2011a). Although the likelihood of violent rural protests was low, there was a real danger that research could inadvertently be caught up in or contribute to local challenges.

Towards developing common understandings, local legitimacy and equitable best practice for the study, the researcher combined efforts with similarly concerned researchers in TPARI, linked up with an international discourse around the social and human dimensions of

conservation and protected area management² and, through participative community engagement, developed guidelines to help social researchers and local people to develop workable and ethical agreements for social research (Tapela et al, 2007; 2009b). Such investment was invaluable to enabling the researcher to proceed through what increasingly became difficult terrain, particularly with the emergence and exponential increase in social protests in South Africa since 2004.

In engagements with members of rural communities, the researcher faithfully complied with ethical guidelines for social research (see Tapela *et al*, 2009b). For example, the purpose of the research was explained prior to commencement of research, local protocols for community entry were respected and respondents were alerted to their freedom not to disclose information they were not comfortable with providing and/or disclosing. Benefits of research were explained as a means towards managing expectations. Feedback was provided to key resource persons in rural communities and assistance given towards ensuring that communities generated longer term benefits from research. The last was achieved through workshops on policy engagement and stakeholder networking. By opening up such space for voices of smallholders to be heard, the researcher broke out of the usual mould of preserving 'sacred' platforms of discourse for elitist access by professionals and academicians.

Similar ethical principles were applied to engagements with institutional stakeholders. A particular challenge regarding this group, however, was tension between the study's ethical requirement to avoid public exposure of information deemed detrimental to respondent officials (although in the public interest) and expectations by PLAAS and funding institutions, such as the NCHR, for the researcher to publicly engage with policy. The researcher found herself caught within such tension and often compelled to tread the fine line between protecting information sources and being accountable to PLAAS, funders and the South African public at large.

For both rural communities and government officials, the researcher devised a strategy to assess and distil critical policy issues, which were then handled through structured and

² This discourse emanated from the World Parks Congress held in Durban in September 2003, and culminated in an international conference or *Indaba on Social Research and Protected Areas: Towards Equitable Best Practice and Community Empowerment*, held at Skukuza in April 2005.

targeted engagements, such as issue-focused workshops and discourses. In such workshops identities of respondents were not disclosed, except where respondents expressed a desire for their names to be published and/or exercised their freedom to actively participate in open discussions. Other problematic issues were assigned to scientific papers and popular publications.

For rural communities, problematic issues included findings on rural livelihood strategies that were brazenly outside the ambit of formal legislation (i.e. criminal) as well as strategies that were criminalized by virtue of absence of institutional measures to redress past discrimination. The latter types of strategies were widely perceived to be legitimate and accepted within local communities, contrary to commonly-held views about the former. Policy engagement on such issues sought to create awareness among institutional actors and a 'safe-space' for constructive responses to the plight of the rural poor and vulnerable.

By contrast, findings on observed and alleged irregular practices by institutional actors were more difficult to deal with. The researcher's handling of such findings was guided by two practical principles. Firstly, if the need for in-depth investigation of *alleged* irregularities went beyond the purpose and focus of the study, then such work was deemed to be beyond the scope of the study. The second principle was that, where *observed* irregularities were deemed significant enough, the researcher would seek advice from relevant actors within the researcher's 'core support group' of institutional stakeholders. As far as possible, identities of information sources were protected and diligence exercised in the handling of sensitive information. Such strategies helped the researcher to manage the more difficult terrains while retaining compliance with ethical guidelines.

1.5.6 METHODOLOGICAL CHALLENGES

At its initiation, the study began with the goal to identify livelihood 'impacts' of agricultural commercialization and, in particular, joint ventures within smallholder irrigation schemes. A focus on impacts implicitly meant that the study would have to assess whether or not livelihood outcomes had been sustainable. This raised three related methodological challenges.

1.5.6.1 Livelihood Outcomes

In determining livelihood outcomes (or results), the study moved beyond metric variables, such as income, to include also the less tangible outcomes relating to well-being, such as power, influence, identity, affirmation, respect and dignity. However, an assessment of *sustainability* of outcomes would have been premature, since the RESIS Programme was at an early stage. Furthermore, although “enhanced income” was considered a success indicator among most of the petty commodity producers, such indicator was not shared by the broader group of subsistence producers and other members of local communities.

1.5.6.2 Community

Subsumed to livelihood outcomes, the concept of ‘community’ was not easy to define (Tapela et al, 2007; Warburton, 1998; Chambers, 1997; Welbourn 1991 in Chambers, 1997), owing to factors such as diversity of interests, power dynamics and porosity of boundaries. Conscious effort was made to avoid imposing technicist views of what community means, and, as far as possible, respondents were asked to define what they understood their communities to be. Consideration was given to linkages between rural local communities and other spheres of livelihood generation, for example rural hinterlands and urban centres. For practical reasons, the study mostly engaged with people found within the study sites at the time of research, although in-depth research also included a number of migrant workers.

1.5.6.3 Livelihood Sustainability

The second challenge related to lack of conceptual clarity about what constitutes ‘sustainable livelihoods’ (Carswell et al 1997 in Scoones, 1998) and specifications of how sustainability should be achieved (Dietz, 1996; Cole, 1994; Chatterjee & Finger, 1994). This difficulty was compounded by differences in interpretations of the meaning of sustainable livelihoods and perceptions about how trade-offs between productivity, equity and sustainability (Carney, 1997) should be handled in the context of government-led interventions and contract farming arrangements. It seemed unlikely that stakeholders would reach a consensus within the time horizon of the study. Effectively, therefore, it would have been futile for the researcher to pursue a goal to assess impacts of agricultural commercialization and joint ventures on the sustainability of livelihoods in smallholder

schemes. The study therefore sought to limit the study to an examination of institutional influences on livelihood assets, strategies, outcomes and, in particular, vulnerability. Where the consideration of sustainability factors was deemed necessary, this was limited to preemptive qualitative assessments of existing institutional provisions for longer term, post-project outcomes.

1.5.6.4 Livelihood Impacts

The third challenge methodological challenge related to the complex nature of rural livelihoods and livelihood systems. Scholars (Ellis, 2000, 1998; Kepe, 1997; Ntshona, 2002; Tapela, 2005; 2008; 2009) clearly indicate that rural people's livelihoods often straddle divides between 'subsistence' and 'commercial' in ways that are complex, dynamic and nested. The diversity, dynamism and inter-connectedness of livelihoods and livelihood systems, and the porosity of household and community boundaries multi-causality of livelihood outcomes, it soon became apparent that the researcher would have to grapple with a major methodological challenge to assess livelihood impacts. A pertinent question was how to determine with confidence the extent to which a given agricultural commercialization and/or joint venture factor affected rural people's livelihoods, 'baskets' of livelihood strategies and livelihood systems, as opposed to the effects of a multiplicity of other possible causal factors. For example, early observations were that while given joint ventures exposed all smallholders within a group to the same risk and hazard factors, households of smallholders showed markedly different degrees of vulnerability to attendant hardships.

Although economists have devised econometric methods that enable disaggregation of effects of different factors that cause specific outcomes, such methods were found not to be sufficiently helpful to gauging qualitative impacts of agricultural commercialization on observed livelihoods. It became clear therefore that a critical part of the study would be to devise a methodology that would provide both a valid assessment and useful insights on how interventions towards agricultural commercialization affected people living within or adjacent to small-scale irrigation scheme in poverty nodes in Limpopo Province.

Owing to methodological difficulties pertaining to determining 'livelihood impacts' (Ahmed & Lipton, 1997), therefore, the study refrained from assessing whether or not livelihood

outcomes are sustainable or not but rather focused on the ways in which contractual joint ventures and strategic partnerships have affected 'livelihoods' within selected smallholder irrigation schemes. Consequently the study examined how rural people's livelihoods were enhanced or adversely affected by agricultural commercialization and contract farming arrangements in selected smallholder irrigation schemes.

The researcher modified the proposed research aim by shifting focus away from assessing livelihood impacts to examining ways in which formulation and implementation of agricultural commercialization through contractual joint ventures and strategic partnerships affected 'livelihoods' within selected smallholder irrigation schemes. This allowed a greater degree of freedom to make causal, though cautious, statements about agricultural commercialization and livelihoods. However, it did not completely eliminate the need to isolate, where possible, the effects of agricultural commercialization from other factors and to distinguish between direct and indirect effects and short-term and long-term impacts.

A pertinent counterfactual question remained: What would have happened without agricultural commercialization and joint venture contracts in the selected small-scale irrigation schemes? In a study by Ahmed & Lipton (1997:5) on the 'Impact of Structural Adjustment on Sustainable Rural Livelihoods', authors observe that the "before and after approach", which is often used to assess the impact of reforms, traces economic performance before and after adjustment and attributes differences to the adjustment. A major problem with the approach, however, is that it is difficult to control for exogenous shocks (Ibid.). The authors further state that such an approach can neither show that any element of adjustment or the whole package has succeeded or failed in changing some policy variable, nor account for changes that would have occurred without adjustment. The above observations can be transposed to the methodological problem for the study.

Both structural adjustment and agricultural commercialization, through contract farming, are premised on transaction cost economics approaches. However, the point of departure for the study was its emphasis on interactions between institutional arrangements and livelihoods, from perspectives of rural poverty and inequality. Drawing from unresolved debates on merits and demerits of agricultural commercialization and contract farming (Section 1.2.4), a hypothetical view by the study was that neo-liberal approaches to

commercial agriculture-driven rural development might not be appropriate constructs for resolving rural challenges of smallholder irrigation schemes in Limpopo Province. As such, the 'before and after' approach was not very useful since it omitted a whole range of quantitative and qualitative effects occurring between joint venture project inception and conclusion. It was important to gain insights into these effects, since they embodied people's real experiences and perceptions rather than concerns by other stakeholders about the economic viability of projects.

Instead of the 'before and after' approach, therefore, this study opted to trace livelihood trends and trajectories throughout the course of agricultural commercialization processes. The rationale was not to simply use comparisons of livelihood characteristics prior to and after contractual joint ventures to determine livelihood impacts. Rather the objective was to obtain insights into how commercialization processes intersected with people's livelihoods, what coping strategies people adopted and what combination of factors predisposed households towards increasing vulnerability or resilience over a period of approximately three years. During this time, joint venture and strategic partnership projects came and went, but primary data collection continued to track livelihood trends and trajectories, both in direct response to agricultural commercialization and to a combination of this and other effects.

Variables that were endogenous and exogenous to agricultural commercialization often co-existed in many of the affected households, such that it was not easy to isolate effects of agricultural commercialization from other effects. For example, there was antecedent socio-economic differentiation. There were also variations in livelihood generation strategies, shocks experienced and coping strategies prior to, during and after the course of joint venture projects. Some of the shocks emanated from outside of joint venture projects, while strategies for coping with shocks induced by joint ventures involved reliance on other resources within the broader 'baskets' of livelihoods. It was possible though to make useful qualitative causal descriptions and analyses of observed phenomena. It also appeared that disaggregating the individual facets of household characteristics and effects of commercialization was not as critical as acknowledging the reality that rural livelihoods are inherently complex and their various facets are closely inter-connected, often inextricably. Thus, rigor in isolating facets and effects was perhaps not as important as capturing the

‘untidy’ reality and qualitatively analysing, as faithfully as possible, the intersection between livelihoods and agricultural commercialization.

In attempting to overcome some of the methodological difficulties, the sampling frame for two of the study sites included households who had and who had not been directly involved in contractual joint ventures, for the sake of comparison. Owing to antecedent differences in household natural resource endowments, tenure rights, material asset ownership, literacy, attained education levels, employment, financial resources, indebtedness, social networks and political influence, this ‘control group’ approach did not sufficiently account for observed differences during agricultural commercialization processes. The approach was therefore of limited use in assessing the degree to which changes in livelihoods could be ascribed to agricultural commercialization. Despite this limitation, the control group approach was useful in highlighting differences in shocks experienced and coping strategies adopted at specific points during commercialization processes.

Towards addressing the aforementioned methodological challenges, attention was also given also to literature on similar studies in order to draw lessons on possible ways of overcoming the methodological difficulties. What emerged was that other researchers (Farrington *et al*, 1999; Ahmed & Lipton, 1997; Gibbon 1996 in Ahmed & Lipton, 1997) had encountered similar problems in livelihood impact studies and concluded that despite limitations, the sustainable livelihoods approach to assessing impacts of interventions remains a useful tool. Farrington *et al* (1999) for example, concludes that the sustainable livelihoods approach provides a useful tool for “putting people and issues of most concern to them at the centre of analysis” and reduces the prospect that any one discipline or sector will dominate. The study surmised therefore that the sustainable livelihoods approach, when used in conjunction with complementary analytical frameworks, is useful in analysing the highly complex interactions between people, institutions and interventions. As such, methodological challenges should not rule out the validity of findings obtained using the approach.

1.6 THESIS STRUCTURE

Chapter Two reviews the context within which efforts to integrate small-scale farmers into mainstream commercial agriculture have emerged in Limpopo Province. The review begins

by defining selected key concepts, followed by a synoptic background to the resurgence of contract farming in global, regional and South African national contexts. A review of debates on the merits and demerits of contract farming for smallholders is juxtaposed with South African debates about post-1994 rural development and agrarian reform. Special consideration is given to the ISRDP context, which emerged in tandem with the RESIS Programme nationally and in Limpopo Province.

Chapter Three presents research findings on the RESIS Programme in Limpopo Province. The chapter begins with an overview of the RESIS Programme framework in Limpopo Province. Finally, an outline of the common implementation framework and approach of RESIS-Recharge Phase is presented. The RESIS-Recharge Phase merits particular attention since it represents a major shift away from the original RESIS Programme objectives. Emphasis is on the generic contract structure used by LDA, contract implementation and key issues raised by smallholders in all targeted sites. Such examination synthesizes findings from rapid appraisals of various case studies, namely, Elandskraal-Balemi/EBIS, Elandskraal-Kgotlelelo, Tswelelopele, Strydkraal A, Krokodilheuwel, as well as Makuleke and Phetwane.

Chapter Four presents findings on institutional arrangements and processes relating to Hereford Irrigation Scheme in Greater Sekhukhune District. Revitalization initiatives emerged in Hereford during the *pilot phase* of the broader national RESIS Programme, but outside of the LDA-led programme in Limpopo Province. Owing to the cross-border configuration and ISRDP designation of Greater Sekhukhune District, and earlier classification of Hereford under Mpumalanga Province, Hereford contract farming arrangements were driven by a multiplicity of institutions at local, provincial and national levels. These included government departments, municipalities, NGOs, CSOs, CBOs, traditional leadership, faith based organizations, political structures and the private sector. After abolition of cross-border municipalities, the location of Hereford was re-classified as Limpopo Province, and the irrigation scheme was incorporated into the LDA-led provincial RESIS Programme. While such background might be construed to indicate a divergence from the RESIS Programme described in this chapter, such difference is cosmetic rather than substantive. Ultimately, context-specific permutations of RESIS were articulation of the same overarching national programme to revitalize small-holder irrigation schemes.

Chapter Five examines interactions between agricultural commercialization, livelihoods and contract farming arrangements in Phetwane Irrigation Scheme associated with the earlier implementation stage of RESIS. Particular attention is given to a joint cotton production venture. To a lesser extent, allusion is made to subsequent shifts towards RESIS-Recharge interventions and strategic partnerships.

Chapter Six presents findings from in-depth research on a strategic partnership arrangement associated with RESIS-Recharge in Makuleke Irrigation Scheme. Makuleke provides particularly useful insights since the case study was directly associated with three of the four phases of the RESIS Programme in Limpopo Province namely, the Watercare Programme (Phase 1), RESIS (earlier Phase 2) and RESIS-Recharge (latter Phase 2). A more detailed examination of livelihoods during and after successive RESIS and RESIS-Recharge interventions and arrangements is made.

Chapter Seven presents a synthesis and discussion of findings. Emphasis is on key issues emerging from the study.

The thesis concludes in Chapter Eight with a summary of key issues and recommendations for policy.



CHAPTER TWO

INTEGRATING SMALL-SCALE FARMERS INTO MAINSTREAM COMMERCIAL AGRICULTURE: THE CONTEXT

2.1 INTRODUCTION

Chapter Two reviews the context within which efforts to integrate small-scale farmers into mainstream commercial agriculture have emerged in Limpopo Province. The review begins by defining selected key concepts, followed by a synoptic background to the resurgence of contract farming in global, regional and South African national contexts. A review of debates on the merits and demerits of contract farming for smallholders is juxtaposed with South African debates about post-1994 rural development and agrarian reform. Special consideration is given to the ISRDP context, which emerged in tandem with the RESIS Programme nationally and in Limpopo Province.

2.2 DEFINITION OF CONCEPTS

The notion of contract is central to any understanding of the social integration of peasants into corporate relations of production (Watts, 1994:25). The section begins by defining the concept of 'contract farming' and then proceeds to outline a typology of contract farming models.

2.2.1 CONTRACT FARMING

Glover & Kusterer (1990:4) state that the concept of 'contract farming' is complex and therefore not easy to define. Complexities include the diversity of institutional arrangements (Da Silva, 2005; Kirsten & Sartorius, 2002), differences in historical and political economy contexts (Little & Watts, 1994) and the multiplicity of objectives, which include welfare, political, social and economic criteria (Kirsten & Sartorius, 2002). According to Glover and Kusterer (1990:4), contract farming or production can be simply defined as arrangements between a grower and firm(s), for example exporters, processors, retail outlets, or shippers, in which non-transferrable contracts specify one or more conditions of marketing and production. Eaton & Shepherd (2001:2) state that "contract farming can be defined as an agreement between farmers and processing and/or marketing firms for the

production and supply of agricultural products under forward agreements, frequently at predetermined prices”.

A common view is that contract farming is a form of ‘vertical coordination’ of linkages between small-scale farmers and agri-business firms (Kirsten & Sartorius, 2002; Glover & Kusterer, 1990; Little & Watts, 1994; Minot, 1986; Wilson, 1986; Dolan, 2005; Singh, 2005, 2002). In their study of contract farming in Sub-Saharan Africa, Little & Watts (1994:9) define the concept, for working purposes, as “forms of vertical coordination between growers and buyers-processors that directly shape production decisions through contractually specifying market obligations (by volume, value, quality, and, at times, advanced price determination); provide specific inputs; and exercise some control at the point of production (i.e. a division of management functions between contractor and contractee)”.

As a form of agricultural commercialization, contract farming can be seen from the perspective of New Institutional Economics (NIE), whereby contracts are a means to reduce ‘transaction costs’. Transaction costs are the costs incurred when a firm engages in an exchange process (Da Silva, 2005:12). They include the costs occurring prior to a transaction, such as obtaining information and negotiating the exchange conditions, as well as post-transaction costs, such as monitoring and enforcing terms of the contract (Ibid.). Reduction of transaction costs has often meant a reduction of government support to farmers.

2.2.2 CONTRACT FARMING MODELS

Eaton & Shepherd (2001:44) put forward a typology of various forms of contractual linkages between small-scale farmers and agri-business firms (Table 4). The typology identifies five broad models, depending on the product, resources of the sponsor and intensity of the relationship needed between the farmer and the sponsor. These include the centralised model, nucleus estate model, multipartite model, informal model and intermediary model.

The Centralized Model involves a centralised processor and/or packer buying from a large number of small farmers. The model is used for tree crops, annual crops, poultry and dairy products, which often require a high degree of processing. The Centralized Model is vertically coordinated, with quota allocation and tight quality control. The involvement of

sponsors in production varies from minimal input provision to the opposite extreme where the sponsor takes control of most production aspects.

The Nucleus Estate Model is a variation of the Centralised Model, wherein the sponsor also manages a central estate or plantation. The central estate is usually used to guarantee throughput for the processing plant but is sometimes used only for research or breeding purposes. The Nucleus Estate Model is often used with resettlement or transmigration schemes and involves a significant input of material and management inputs.

TABLE 4 TYPOLOGY OF CONTRACT FARMING MODELS

TYPE OF MODEL	CHARACTERISTICS
Centralised Model	<p>Involves a centralised processor and/or packer buying from a large number of small farmers;</p> <p>Is used for tree crops, annual crops, poultry and dairy. These products often require a high degree of processing, such as tea and vegetables and fruit for canning or freezing;</p> <p>Is vertically coordinated, with quota allocation and tight quality control;</p> <p>Sponsors' involvement in production varies from minimal input provision to the opposite extreme where the sponsor takes control of most production aspects.</p>
Nucleus Estate Model	<p>Is a variation of the centralised model where the sponsor also manages a central estate or plantation;</p> <p>The central estate is usually used to guarantee throughput for the processing plant but is sometimes used only for research or breeding purposes;</p> <p>Is often used with resettlement or transmigration schemes;</p> <p>Involves a significant input of material and management inputs.</p>
Multipartite Model	<p>May involve a variety of organisations, frequently including statutory bodies;</p> <p>Can develop from the centralised or nucleus estate models, e.g. through the organisation of farmers into cooperatives or the involvement of a financial institution.</p>
Informal Model	<p>Is characterised by individual entrepreneurs or small companies;</p> <p>Involves informal contracts, usually on a seasonal basis;</p> <p>Often requires government support services such as research and extension services;</p> <p>Involves greater risk of extra contractual marketing.</p>
Intermediary Model	<p>Involves sponsor in sub-contracting linkages with farmers to intermediaries;</p> <p>There is a danger that the sponsor loses control of production and quality as well as prices received by farmers.</p>

Source: Eaton & Shepherd, 2001

The Multipartite Model may involve a variety of organisations, and frequently includes statutory bodies. This model can develop from the centralised or nucleus estate models, for example through the organization of farmers into cooperatives or the involvement of a financial institution.

The Informal Model is characterised by individual entrepreneurs or small companies and involves informal contracts, usually on a seasonal basis. The model often requires government support services, such as research and extension services. The Informal Model involves greater risk of extra-contractual marketing, wherein producers surreptitiously sell portions of produce to buyers outside the ambit of the informal contract.

In the Intermediary Model, the sponsor sub-contracts linkages with farmers to intermediaries. The danger is that the sponsor may lose control of production and quality as well as prices received by farmers.

The above typology provides a useful tool for this study's characterization of the joint ventures and strategic partnerships that have emerged under the RESIS Programme and similar initiatives in Limpopo Province. In applying the typology, however, this thesis is mindful of the possibility that the permutations obtaining within the case study sites may vary in structure and content from the five models outlined in Eaton & Shepherd's (2001) typology. As such, the typology is used with a degree of flexibility.

2.2.3 THE CONCEPT OF 'SMALLHOLDER'

According to Cousins (2010), the term 'smallholder' is often defined and used in an inconsistent manner to refer to, among other things, producers who occasionally sell produce for cash as a supplement to other sources of income; those who regularly market a surplus after their consumption needs have been met and those who are small-scale, market-orientated commercial farmers. While the two main criteria that distinguish between these types of smallholder are, firstly, size of landholding and, secondly, extent of production for the market, other criteria include use of different types of labour (e.g. household or family labour, hired workers or cooperative labour) and/or source of farming capital.

The smallholder model, which has been adopted by many international development institutions (e.g. IFAD) and regional development organizations (e.g. NEPAD), positions small-scale farmers as a potential engine for growth for rural areas, particularly in Africa (Béné et al, 2010:7; Valdes & Foster, 2005; Hazell et al, 2007). The 'success-story' of the Eastern Africa export-oriented high-value horticulture sector (Dolan & Humphrey, 2000; Minot & Ngigi 2004 in Béné et al, 2010:7) is viewed as additional evidence that the smallholder model might be a solution, and that trade with developed-country markets is of particular importance in this process (DFID 2005 in Béné et al, 2010:7). Consequently, an increasing number of donor agencies and governments of developing countries have been encouraged by their academic and policy advisors to push their national agri-food sectors (i.e. crops, livestock, forests and fisheries) along this high-value, export-oriented avenue. Proponents of such approach claim that the exportation of agri-foods (in particular high value agri-food products) to developed countries' markets could be a powerful engine for poverty reduction and economic development (Béné et al, 2010:8; Cunningham, 2000; Valdimarsson & James, 2001; FAO, 2007). However, the debate about whether such trade actually benefits small-scale producers, such as smallholders and fishers, as well as local populations or possibly the wider national economy remains unresolved (Béné et al, 2010:8; Kaczynski & Fluharty, 2002; Hersoug, 2004).

International experience suggests that a major problem with smallholder-oriented agricultural commercialization in many rural contexts relates to predication of interventions upon the wealth-based model. According to Béné et al (2010), this model conceives the solution to problems of poverty and resources degradation as revolving around making smallholders more 'economically efficient' while enhancing the productive capacity of the resource base. A central objective of the wealth-based approach is to 'unlock' the inherent wealth or resource rent value (i.e. the 'economic rent') from high value produce and then add value throughout the agri-food chain (Sumaila 2008 in Béné et al, 2010:9). The wealth-based model espouses and reproduces the logic of the conventional Malthusian narrative, which argues that since poverty is the result of too many people depending directly on too limited resources, the solution is to restrict resource access to a limited number of users through an efficient rights allocation system and to maintain and maximize the overall productivity of the resource base (Cunningham et al 2009 in Béné et al, 2010:9). Such an

approach is presumed to lead to maximization of wealth or economic rent for the smallholder sector, improve the profits of smallholders who remain included in productive enterprises and possibly redistribute resultant benefits to the rest of local rural communities and the broader public. Mechanisms for achieving this include diverting part of the tax and license fees (i.e. 'resource rent') levied on the productive sector towards social expenditure (Béné et al, 2010:9; Cunningham & Neiland, 2005).

The theory and the reasoning of rent extraction has been an alluring option for those seeking to create wealth from smallholder irrigation schemes and thereby contribute to local, regional and national economic growth and development as well as poverty reduction. Such reasoning resonates with arguments put forward by South African agricultural economics scholars in support of an integrated rural development approach that predicated upon high growth rate within the core or mainstream economy, which spreads favourable trickle-down effects to the impoverished rural periphery (Terreblanche, 1998:49). Such argument resonates, to an extent, with ISRDP and RESIS Programme formulations (see Section 2.5 and Chapter Three, respectively).

2.3 RESURGENCE OF CONTRACT FARMING: GLOBAL AND REGIONAL BACKGROUND

According to Watts (1994), contract farming represents one fundamental way in which the twin processes of internationalisation of agriculture and agro-industrialisation are taking place on a global scale. From such perspective, contracting signifies profound changes in the "old" international division of labour, the structure of international food regimes and in North-South relations. The spread of contract farming also denotes a watershed in the transformation of rural life and agrarian systems in the Third World in general (Ibid., 1994:24). Contract farming is not new, however, and observed developments represent a resurgence of interest in contract farming, which since the 1980s has been influenced by broader changes in world agri-food systems.

This section reviews the global and regional background to South Africa's renewed interest in contract farming. The review presents, firstly, an overview of the historical development of contract farming and changes associated with the emergence of prevailing agri-food systems. Secondly, the review gives an outline of international debates about the

integration of small-scale farmers into globalized agri-food systems. Such background, however, is fraught with complexities due to, among other factors, the wide array of agricultural products, contractual arrangements, agricultural development policies and processes, and intersection of these with shifts in the global political economy. It is beyond the scope of this thesis to delve into a detailed account of how contract farming developed in different sectors and regions of the globe. This section therefore restricts itself to overviews of selected key features and milestones.

2.3.1 HISTORICAL DEVELOPMENT OF CONTRACT FARMING AND EMERGENCE OF NEW AGRI-FOOD SYSTEMS: GLOBAL OVERVIEW

Contract farming has been widely practised for many years in many countries, including developing countries (Kirsten & Sartorius, 2002; Eaton & Shepherd, 2001; Glover and Kusterer, 1990:1). Eaton & Shepherd (2001) assert that the contracting of crops has existed from ‘time immemorial’. The practice has ranged from the specifications of percentages of crops as means of payment of tithes, rents and debts in ancient Greece, through the various forms of sharecropping during the first century in China and the late nineteenth century in the United States, to the establishment of formal farmer-corporate agreements in European colonies in the early twentieth century (Ibid.).

Other scholars trace the principles of contract farming practice back to the nineteenth century, when contract farming was used in the United States for processing crops, such as sugar, beets and peaches, and in Taiwan for sugar production under Japanese colonial rule (Da Silva 2005:11). From its historical origins, contract farming has spread globally into many developing countries, accompanied by an expansion into a broader array of food and fibre sectors (Kirsten & Sartorius, 2002). From a radical political economy stance, Wilson (1986) describes this spread as the “capitalist penetration of agriculture”. The crystallization of contract farming into its industrial form of organization, however, appears to have begun in the aftermath of the Second World War.

The restructuring of global economy following the Bretton Woods Agreement of 1944 and the revolutionary transformation of international political economy since 1945 exerted widespread influence on the organisation of world commercial agriculture. Drawing from Watts’ (1994: 23) analysis of the genesis and spread of the seed industry, for example, this

restructuring had three distinct facets. Firstly, the 1970s to early 1980s was a period of corporate merger and consolidation by multi-national companies (MNCs). Secondly, the geography of agricultural production changed with the shifting of production sites around the globe. Thirdly, the globalization of certain sectors was accompanied by the spread and deepening of contractual relations in commercial agriculture.

Interest in agri-business increased noticeably during the 1970s and 1980s due to a number of factors, including African famines of 1974 and 1985, which focused world attention on the continent's continuing crisis in food production (Glover & Kusterer, 1996:11). The 1980s and early 1990s witnessed a steep decline in the continent's export earnings, a depletion of foreign-exchange reserves and a looming prospect of bankruptcy for many countries (Little & Watts, 1994). In recommendations to avert economic crises, the International Monetary Fund (IMF) and the World Bank prescribed economic structural adjustment programmes as part of a "new order" of development, in which contract farming assumed a prominent position (Ibid.).

Transformation of world agri-food systems resulted in the 'industrialisation' of world agriculture (Da Silva, 2005; Glover & Kusterer, 1996; Little & Watts, 1994). Since the 1980s, such industrialisation has been evident in all segments of production-distribution chains (Da Silva, 2005:4; Kirsten & Sartorius, 2002; Little & Watts, 1994; Glover & Kusterer, 1990). Agri-food systems have become globally dispersed and increasingly vertically-integrated along "value chains" (Little & Watts, 1994). The spread of these contract-based systems has been accompanied by a reduction of the role of spot markets as a mechanism to harmonise transactions (Da Silva, 2005). "New agricultures" have emerged that are geared towards high-value crops (Little & Watts, 1994), an increasing involvement of small-scale resource-poor farmers in contract farming in developing countries and a reduction of state roles in farmer support as private sector roles increase (Da Silva, 2005:4).

Drivers of this change have included technological developments, demographic changes, changing consumer preferences, trade liberalisation, financial capital mobility (Da Silva, 2005). Drivers have also included innovations in biotechnology, transportation and processing (Little & Watts, 1994) and, more recently, and climatic change. The contract is considered a critical institutional mechanism for minimising the costs of market exchange

and ensuring compliance, thus reducing supply-side uncertainty that is detrimental to the workings of industrialised agricultural market chains. Contract farming has therefore emerged as a means to reduce transaction costs, coordinate links between farmers and agribusiness firms and integrate small-scale farmers into mainstream agricultural market chains (Kheralla & Kirsten, 2002). Concomitant to these changes has been a massive shift towards the commoditization of agricultural resources, such as land and water, which is similarly driven by transaction cost economics. It is perhaps worth noting that, with neo-liberal reforms having resulted in state disengagement from rural areas of developing countries, contract farming was proposed as a means for private firms to assume roles previously performed by the state (World Bank, 2001).

Since the 1980s, contract farming has come to represent a fast-growing and much-advertised form of agro-industrialisation for Third World countries (Watts, 1994:23). This development has taken place against the background of the internationalisation of world agriculture as well as drastic changes in technology and improved capacity for natural resources extraction (Little & Watts, 1994). While contract farming has assisted farmers to improve their lot through providing more reliable incomes, generating employment especially for women, providing new skills in farming and doing away with the patron-client relationship between large and small producers, in many cases the practice has been accompanied by poor extension services, low prices to farmers due to haphazard pricing of produce and higher risk to producers (Glover & Kusterer, 1990; Singh, 2002).

2.3.2 THE RESURGENCE OF CONTRACT FARMING IN SOUTHERN AFRICA: REGIONAL OVERVIEW

Contract farming re-surfaced in Southern Africa and Africa in general in the 1980s as a strategy for rural transformation. In these countries, the “new agricultures” have been geared towards high-value crops (Little & Watts, 1994), an increasing involvement of small-scale resource-poor farmers in contract-based commercial agriculture and a reduction of state roles in farmer support as private sector roles increase (Da Silva, 2005:4). Southern African frameworks and developments have been part of broader international and African institutional frameworks and trends.

African states are signatories to the Maputo Declaration of 2003 (IDASA, 2009). Under the Maputo Declaration, heads of state of the African Union (AU) recognize that Africa has the responsibility to invigorate its agricultural sector, increase food production and ensure economic prosperity and the welfare of its people by guaranteeing sustainable food security. The heads of state also acknowledge that 30 per cent of the continent's population is chronically and severely undernourished. They also recognize that the continent is a net importer of food and the largest recipient of food aid in the world (Ibid.). With specific regard to the Southern African region, the SADC Declaration on Agriculture and Food Security (SADC, 2004) provides a key institutional framework for linking small-scale farmers into mainstream commercial agriculture. International institutions that have supported the integration of Southern African small-scale farmers into mainstream commercial agriculture include, among others, the Food and Agriculture Organisation (FAO), International Finance Corporation (IFC)³, Consultative Group for International Agricultural Research (CGIAR) and Food Agriculture and Natural Resource Policy Analysis Network (FANRPAN).

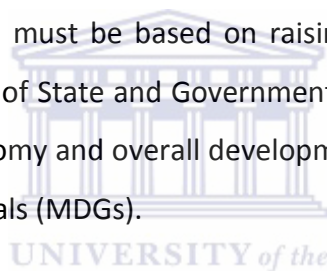
Under auspices of the United Nations Development Assistance Framework (UNDAF), the FAO has provided overarching advisory support to the reform of regional agricultural sector frameworks (FAO, 2006). Regarding issues of food security and vulnerability, for example, UNDAF's Common Country Assessment (CCA) and Poverty Reduction Strategy Paper (PRSP) have been linked to the Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS) in an effort to redress failure by past interventions to reduce poverty and food security (Ibid.).

The IFC, which is part of the World Bank Group, has provided financial investment and advisory support to commercial ventures by small-scale farmers. CGIAR has provided support to research organizations based in Southern Africa, mainly through the Challenge Program on Water and Food (CPWF). FANRPAN has co-ordinated, influenced and facilitated policy research, analysis and dialogue at the national, regional and global levels, through networking, capacity building and generation of information for the benefit of all stakeholders in the SADC region (FANRPAN, 2006).

³ IFC Agri-Business Sector Brochure on 'The Private Sector and Global Food Security'. Internet [http://www.ifc.org/ifcext/agribusiness.nsf/Content/Features_Food_Security] 29/10/2011.

Furthermore, donor funding has been disbursed through various bi-lateral arrangements. For example, the Danish Association for International Cooperation supports trade and market linkages for Zambian small-scale producers⁴. Such support is provided in terms of 'favourable' trade agreements and arrangements under the World Trade Organization (WTO), Economic Partnership Agreements (EPAs), Southern African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA) and African Growth and Opportunities Act (AGOA), through which the United States (US) opened its market for over 6000 products from Sub-Saharan African (SSA) countries.

The New Partnership for Africa's Development (NEPAD), through its Comprehensive Africa Agriculture Development Programme (CAADP), provides an important institutional framework for promoting African small-scale farmers' entry into mainstream commercial agriculture (NEPAD, 2005; South Africa, 2012). NEPAD has declared that the vision for economic development in Africa must be based on raising and sustaining higher rates of economic growth. African Heads of State and Government have recognised that agriculture is crucial to the continent's economy and overall development and, specifically, to achieving the Millennium Development Goals (MDGs).



Within the CAADP framework, contract farming is considered to be a useful institutional mechanism for governing linkages between small-scale farmers and agri-business firms and promoting small-scale farmers' entry into mainstream agricultural market chains. CAADP is predicated on four pillars, which have been prioritized for investment. These are: sustainable land and water management; improvement of rural infrastructure and enhanced market access; increasing food availability and nutrition; and improving agricultural research, technology dissemination and adoption. Anticipated socio-economic development benefits include increased productivity, on-farm and off-farm employment opportunities, improved incomes, livelihoods and the quality of life in rural areas.

Against the background of concerted efforts to promote the integration of small-scale farmers into mainstream commercial agriculture, the recent past has seen many African small-scale becoming increasingly drawn into industrialised and globalised agri-food

⁴ Report on proceedings of the Advocacy and Lobby Workshop on Market linkages for Small Scale Farmers and Producers in Luapula Province, held from 20 to 21 November 2006 in Mansa, Zambia. Internet [http://www.cuts-international.org/pdf/Report_MarketLinkages.pdf] 29/10/2011.

systems. A few examples include Zambia and Malawi (Kirsten *et al*, 2005; Chizarura, 2007), Gambia (Carney, 1994), sugar, tea and cotton production in Zimbabwe (Jackson & Cheater, 1994; Chizarura, 2007), horticulture in Kenya (Dolan, 2005; Jaffe, 1994), palm oil in Côte d’Ivoire (Daddieh, 1994) and sugar in South Africa (Porter & Phillips-Howard, 1998). Such ventures are characterized by permutations of contract farming arrangements, and this mode of agricultural commercialisation is seen by its proponents as contributing, through multiplier effects, to economic growth (Kirsten *et al*, 2005; Kirsten & Sartorius, 2002; Eaton & Shepherd, 2001; Von Braun, 1995) and rural development (Glover & Kusterer, 1990).

Amid the optimism about prospects for entry by Southern African smallholders into the free market economy and about their establishing of viable niches within commodity sectors, there has been an on-going debate about the extent to which contract farming benefits small-scale farmers or leads to their exploitation by firms (Da Silva, 2005). This debate resonates with the broader international debates on implications of neo-liberal approaches to rural development and poverty in developing countries.

2.3.3 SMALL-SCALE FARMERS’ INTEGRATION INTO GLOBALIZED AGRI-FOOD SYSTEMS: INTERNATIONAL DEBATES

Proponents of agricultural commercialisation argue that it contributes, through multiplier effects, to economic growth (Kirsten *et al*, 2005; Kirsten & Sartorius, 2002; Eaton & Shepherd, 2001; Von Braun, 1995) and rural development (Glover & Kusterer, 1990). A further argument is that agricultural commercialisation has “a significant potential to enhance rural development, reduce poverty and increase productivity, employment and incomes of small-scale farmers” (Norton 2004). Contract farming, in particular, is said to have a “considerable potential to integrate small-scale farmers in developing countries into export and processing markets and into the modern economy” (Kirsten & Sartorius, 2002). Such optimism is evident in the heraldic descriptions of contract farming as “partnerships for growth” (Eaton & Shepherd, 2001) and “a tool for empowering smallholder farmers in Southern Africa” (Kirsten *et al*, 2005).

Experience shows that while contract farming has assisted African farmers to improve their lot through providing more reliable incomes, generating employment especially for women, providing new skills in farming and doing away with the patron-client relationship between

large and small producers (Glover & Kusterer, 1990). However, in many cases the practice has been accompanied by poor extension services, low prices to farmers due to haphazard pricing of produce and higher risk to producers (Ibid.). Disadvantages have also included the poor bargaining power of farmers and their dependence on firms for inputs and credit (Fulton & Clark, 1996), as well as environmental degradation due to over-exploitation of land and water resources (Siddique, 1998).

Observations have also been that small-scale farmers, who wield less power and control within contract farming arrangements, are often more vulnerable to risks associated with highly competitive commercial agriculture (Jacobs, 2001: 28; Mayson, 2003; Cousins, 2003; Da Silva, 2005; FAO, 2006). Some critics have argued that producers' control of the production process is reduced, and cash crops are produced at the expense of local food production and food security (Jacobs, 2001: 28). Others have argued that contractual joint ventures are a new form of exploitation and a mechanism through which private investors spread the risk of engaging in an increasingly complex and capital-intensive sector, while gaining market and political credibility in the process (Mayson, 2003). The cited merits of contract farming have therefore been juxtaposed with a broad consensus that commercialization of agriculture has mainly negative effects on the welfare of the poor (Von Braun, 1995:187).

Eaton & Shepherd (2001:3) argue that “the decision to use the contract farming modality must be a commercial one. It is not a developmental model to be tried by aid donors, governments and non-governmental organizations (NGOs) because other rural development approaches have failed. Projects that are motivated primarily by political and social concerns rather than economic and technical realities will inevitably fail.”

Constraints to effective participation by small-scale farmers partly emanate from world market conditionalities. The requirements, quality standards and food safety rules of consumers and corporations in developed countries can act as effective barriers to participation in high-value chains by small producers (Kirsten & Sartorius, 2002). Sanitary and phyto-sanitary measures and regulatory instruments, such as Provisions of the European Union’s Common Agricultural Policy (CAP), are used as non-trade barriers to protect producers in the north thereby making it difficult for producers in developing

countries to compete (Madonsela 2001 in Jacobs, 2001). There is a danger therefore that the requirements, quality standards and food safety rules of consumers and corporations in developed countries can act as effective barriers to participation in high-value chains by small producers (Kirsten & Sartorius, 2002).

Constraints are also due to trade liberalization policies, such as the World Trade Organization's Agreement on Agriculture, which compel developing countries to phase out subsidies, exchange controls and trade barriers without imposing the same conditions in countries in the north (Jacobs, 2001). An issue that has been raised in policy debates and international trade negotiations, such as the FAO-facilitated Doha and Uruguay Rounds, is the 'uneven playing field' that has emerged in world agriculture subsequent to the various General Agreements on Trade and Tariffs (GATTs) since the 1944 Bretton Woods Agreement.

According to an FAO report (FAO, 2006:2), the uneven playing field resulted from the "difficult history" that agriculture has had in the sequence of rounds of multi-lateral trade negotiations. The problem was belatedly addressed and brought under GATT disciplines after conclusion of the Uruguay Round in 1994. Prior to that "agriculture had been subject to a number of exceptions from GATT rules and GATT members, notably those who had the financial resources to do so, used these exceptions to grant export subsidies and impose quantitative import restrictions as adjuncts to their domestic agricultural support policies". This created distortions and "disarray" in world food markets, which multi-lateral trade negotiations have since sought to redress (Ibid.).

Measures to resolve structural problems, however, have not fully resolved the market inequalities. On the one hand, GATT negotiations continue to explore ways of mitigating negative impacts of liberalisation using, for example, mechanisms such as 'special and differential treatment' (SDT), which applies only to developing and least-developed countries (LDCs) (FAO, 2006). On the other hand, trade liberalisation policies, such as the World Trade Organization's Agreement on Agriculture, continue to coerce developing countries to phase out subsidies, exchange controls and trade barriers without imposing the same conditions in the north (Mayson, 2003:28). The FAO Report (FAO, 2006) concludes that "the debate over SDT continues, with developing countries and less developed

countries (LDCs) remaining dissatisfied with developed country responses to assist them in increasing their capacity to trade and to implement trade regulations”.

Political economy scholars (Wilson *et al*, 2001:4; Tarrow, 1996 cited in Harris, 2001:1; Cousins, 2003; Drummond & Marsden, 1999) consider structural factors, such as outlined above, to be the most fundamental of constraints. These scholars argue that the persistence of poverty in developing countries, irrespective of more recent formulations for development, is largely the direct result of the broader structural factors inherent in the global political economy. Such factors perpetuated the divergence between core and marginal economies.

According to Bessant (2007:443), debates within discourses about agricultural commercialization and market integration of small-scale farmers tend to invoke the terms ‘farm crisis’, ‘agricultural crisis’ and ‘rural crisis’ to characterize significant disruptions or threats to rural livelihoods. Bernstein *et al* (2006), for example, describes the great processes of agrarian transformation, which have fundamentally altered rural livelihoods in developing countries, and identifies some of the dilemmas for public action, which arise from agrarian transformation and the crises of rural livelihoods. Although such perceptions of crisis lack clear and concise meaning and shared conceptual understanding, much of the debate revolves around four themes (Bessant, 2007:443). The first relates to farm financial difficulties, which include low or unsustainable incomes, indebtedness and increasing reliance on non-farm revenue. The second theme relates to structural changes in agriculture, involving increasing scale, concentration and consolidation. The third is about rural livelihoods, while the fourth theme relates to international dimensions namely, market fluctuations, trade regulations and disputes (*Ibid.*).

Given the significant constraints to prospects of small-scale producers effectively participating in mainstream commercial sectors, debates have more recently become focused on identifying requisite conditions for ensuring that value chains become effective tools for pro-poor development. According to Seville *et al* (2011), key questions revolve around whether or not resource-poor producers can participate and capture the value in such supply chains. Other questions centre on whether or not small-scale producers really benefit, given the additional costs and risks in such markets, and under what conditions

such benefits accrue. While it is critical for interventions to be predicated on clear understandings of small-scale producer contexts (or “rural worlds”, according to Vorley 2002 in Seville et al, 2011), a constraint, however, is that there is as yet a limited number of quantitative studies to demonstrate the impact of interventions in value chains on the poor (Humphrey & Navas-Aleman 2010 in Seville et al, 2011). Despite that there are also few interventions and theoretical approaches that successfully integrate analyses of stand alone value chains, livelihoods and environmental factors (Bolwig et al (2008 in Seville et al, 2011), emerging findings seem to suggest that ‘lead firm’ interventions, which funnel assistance by partnering with lead firms in the value chains, have less impact than ‘market linkage projects’, which work with chains without a lead firm (Humphrey & Navas-Aleman 2010 in Seville et al, 2011). A weakness of the former means of participation is that lead firm interventions primarily focus on business development with poverty impacts being a secondary outcome (Seville et al, 2011).

In spite of the above constraints, Seville et al (Ibid.) affirms the usefulness of livelihoods-based approaches to developing clearer understandings of rural contexts. The scholars further propose that strategies for increasing development impact include co-investments in the upgrading of livelihoods, producer skills, producer organizations and intermediaries to meet the requirements of the markets, as well as in utilizing existing assets and committing additional requisite investments towards ensuring that the poor are able to participate in ways that enhance their benefits while their reducing exposure to risks. Other suggested strategies include adapting trade relations, supply chain coordination, development of effective market linkages, fairness and transparent governance, sharing of costs and risks, equitable access to services, adaptation of product proposition and procurement practices, and co-investments in livelihoods beyond the value chain (Ibid.).

2.4 SOUTH AFRICAN INSTITUTIONAL CONTEXT: OVERVIEW

Since the late 1990s, there has been an increasing convergence of reforms in various sectors in South Africa. This development seems to have provided a semblance of the required policy, statutory and governance framework within which the challenges of poverty and inequality can be resolved, rural development achieved and livelihoods secured. However, while the convergence of sector reforms might appear to have bolstered the prospects of

black small-scale farmers' entry by into commercial agriculture, a problem is that these reforms have been concomitant with the government's macro-economic policy shifts away from the anti-poverty strategies of the Reconstruction and Development Programme (RDP) towards the national economic goals espoused by the Growth Employment and Redistribution (GEAR) Strategy. Amid such policy shifts, government has retained a commitment to both economic growth and social development.

Government's interest in "playing a significant role in the economy while fighting poverty" is evident in the Finance Minister's 2005 budget speech, in which expenditure on an expanding social security programme to cater for the poorest 40 per cent of the population would increase by 25 per cent in the following five years (Friedman, 2005). The National Growth and Development Strategy (NGDS) envisages that economic investment and growth will contribute to resolving challenges of poverty, unemployment, food insecurity and socio-economic development. Despite government interventions, however, poverty and unemployment persist. The Accelerated and Shared Growth Initiative of South Africa (AsgiSA), which was launched by Deputy President Ngcuka in 2006, states that towards meeting targets for reducing unemployment and poverty, the challenge is "to use strong demand for South Africa's natural resources to build foundations for sustainable growth and bring the economically marginalised third of the population in mainstream economy" (South Africa, 2006).

Within the agricultural sector, support to emerging farmers by the various sectors derives from the core objectives of the Agricultural Sector Strategy (South Africa, 2001) namely, to:

- Enhance equitable access and participation in the agricultural sector;
- Improve global competitiveness and profitability;
- Ensure sustainable resource management; and
- Ensure food security.

The food security objective seems to address interests of both the rural poor as well as the broader public in South Africa. The Broad Based Black Economic Empowerment Framework for Agriculture (Agri-BEE) addresses the first two objectives, and joint ventures and strategic partnerships are considered to be key strategies for promoting entry by emerging black commercial farmers and petty commodity producers into mainstream agri-food systems.

Strategic initiatives that complement Agri-BEE include Irrigation Management Transfer (IMT), Water Allocation Reform (WAR), Policy on the Financial Assistance to Resource Poor Irrigation Farmers, Land Reform, Comprehensive Agricultural Support Programme (CASP), municipal Local Economic Development (LED) frameworks and the ISRDP.

The ISRDP, which was the key rural development framework from 2001 to 2009, is further demonstration of the hybrid nature of the government's macro-economic policy (see Section 2.5). The ISRDP emerged concomitant to the RESIS Programme, which is a nationwide programme to revitalize production and promote agricultural commercialization in smallholder irrigation schemes. Stated objectives of the RESIS Programme address both economic and poverty concerns, but articulation of the programme has progressively shifted towards economic interests, with key drivers including infrastructure and technology development (see Section 2.7).

With specific regard to Limpopo Province, the Provincial Growth and Development Strategy (PGDS) provides the main institutional framework for interventions by government and partners in civil society, private sector and donor agencies. The PGDS is premised upon a view that resolving challenges of poverty, unemployment, food insecurity and rural development in the province will depend largely on investment and growth in the agricultural sector.

While government seeks to balance conditions for economic growth with social security concerns, in many rural and urban contexts, various factors continue to militate against poverty reduction and livelihoods and food security, while BEE-focused interventions favour the creation of black elites without meaningfully reducing inequalities (Cousins, 2003; Tapela, 2008). Since 2004, discontent over perceived relative deprivation has increased, particularly among the poor and marginalized, become conflated with poor service delivery and other factors, and nationwide tides of violent social protests have erupted mostly in urban informal settlements (Nleya, 2011; Nleya et al, 2011; Atkinson 2007, Johnston & Bernstein 2007, Botes et al 2007a,b; Bond & Dugard, 2008; Allen & Heese, 2009; Heese & Allen, 2009) and exponentially increased in frequency in 2009 (Tapela et al, 2011a; Allen & Heese, 2009; Gouws et al, 2009; Sinwell et al, 2009; Nleya, 2011; Nleya et al, 2011). Although most rural communities have not been actively involved in such protests, there is

evidence of heightened discontent in various bucolic localities across South Africa (Tapela et al, 2011a; Tapela, 2009).

With specific regard to land and agricultural policy, Greenberg's (2010) Status Report shows that liberalization and deregulation have removed the state from direct interventions in nearly all operational activities in South Africa. Under such conditions, there has been a significant growth in concentration on food manufacturing, storage and retailing. Smallholders have suffered shortages of essential services, such as extension services, which were formerly provided by agricultural boards and cooperatives. Deregulation has established an expectation that farmers, regardless of resource endowments and scale of enterprise or operation, should be able to procure privatized extension services at a relatively high cost and to raise both capital and production loans at market-related interest rates and be able to pay them back. Greenberg alludes to recognition by the ANC's 2007 Polokwane Conference resolutions, which recognized that concentration and vertical integration in the value chain limit the space for smallholders to participate in the market. In light of this, the ANC proposition was 'to integrate smallholders into formal value chains and link them with markets', with cooperatives as a key organizational structure to operationalize such integration. Greenberg comments that the resolutions provided no clarity on the extent to which cooperatives might be orientated towards transforming the inherited market economy as opposed to merely enabling access to it.

The burgeoning of social protests seems to have contributed, alongside a range of other factors, to pressurizing government to re-orient rural development interventions towards poverty and inequality concerns. Following an abrupt change of the South African presidency in 2009, whereby Deputy President Jacob Zuma replaced President Thabo Mbeki, various ministries were restructured and the Comprehensive Rural Development Programme (CRDP) replaced the ISRDP as the key institutional framework for rural development.

President Jacob Zuma officially launched the CRDP on Monday 17 August 2009, at Muyexe Village in Greater Giyani Local Municipality of Limpopo Province. The CRDP was driven by the newly-constituted Department for Rural Development and Land Reform (DRDLR). CRDP objectives were to facilitate processes that address specific and prioritized needs of

communities in rural areas. Such needs included access to clean water, decent shelter, adequate sanitation and enterprises development support. The programme was based on the three strategic pillars namely, Agrarian Transformation, Rural Development and Land Reform. Community participation was stated as a central approach to CRDP implementation, particularly with regard to needs identification, programme development and service delivery monitoring. Since the CRDP emerged after the study, an extensive examination of the CRDP is largely beyond the scope of this thesis, although some reference is made to the programme insofar as it relates to the RESIS Programme (Chapter Three).

2.5 INTEGRATED SUSTAINABLE RURAL DEVELOPMENT PROGRAMME

2.5.1 INTRODUCTION

The South African government launched the ISRDP in July 2000 after consultation with a wide range of key stakeholders and as a renewed attempt to improve opportunities and the well-being for the rural poor (IDT, 2000: iv). Prior to this, the Office of the Presidency of South Africa directed the formulation process for the ISRD Strategy (ISRDS). President Thabo Mbeki formally announced the ISRDS on June 25 1999. The ISRDP ended in 2009, following government's expressed recommitment to addressing poverty, restructuring of ministries and emergence of CRDP. This section gives attention to the ISRDP, which was the main institutional framework for rural development during the course of the study.

2.5.2 ISRDP VISION AND ARTICULATION

The vision of the ISRDP was to "attain socially cohesive and stable rural economies with viable institutions, sustainable economies and universal access to social amenities, able to attract and retain skilled and knowledgeable people who are equipped to contribute to growth and development" (IDT, 2000:19).

Articulation of this vision involved an incremental approach wherein the initial focus on thirteen identified pilot nodal areas was to be broadened to embrace all impoverished rural areas in the country by the year 2010. A further seventeen nodes were identified in September 2003 but were never gazetted.

Articulation of the ISRDP vision also involved the integration and coordination of rural development interventions by various sectors and spheres of government in South Africa. In

this regard, the Integrated Development Planning (IDP) process provided the principal instrument for integration and coordination, as required by the Municipal Systems Act 23 of 2000. This act gave municipalities the legal responsibility to undertake IDP processes to guide and inform all planning, budgeting, management and decision-making in municipal areas, and therefore places municipalities in a key position to coordinate the ISRDP programme. The central positioning of municipalities in the implementation of the ISRDP reflected the government's objectives to decentralize political and administrative decision making to local authorities.

2.5.3 ISRDP OBJECTIVES

As a support strategy for government decentralization objectives, the ISRDP subscribed to policy objectives pertaining to rural development, which included:

- The promotion of macroeconomic stability to create favourable conditions for investment and trade;
- Agricultural policy reform to remove distortions and enhance competitiveness in the agricultural sector;
- Investment in infrastructure and service delivery to strengthen links between rural areas and the economy as a whole, to reduce the costs of production in rural localities and to make rural areas more desirable places to live in;
- Investment in human capital to enhance the skills and health of rural people; and
- Broadly-based ownership of land and productive assets to address the historical inequalities in access to land and housing (Goldman *et al*, 2002).

2.5.4 IMPLEMENTATION OF THE ISRDP: OVERVIEW

Implementation of the ISRDP involved the use of existing institutional, planning, management and funding mechanisms to focus the expenditure of the three spheres of government in order to more effectively and efficiently respond to needs and opportunities (See Figure 6). It is perhaps worth noting that the implementation approach was not based on additional funding from government, but on increasing efficiency in the application of public funds to create appropriate outputs in the rural areas where they are required. Towards this end, the structures and procedures of the Medium Term Expenditure Framework (MTEF) provided the mechanism for rationalizing national and provincial budget

structures into an 'amalgamated expenditure envelope' to meet ISRDP objectives. Mobilization of funds took place through various delivery structures and relationships, including the economic, social and infrastructure 'clusters' and 'partnerships' of various state organs, the private sector, public-private partnerships and the donor sector.

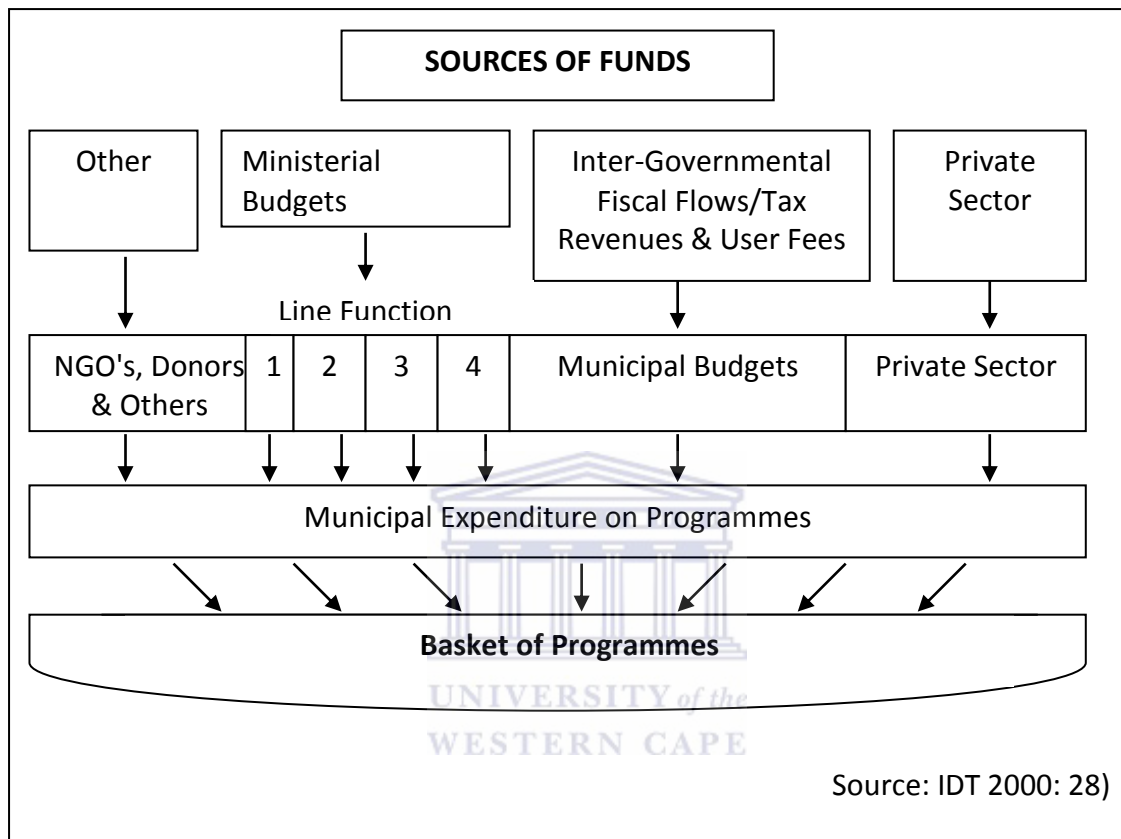


FIGURE 6 AMALGAMATED EXPENDITURE ENVELOPE FOR FUNDING THE ISRDP

Implementation of the ISRDP also included the establishment of political and technical institutions to drive, manage and implement the programme across the three spheres of government (See Box 1).

It is evident that the ISRDP was basically an institutional rationalization strategy for aligning the activities of all three spheres of government with local development priorities. Although the ISRDP had no tangible development outputs, the implementation framework for the programme included the identification of 'anchor projects' around which the various development initiatives were envisaged to revolve. Smallholder irrigation schemes were among a list of seventeen anchor projects in the Greater Sekhukhune District.

BOX 1 SOME KEY OUTPUTS OF THE ISRDP

- An Inter-Governmental Relations (IGR) Organanalysis that outlines the key roles and responsibilities of critical entities across all spheres of government;
- Assignment of a core group of 14 national ministers to act in pairs as political "champions" for individual provinces and rural nodes;
- Identification of political and technical champions at the provincial and nodal municipal levels;
- Establishment of a national Inter-Departmental Task Team (IDTT) structure to manage and coordinate the ISRDP nationally;
- Initiation of a process to establish provincial and nodal municipality Technical Coordinating Committees to manage and coordinate the ISRDP at the operational level;
- Initiation of process to establish nodal delivery teams in all the nodal district municipalities (IDT, 2002); and
- Identification of "anchor" projects for each of the thirteen pilot nodal areas, and the incorporation of these into the relevant IDPs.

(Source: IDT, 2002)

Despite achievements in the setting up a variety of institutional arrangements to implement the ISRDP and the identification of nodal anchor projects, a common view was that the implementation of the programme had been beset with a number of difficulties. Prior to the launch of the ISRDP in 2001, the national Inter-Departmental Task Team (IDTT) identified the following challenges: insufficient alignment across the three spheres of government, lack of adequate funding and technical inputs for projects, slow response by institutional systems and actors to the demands for new protocols of organizational behaviour, and poor visibility and support of political champions.

A 2004 evaluation of the ISRDP, on behalf of the Independent Development Trust (IDT), showed that there had been limited improvements over the previous four years and the programme was still beset with insufficient capacity and inadequate coordination with and participation by provincial and national departments (Everatt *et al*, 2004). Although a great deal of money had been made available for capacity building initiatives in the nodes, such funding was not guided by clear planning. Institutional arrangements at the nodal level had yet to be sufficiently refined. Although relations between district and local municipalities seemed to be generally adequate, there were problematic undercurrents that needed to be dealt with. IDP process required greater participation by the national sphere and better coordination of planning, budgeting and delivery between all the spheres of government. Such challenges were compounded by the fact that the ISRDP emerged within a context in which there was "very little concentration on spatial planning in rural areas to succeed the former apartheid planning strategies" (Swartz *et al*, 2003: 3).

2.5.5 HISTORICAL ORIGINS OF THE ISRDP: POST-1994 RECONSTRUCTION

The ISRDP was the product of a concerted effort by the South African government, acting in conjunction with local, national and international structures and networks (IDT, 2000). The programme drew from a diversity of development approaches and interests. Indeed, international frameworks such as Agenda 21 and the Millennium Development Goals appear to have had significant influence on the drafting of the ISRDP. While this enriched the discourses that informed the ISRDP design process, the same diversity also created difficulties in the conceptualisation of the rural challenge in South Africa and the requisite interventions. These difficulties were reflected in debates regarding whether or not the ISRDP provided an adequate construct for the resolution of the rural challenge.

The ISRDP emerged during the African National Congress' (ANC's) second term in government. Everatt (2004: 3) asserts that between 1999 and 2004, there was a shift away from the 1994 - 1999 emphasis on policy formulation and releasing resources to benefit the majority of citizens towards a focus on implementation and service delivery, including better organization of government through mechanisms such as the Cabinet Cluster system. The beginnings of this shift, however, were rooted in the ANC's first term in government. This was the design phase of the Cabinet Cluster system and systems and structures such as the Poverty Relief Fund, the annual Cabinet Lekgotlas and the Medium Term Strategic Framework. There seem to be varying views, however, on the contributions by the policy and legal frameworks developed in the ANC government's first term of office.

One view (Everatt, 2004: 4) is that the ISRDP was a response to the failure by the Rural Development Strategy and the Rural Development Framework to articulate a clear methodology for achieving the RDP requirements and standards, due to a lack of experience with the complexities of governance. Everatt's view is therefore that the RDP provided the key macro-economic policy that set out the delivery requirements and standards for the ISRDP. Other scholars (Van Rooyen *et al*, 2001: 42) recognize the role of both the RDP and GEAR in providing the policy grounding of the ISRDP, the latter being seen as providing the requisite stable macro-economic framework. The contrasting views reflect divergence in the conceptual bases for the ISRDP and contradictory perspectives on the broader rural development approach adopted by government. The contrasting views also reflect the

interests and tensions inherent in the broader national and provincial institutional context outlined in Section 2.1 above.

Apart from diversity of international influences on the framing of the ISRDP, there seem to have also been some practical national and local imperatives for the government intervention. Practitioners within various sector departments appear to have recognised the weaknesses inherent in the uncoordinated delivery of assets and services. This seems evident from adoption by the ISRDP of the 'cluster' delivery model developed by the National Public Works Department for implementation of the Community Based Public Works Programme (CBPWP). The cluster delivery model became the 'nodal' model for the ISRDP (Everatt, 2004).

Scholars such as Cousins (2003) have argued that the South African challenge is not about 'rural development' but 'agrarian reform'. Cousins's notion of agrarian reform encompasses a broader set of issues than envisaged by neo-liberal economists, such as Van Zyl (1996). It embraces the character, strength and distribution of land rights; the class character of the relations of production and distribution in farming and related enterprises; how these connect to the wider class structure; and therefore economic and political power and the relations between them. By contrast, 'integrated rural development', as conceived by neo-liberal economists, emphasizes the inclusion of petty commodity producers into the mainstream capitalist economy as a means of achieving 'equity' and 'empowerment' of the historically disadvantaged⁵.

2.5.6 CONCEPTUAL FOUNDATIONS OF THE ISRDP

Conceptual foundations of the ISRDP can be traced to the early 1990s, when academic debates about the challenge of rural poverty and inequality occupied a central position in numerous conferences, workshops and seminars that were held both in South Africa and abroad. Such debates largely focused on the land question. An important landmark among these was the Land Options Conference, which the Land and Agricultural Policy Centre (LAPC) convened in Johannesburg from 12 to 15 October 1993 (Van Zyl, 1996). Major

⁵ See Section 2.3 for a more detailed review of this debate.

initiatives also included a plethora of popular discussions that were held at the grassroots level (Ibid.).

With progression through the decade, however, there was a broadening of focus to include issues of disempowerment, poverty and empowerment of historically disadvantaged individuals (HDIs) and communities in various sectors of the economy, particularly agriculture. The focus of debates shifted to restructuring of the economy to “create equal opportunities and level the playing field” (Kirsten et al, 1998:1). Concepts such as ‘black advancement’, ‘black empowerment’ and ‘affirmative action’ came to the fore (Ibid.). Black economic empowerment (BEE) broadly meant the redress of the legacy of past discrimination and elimination of inequalities, but this was qualified by recognition of the need for “economically optimal allocation of scarce production factors in order to produce sustainable levels of welfare” (p.3). The assumption was that the market, as an institution that links demand and supply, provided an effective mechanism for allocating scarce resources according to need and utility (Brand et al 1992 in Kirsten et al, 1998; Eckert 1991 in Kirsten et al, 1998).

Global liberalisation policies were influential in shifting focus to include economic questions, alongside the land question. The World Bank, in particular, played a key role in setting the tone for post-1994 discourses on the challenge of rural poverty and inequality and, by extension, conceptualization of the ISRDP and related interventions in the land, agriculture, water and other productive sectors.

2.5.6.1 World Bank Approach: Economic Liberalization

In 1994, the World Bank asserted that a successful strategy for growth and development of the rural economy would require at least three components, including:

- Firstly, the removal of prevailing distortions in white commercial agriculture to increase competition and induce a shift towards more employment-intensive forms of production, processing and marketing;
- Secondly, the development of a new type of commercial, small-scale agriculture centred on the family farm to further increase employment intensity and efficiency in agriculture; and

- Thirdly, a fundamental institutional restructuring in order to support the new vision: on the one hand, a down-sized and employment-intensive white farming sub-sector and, on the other hand, an emerging commercial small-scale farming sub-sector (Kirsten et al, 1998:5).

The second component pertained specifically to historically disadvantaged people in former homeland areas, for whom the proposed development strategy would entail an upgrading of agricultural support services and investments in improved physical and social infrastructure. Such strategy was said to be consistent with the process of policy liberalization and focusing public sector resources on “some of the most obvious victims of apartheid”. By contrast, the second element of the World Bank’s assertion involved a restructuring of the public, private and private voluntary institutions that define entitlements of farmers and provide support services to farmers as well as “a restructuring of the entitlements and services themselves” (Ibid.).

Although the World Bank’s proposition was closely attuned to global liberalization policies emanating from the Bretton Woods Agreement, it was largely silent on outstanding socio-economic and political issues, such as disempowerment and alienation of productive resources, principally land, which affected the majority of historically disadvantaged black people of South Africa. It was left to South African stakeholders to qualify the content of ‘appropriate’ strategies for redress and restructuring.

2.5.5.3 Emergence of Neo-liberal Dominance of South African Rural Development and Agrarian Reform Discourses

Lipton (2007) suggests that South African debates have been subject to conflicting interpretations of South Africa’s history of disempowerment. Lipton identifies three broad categories of scholarship that shaped perceptions about South Africa’s past, socio-economic challenges and requisite reforms. These are the neo-liberals, neo-Marxists and (African and Afrikaner) nationalists.

From among a diversity of stakeholders who engaged with the 1990s discourses about post-apartheid South Africa’s rural challenge, a ‘think-tank’ of neo-liberal scholars rose to prominence in the late 1990s and influenced the formulation of the ISRDP and related

reforms in land, agriculture, water and other productive sectors. This grouping, as well as some Marxist scholars, social scientists and political economists, emanated from the LAPC 'Options Conference' of 1993 (Van Zyl et al, 1996), and the think-tank was formally convened by the Africa Institute for Policy Analysis and Economic Integration (AIPA) towards publication of a book entitled 'The Agricultural Democratisation of South Africa' (Kirsten et al, 1998). Contributors mostly included agricultural economists notably, Johan Van Zyl, Johan Kirsten, Hans Binswanger, Nick Vink, Klaus Deininger, Johan Van Rooyen, Michael Aliber, Rob Townsend, Sampie Terreblanche and Diana Carney, among others. The AIPA publication became the conceptual basis for the ISRD and, by extension, the RESIS Programme.

The ascendance of neo-liberal scholarship was counter to compelling evidence and arguments put forward by South African political economics scholars (e.g. Levin & Weiner, 1996; Delius, 1996; May et al, 1998; May, 2000:7). These argued that the challenge of rural poverty and inequality might not be resolved through neo-liberal approaches but required a comprehensive poverty relief programme. South African neo-liberal scholarship also rose despite international evidence that a few decisive strokes of policy to roll back states and liberate markets was not enough to achieve accelerated economic growth *and* reduce poverty⁶.

Terreblanche (1998:49) ascribes the hegemonic influence of neo-liberals to fiscal constraints and lack of organizational capacity, which prohibited the new ANC-led government from implementing a comprehensive poverty relief programme. Terreblanche concludes that, in the absence of practicable poverty-focused options, the argument of the "wealthy middle class" that the only way to solve the poverty problem was to maintain a high economic growth rate prevailed.

By contrast, Lipton (2007:148) alludes to tensions within the Tripartite Alliance of the African National Congress (ANC), Congress of South African Trade Unions (Cosatu) and the South African Communist party (SACP). While the main divisions have been between African nationalists/Africanists, the Left and various less effectively mobilized liberals and

⁶ Bernstein, H. 2004. Development Studies and the Marxists. Draft eScholarship Repository. Internet [http://repositories.cdlib.org/cgirs/CGIRS-2004-8] 01 April 2008.

pragmatists, “pace-setters” have been Africanists and the Left within the ANC. According to Lipton, many among Africanists are former Black Consciousness activists, who have been co-opted into influential positions within the ANC and are among those who decry the lack of change and incomplete power transition. Most are not averse to capitalism and are indeed the driving force behind the ANC’s BEE policy.

It would seem therefore that emergence of the ISRDP in the ANC’s second term of office reflected, in addition to lack of fiscal and organizational capacity (Terreblanche, 1998:49), the convergence between Africanist and neo-liberal perspectives. Such convergence has also been evident in the heraldic economic ‘growth and development’ mantra that characterizes overarching institutional frameworks, such as the National Growth and Development Strategy (NGDS) and its provincial permutations, as well as sector-specific slogans like ‘water for growth and development’. The mantra is also echoed in regional institutional frameworks for agriculture, such as the NEPAD CAADP (see Section 1.2.3), and similar provincial frameworks, such as RESIS-Recharge Programme of Limpopo Province (see Section 2.3.2).

2.5.6.2 Van Zyl's Vision for Agriculture and Management of the Transition: Liberalization

The World Bank’s proposition of 1994 (see Section 2.2.3.2) appears to have been taken up by South African neo-liberal scholars, such as Van Zyl (1996), who put forward ‘a new vision for agriculture and management of the transition’. Van Zyl’s vision was predicated upon three pillars namely: accelerating rural development; increasing access to land for the poor; and increasing access to land for small- to medium-sized commercial farmers (Ibid.). Regarding the last pillar, Van Zyl advocated that this strategic option represents the missing link in the required strategy for successful agricultural and rural transformation in South Africa (Kirsten et al, 1998:7). To promote market-assisted land redistribution, Van Zyl proposed that support should concentrate on the following four categories of individual and/or community owner-operators (Table 5):

- Land rental markets (including sharecropping);
- Joint ventures of workers and owners;
- Contract farming between a processing or marketing firm and owner-operators; and

- Market-assisted land redistribution to individual, small- to medium scale owner-operators (Van Zyl 1996:605; Kirsten et al, 1998:7).

TABLE 5 VAN ZYL'S VISION FOR INCREASING LAND ACCESS FOR SMALL- TO MEDIUM-SIZED COMMERCIAL FARMERS, 1996

Owner-Operator Category	Rationale and Requirements
Land rental markets (including sharecropping)	A more flexible rental market would improve the opportunity for households with some farm resources to engage in agriculture. However, land rental should not become the main aspect of farm structure, given the intrinsic problems such as under-investment, environmental costs and collateral constraints to credit.
Joint ventures of workers and owners	Joint ventures, such as equity-sharing schemes, will contribute to broadening the ownership base in agriculture. However, successful replication of this approach will be constrained by high transaction costs and special conditions for success, such as high value products.
Contract farming between a processing or marketing firm and owner-operators	Contract farming is especially appropriate for commodity production that involves a central processing plant or packing house, which requires large capital outlays and benefits from economies of scale (e.g. cotton and sugar cane production).
Market-assisted land redistribution to individual, small- to medium scale owner-operators	This approach will facilitate access to land for small- to medium-scale farmers. However, it will also require coordinated support by Departments of Agriculture, Land Affairs and Finance as well as the private sector regarding: grants, a viable credit system, substantial private sector involvement and selective government funded, financed and/or provided support services.

Source: Adapted from Van Zyl (1996:605) and Kirsten et al (1998:7).

Van Zyl's vision set the tone for neo-liberal scholars within AIPA's think-tank. Their perspectives on economic growth and development in AIPA publication entitled 'The Agricultural Democratisation of South Africa' became key points of reference for ISRDP formulation. The hegemony of neo-liberalism, however, remains contested. Various Marxist, social science and political economy scholars have continued to engage with policy on the requisite framing of the land and agrarian question, as well as institutional arrangements for empowerment and poverty alleviation. Such scholars include, among others, Levin (2002), Kepe & Cousins (2002), Cousins (2003), Borras (2003), Andrew et al (2003), De Swart (2004), Du Toit & Ziervogel, 2005; Du Toit (2004), Mayson (2004), Cousins (2005a), Cousins (2005b), Cousins et al (2005a), Cousins et al (2005b), Lahiff & Cousins (2005), Cousins & Hall (2005), Cousins & Claassens (2005), Cousins (2010) and Cousins & Scoones (2010). Drawing largely from radical political economy perspectives, some of these scholars (e.g. Cousins, 2005a; Du Toit & Ziervogel, 2005; Du Toit & Ziervogel, 2004; Du Toit, 2004; Cousins, 2003; Borras, 2003; Levin, 2002; May, 2000: 7; Levin & Weiner, 1996) identify structural factors as being

the fundamental constraints and argue that constraints to effective participation by small-scale farmers partly emanate from world market conditionalities. Similar views are expressed by Wilson *et al* (2001:4), Tarrow (1996 in Harris, 2001:1) and Drummond & Marsden (1999), who consider structural factors to be the most fundamental of constraints to poverty reduction in developing countries. Within this thesis, the institutional dimension of relationships within contractual joint ventures and strategic partnerships provides a lens for examining whether or not structural factors constitute constraints to rural livelihoods in impoverished smallholder irrigation scheme contexts in Limpopo Province.

According to Lipton (1993 in Cousins & Scoones 2010:40), institutions assume a significantly central role in New Institutional Economics, which informs much of the thinking underpinning contractual arrangements between farmers and private firms. New Institutional Economics sees both peasants and large land owners as rational decision-makers and real markets to be absent or 'thin' because of inadequate information or high transaction costs. This paradigm therefore propounds the adoption of exogenous institutions, such as rural money markets or share-cropping, and endogenous institutions, such as rural property rights, as means towards reducing transaction costs. Proponents of New Institutional Economics approaches also advocate the accommodation of 'interlocked markets', which are explicable as an endogenous response to market imperfections. They also recognise power relations and structures as important, since groups and coalitions seek to use or alter their property rights to their advantage (Ibid.). Endogenous power structures are seen as potentially leading to sub-optimal outcomes for society, particularly when large land owners prevent land markets from optimizing farm size and allowing the economic strengths of labour-intensive small-scale agriculture to be realized. New institutional economists therefore gauge viability in terms of productive efficiency, higher levels of equity and contributions to broader economic growth and poverty reduction (Ibid.).

Hart (2008) asserts that adequate understanding is not just a matter of combining different dimensions into a more encompassing model of "neo-liberalism in general" but rather the challenge is to come to grips with how "identifiably neo-liberal projects and practices operate on terrains that always exceed them". Hart's rationale is that the fissures within South African society form part of greater struggles over the definition and meaning of liberation and freedom on the one hand and simultaneously reflect the "expressions of

betrayal—intensified and sharpened by obscene and escalating material inequalities, and the crisis of livelihood confronting many in South Africa today”. This implies therefore the need to examine, in nuanced ways, the class dimensions of decision making, formulation and implementation of interventions and their impacts.

The next section presents, by way of context, an overview of South African debates on requisite approaches to enhancing rural development and addressing challenges of poverty and inequality. It is beyond the scope of this thesis to delve into a comprehensive review of counter-arguments to the neo-liberal perspectives. The thesis therefore limits such examination primarily to works by several selected social scientists, Marxists and other political economy scholars, who, among other scholars, have developed thorough analyses of South Africa’s rural challenge and critiques of adopted approaches. The logistical limitations to capturing the entire diversity of views and volume of such debates within this thesis, which foregrounds empirical research findings, are acknowledged.

2.6 OVERVIEW OF SOUTH AFRICAN DEBATES ON ENHANCING RURAL DEVELOPMENT

A number of South African political economy and social science scholars, and notably the Marxists, have questioned the neo-liberal argument for integrated rural development, agricultural commercialization and, in particular, the merits of contractual market linkage for smallholders and other members of impoverished rural communities. Such dispute revolves around various linked axes of argument. One of these relates to the neo-liberal assumption that a high growth rate within the core or mainstream economy will spread favourable trickle-down effects to the impoverished rural periphery, resulting in greater socio-economic integration and stability. Another is linked to the practical difficulties of ensuring successful entry by black small-scale farmers into mainstream commercial agriculture and a significant role for smallholder irrigators within the economy. A third pertains to the divergence of understandings about ‘marginalization’ and therefore the requisite interventions for addressing challenges of poverty and inequality.

In his critique of the ‘redistribution-through-growth’ perspective, Terreblanche (1998:46) asserts that the economic problem for South Africa is mainly a systemic one. The scholar argues that for South Africa to be aligned with “today’s world”, the country has no choice

but to develop an “appropriate and sustainable system of democratic capitalism” to replace the previous system of racial capitalism. The scholar identifies the most serious problem facing South Africa today as the ‘absence of a proper social structure’. He states that South African population does not presently constitute a society since it lacks the shared values, the common ideological connections, the cross-cutting cleavages and the common history necessary to “cement the population into some kind of community” (p.47). Terreblanche further argues that South African transformation will not be complete until a new “symbiosis” has been forged between the black controlled state and white owned capital. Drawing from the perspectives of an “incomplete power shift” and an “on-going power struggle” across post-1994 racial cleavages of political and economic power, Terreblanche identifies five ‘problem areas’ as probable impediments to the transformation process:

- Lack of *socio-economic stability* and a unifying *ideology*, manifest in high levels of violence, crime and general lawlessness;
- Lack of *equity*, manifest in inequalities in the distributions of incomes, property, opportunities and in abject poverty;
- Relatively low *economic growth* and poor job creating ability of the economy;
- Inability of both the private and public sectors to create socio-economic and ideological conditions conducive for a fuller re-integration of the South African economy into *global economy*; and
- Inability of the new government to *govern efficiently and effectively* as well as the inability of government to facilitate the *systemic transformation* towards a sustainable system of democratic capitalism (Ibid.).

Terreblanche surmises that although racial capitalism cannot be blamed for all inequalities in the distribution of income, property and opportunities, a large part of these inequalities can and should be blamed on the social, economic and political structures created during the period of white supremacy. This view resonates with views by other scholars (e.g. Leibbrandt et al 2001:205 in Du Toit, 2005; Makgetla 2004 in Du Toit, 2005; May, Carter & Padayachee 2004 in Du Toit, 2005) that the role of the structure of the Apartheid economy and the extreme nature of South African inequality in impeding growth should be recognised, and that the neo-liberal argument about rigidity and inefficiency seems rather

decontextualised in the light of the deeply racialised and authoritarian history of South African capitalism, state formation and modernisation.

With regard to the practical difficulties of ensuring successful market entry by black small-scale farmers, Cousins (2003) casts his argument in terms of the 'agrarian question of the dispossessed' perspective, which revolves around the constituting of a new class of emergent petty commodity producers from the ranks of the desperately poor, a class which "must insert itself aggressively into the mainstream capitalist economy". Cousins raises questions about prospects for effective participation by small-scale farmers in highly competitive and globalised agricultural commodity sectors. On the basis that black small-scale farmers lack the financial resources, technology, technical and managerial skills and access to markets, Cousins asserts that it is debatable whether a new class of petty commodity producers can establish a viable niche within global commodity chains, given the significant constraints to their effective participation. Collier & Dercon (2009) argue that in the longer term, strategies to increase agricultural contributions to economic growth might render smallholder farming untenable, since labour productivity requires "successful" migration out of agriculture and rural areas.



At face-value, such perspectives seem to echo Kirsten & Sartorius' (2002) observation that, among farmers, it is often only the well-endowed and skilled who have the ability to be part of the coordinated chains and alliances. However, there is a fundamental difference in assumptions underpinning Kirsten & Sartorius' observation and Cousin's (2003) perspective. Cousins's 'agrarian question of the dispossessed' view is predicated upon a class-analytic assumption that prospects of effective participation by these farmers are untenable under prevailing structural constraints. Kirstens & Sartorius' view resonates, rather, with Eaton & Shepherd's (2001:3) argument that successful entry by small-scale farmers into mainstream commodity sectors becomes possible when the decision to use the contract farming modality is commercial rather than developmental, and motivated primarily by economic and technical realities rather than political and social concerns. The latter view implicitly assumes that the 'inclusion' of the more capable among black farmers can enhance these farmers' equitable access to and participation in coordinated global value chains and alliances.

Cousins (2003) argues that contrary to conventional notions of poverty as 'residual' in character, the vast majority of rural dwellers are not so much excluded as included on highly adverse terms. Reiterating this view, Du Toit (2005) asserts that often the problem is not that poor people have simply been excluded from particular institutions, resources or larger processes, but that they have been included on inequitable or invidious terms (Apthorpe 1999 in Ibid.; Bracking 2003 in Ibid.; Murray 2001 in Ibid.). The counter-argument by some among Marxist scholars, including Cousins (2003) and Du Toit (2005), is that the complex and dynamic processes of marginalization form such an important dimension of chronic poverty and require us to go beyond the simplistic dichotomy between inclusion and exclusion and the assumption that inclusion is necessarily beneficial.

The above debates have direct implications for what has become known in South Africa as the "two economies" debate, which revolves around the argument advanced by President Mbeki in August 2003 that the persistence of poverty in South Africa is due to the "structural disconnection" between the "first world economy" and a "third world" economy (Mbeki 2003 in Du Toit, 2005). According to Du Toit, the significance of Mbeki's argument is that it represents government's recognition of the limitations of trickle-down approaches. Such recognition presents opportunity to advance the re-examination and enhancement of approaches to poverty (Ibid.). In his 'two economies' analysis, Cousins (Ibid.) dismisses the assumption that economic growth in the 'first economy' will automatically benefit those in the 'second economy', arguing that the apparently successful policies pursued within the 'first economy' are the same policies that create structural disadvantage in the 'second', and thus need to be questioned. Webster (2004 in Du Toit, 2005) points out that powerful and suggestive as the metaphor of a separate "third world economy" is, it is not a helpful way to understand the very complex actual relationships that persist between the highly developed 'core' of the South African economy and its underdeveloped and impoverished periphery.

Furthermore, Cousins (2005a) expresses reservations about former President Thabo Mbeki's suggestion that the 'first' (i.e. formal and mainstream) and 'second' (i.e. informal and marginalized) economies are 'structurally disconnected'. In disputing such suggestion, the scholar invokes suggestions by analysts, such as Magketla (2004 in Cousins, 2005a) and Terreblanche (2002 in Cousins, 2005a), that poverty is caused by structures of inequality within *one* economy that is already integrated, but in ways that disadvantage the majority.

The scholar surmises that if the construct envisaged by Makgetla and Terreblanche is a more appropriate model, then the solution lies not in “building ladders between the lower and the upper storeys of the two-tiered house, but rather in rebuilding the house, according to a new set of architectural plans”, according to an often cited analogy by Mbeki. In essence, these scholars call for a radical change of the capitalist structure rather than a reconstruction of the same construct that has proved detrimental to real transformation of South African society. Cousins therefore rejects the neo-liberal assumption that integration of the first and second economy will require ‘sustained government intervention’, including resource transfers and the infusion of capital (Ibid: 11).

Du Toit (2004:11 in Cousins, 2005a) observe that it may well be that many of the obstacles to accumulation from below among poor people are linked very closely to the depth of corporate penetration of the economy as a whole...”. Drawing from perspectives on global value chains, Cousins & Scoones (2010) contest the neo-liberal paradigms of ‘viability’ and observe that the notion of viability is often narrowly seen in technical and economic terms, with success being judged on the basis of farm productivity and economic returns and technical recommendations around ‘minimum farm sizes’, ‘economic units’ and ‘carrying capacity’. Smallholders are therefore thrust into standard farm management approaches and business plans developed for large scale commercial farms. The result is that the role of other farming systems that do not fit into the narrow commercial model, such as as small-scale household-based production systems, are marginalized from the ambit of programmatic support. Cousins & Scoones view such normative model and practice as legacies from settler colonialism in Southern Africa, which has given rise to the highly dualistic and racially divided agrarian structure.

Acknowledging this historical context, Denison & Manona (2007) call for a re-formulation of interventions to take into account the diversity of smallholder needs and interests, and factoring in of needs of the resource-poor while responding to changes in global agri-food systems. From a radical Marxist perspective, Cousins (2003) asserts that although the deep poverty in rural areas requires radical measures, not least a redistribution of resources including land, a sustainable livelihoods approach that builds on the land-based livelihoods that rural people currently practice and enhances their economic value might be more appropriate than attempting to replace these livelihoods with fully market-orientated or

commercialised approaches. Towards this end, Friedman's (2005) observation that attempts to deal with poverty are ineffective because they do not reflect what the poor want also suggests, perhaps, the need for more active participation by the rural poor in shaping the agrarian agenda.

Cousins & Scoones (2010) point out that many livelihoods analyses reveal an inherent tension between emphases on poverty alleviation, on the one hand, and promoting economic growth and increased market access, on the other hand. Effectively therefore, two strands of livelihoods approaches can be identified namely, the developmentalist and welfarist approaches. The former underscores economic growth and development while the latter approach emphasizes poverty alleviation and strongly focuses on food security. Wegner & Zwart (2011), for example, cast the contemporary production challenge in terms of food security for the poor. These scholars state that achieving the objectives of increased food production, food availability and environmental sustainability requires adoption of a blend of policies that address a four-pronged approach that includes supporting subsistence farmers to cope with risk and vulnerability; empowering small investor farmers with capacity to increase their productivity, production and competitiveness and thereby contribution to food security; making large investments pro-poor by setting appropriate frameworks; and building complementarities between small and large farms where possible (Ibid.). Viability, from the welfarist approach, is defined in protectionist terms as the ability to shelter poorer people from shocks and stress, alleviate poverty and reduce vulnerability of those most at risk.

By comparison, radical political economy has relatively more diverse strands of thinking (Cousins & Scoones, Ibid.). One view, for example, attempts to theorise contemporary forms of radical agrarian populism. Radical populists perceive rural poverty to be a result of unequal agrarian structure and therefore underscore the oppression and exploitation of workers and peasants by the more powerful land-owning classes and corporate interests. While such perception resonates with the Marxist focus on class relations, class structure and dynamics of class accumulation in agriculture, radical populists differ in that they place less emphasis on class and other forms of differentiation amongst the rural poor while instead lumping together the collective interests of groups of marginalized people. Such radical political economy perspective rejects the conventional assessment of viability in

terms of efficiency and productivity, drawn from “an economic logic that fetishes growth in quantitative terms” (McMichael 2008 in Cousins & Scoones, 2010). The rationale is that such logic externalizes ecological effects, such as chemical pollution, discounts energy costs and subsidy structures for agribusiness and undervalues the economic costs of agro-industrialization (Ibid.).

Marxist analyses, like radical political economy perspectives, are diverse and fraught with contradictions over nuance and interpretation (Cousins & Scoones, 2010). Key Marxist concepts include social relations of production, the unequal distribution of property rights between classes and class power, in both economic and political terms. A core concern for Marxists is the contribution of agriculture to capitalist accumulation and industrialization (Akram-Lodhi & Kay 2009 in Cousins & Scoones, 2010:46). While such concern is rooted in late nineteenth century classical framings of the ‘agrarian question’, the contemporary concern is debated under a markedly different context of neo-liberal globalisation (Cousins & Scoones, 2010). Whereas pre-capitalist societies were characterized by rent-based appropriations of surplus labour of peasant producers by the landed gentry, the logic of capitalist social property relations in contemporary contexts establishes the conditions of market dependence and drives the growth of agricultural productivity through technical innovation (Bernstein 2004 in Cousins & Scoones, 2010). From such perspective, Bernstein (Ibid.) postulates that peasants are best understood as petty commodity producers, who are subject to processes of class differentiation. Some succeed in becoming rural capitalist farmers while others are compelled to engage in wage labour and other forms of activity to secure their livelihoods. Cousins & Scoones surmise that this implies therefore that viability from a Marxist perspective is primarily a function of class relations and dynamics. Viability can also refer to an accumulation from below or above by emerging classes of agrarian capital. Similarly, viability can be considered to be the reproduction of peasant farmers as petty-commodity producers, or improved prospects for the livelihood security of differentiated classes of labour. In light of the extension of neo-liberal globalization into the commodification of rural economies, assessments of viability also go beyond localized contexts and might include the ability of agriculture to contribute to national economic growth for the benefit of the broader society.

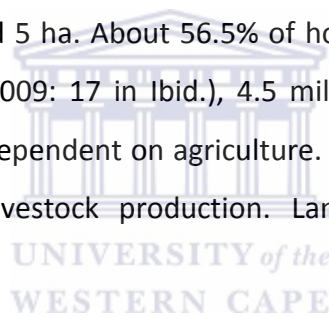
From among the five contested paradigms of viability outlined above, it would seem that Cousins, draws largely from the Marxist perspective to further develop a class-analytic perspective on small-scale farming and agrarian reform (Cousins, 2010). The latter perspective is centred on the key concepts of 'petty commodity production' and 'accumulation from below', which the scholar asserts are essential for understanding the differentiated character and diverse trajectories of small-scale agriculture in capitalist economies. Cousins's perspective also revolves around the notion of 'smallholder', which embodies class differentiation although much of its common usage suggests that smallholders form a relatively homogenous group. The downplaying of inequalities and differences between rural households is associated with the greater importance ascribed to 'racialized class relations' in Southern Africa.

Cousins (Ibid.) postulates that an alternative approach to analysing rural social formation in the region is to view both proletarianization and the emergence of petty commodity production as class trajectories within a capitalist economy. Such trajectories can also be seen in complex and contradictory combinations with each other. The scholar therefore proposes a class-analytic typology that identifies six categories of small-scale producers in South Africa. These include, firstly, 'supplementary food producers', who work small plots or gardens, do not have access to wage income and rely on additional forms of income such as social grants, craftwork or petty trading for their simple reproduction. Secondly, 'allotment holding wage workers, who work small gardens but are primarily dependent on wages for their simple reproduction. Thirdly, 'worker peasants', who farm on a substantial scale but are also engaged in wage labour and combine these in their simple reproduction. The fourth type consists of 'petty commodity producers', who are able to reproduce themselves from farming alone, or with minor additional forms of income. The fifth type includes 'small-scale capitalist farmers', who rely substantially on hired labour and can begin to engage in expanded reproduction and capital accumulation. Lastly, the sixth type of small-scale producer includes 'capitalists whose main income is not from farming', and who farm on a small-scale but their main source of income is another business. This typology seems particularly useful in helping to unpack the key variables relating to who engages in what agricultural activity, the degree to which agriculture contributes to social reproduction or expanded reproduction and the degree to which hired labour is used in the agricultural

production process. According to Cousins, such variables are key indicators of class relations in agriculture.

2.6.4 WATER SECTOR PERSPECTIVES ON PROSPECTS FOR SMALLHOLDER IRRIGATION FARMERS

Perret (2001) argues that the vision of a significant role for black petty-commodity producers in smallholder irrigation schemes seems rather ambitious when viewed against the fact that the majority of black arable farmers in South Africa practise rain-fed cropping rather than irrigation, and subsistence rather than commercial farming. This view seems to be supported by observations by Backeberg & Sanewe (2010) that among the approximately 1.3 million households in the category of small-scale agriculture, who participate in some type and varying intensity of food production activity, the majority (82.8%) have plots of land whose size ranges from less than 0.5 ha to 1 ha. For an additional 10.7% of households the plot sizes are between 1 and 5 ha. About 56.5% of households are headed by women. According to a study by Hart (2009: 17 in *Ibid.*), 4.5 million black people in South Africa participate or are in some way dependent on agriculture. For many this is a low-input, low-output activity and includes livestock production. Land access is therefore a major constraint.



The proportion of black small-scale farmers who can benefit from agricultural commercialization in Limpopo province is constrained by environmentally and structurally induced 'water scarcity' (Tapela *et al*, 2011a; Tapela, 2009). Most (11) of the 19 Water Management Areas (WMAs) experience problems associated with physical water scarcity (Tapela *et al*, 2011). Water-stressed WMAs include the Olifants River Basin in Limpopo Province, within which all study sites for this thesis are located. While the relatively dry and drought-prone climate of Limpopo Province is widely acknowledged to be responsible for environmental water scarcity, it is the structurally induced water scarcity that has preoccupied debates around water and livelihoods, agrarian reform and rural poverty eradication (Derman *et al*, 2011; Van Koppen *et al*, 2010; Schreiner *et al*, 2010; Van Koppen *et al*, 2009).

With respect to productive water use, such as irrigation farming, observations are that white commercial farmers have continued to command a significantly larger share of

irrigation water and infrastructure in the 'water-stressed' Olifants River Basin (Tren & Schur, 2000; Ligthelm, 2001). While the South African government's Policy on the Financial Assistance to Resource Poor Irrigation Farmers is a welcome move to improve access to water by black smallholders, the gradualist approach adopted by the government's Water Allocation Reform (WAR) Programme limits prospects for redistribution of water at a critical phase of entry by black farmers into mainstream commercial agriculture (Tapela, 2008). Given WAR provisions that a review and possible reallocation of registered water use should take place after a period of five years, and that reallocations detracting from existing lawful use have to be justified, the process of redistributing water is likely to be "technically demanding and contentious" (DWAF, 2005).

Neo-liberal interpretations of emphases on 'efficiency' in water use, the 'user pays' principle and the payment for water resource management services at their 'economic value' further narrow the prospects for resource-poor emerging black farmers securing equitable access to water. An illustration of the small-scale farmers' dilemma relates to the inter-sectoral competition for water between the mining sector and the emerging smallholders occupying irrigation schemes in the Olifants Basin (Farolfi & Perret, 2002). Until Flag Boshielo Dam wall was upgraded in 2005, this competition seems to have compelled the small-scale farmers, whose profit margins were relatively low (Tren & Schur, 2000), to trade away a greater share of their water allocation to the mines, who could afford to off-set water prices. Commoditization of water resources therefore possibly poses a threat to the sustainability of livelihoods of subsistence producers among smallholders.

The possible negative effects of water commoditization resonate with the effects of market-based land reform, which particularly seems to restrict possibilities of extrapolating small-scale farmer support to areas outside of smallholder irrigation schemes. Studies (Jacobs *et al*, 2003: 25) suggest that reliance on the market to acquire land has resulted in a strong and increasing emphasis on commercial agriculture. Applications for land reform grants are required to adhere to stringent commercial criteria to qualify for land purchase grants and loans, and applicants are required to procure support services, such as business planning, extension and finance, from the private sector. Small-scale production particularly for household consumption "hardly features in official redistribution thinking", and state agricultural support services are unavailable in many parts of the country (*ibid.*). In light of

these factors, Jacobs *et al* (2005: 25) concludes that the prospects of the very poor accessing LRAD funding are increasingly in doubt. From the foregoing, it is difficult to see how a commercialized approach to the allocation of land and water resources and to agricultural production can contribute to sustainable livelihoods in contexts where poverty is rampant, such as in smallholder irrigation schemes in Greater Sekhukhune.

Beyond redistributive reforms for productive land and water use, arguments have been put forward that, although water is an integral part of people's multi-faceted livelihoods, the single-use design of formal public water schemes continues to be at variance with multiple-use practices of local communities and households and is therefore key factor determining insecurity at local community and household levels, particularly among the rural poor (Van Koppen *et al*, 2006, 2010; Cousins *et al*, 2007; Maluleke *et al*, 2005; AWARD, 2005; Mendiguren & Mabelane, 2001). Such arguments draw from empirical evidence that rural people simultaneously use multiple natural and man-made sources, such as surface water bodies, irrigation canals, wetlands, soil moisture or rooftop water, individual or communal storage facilities, groundwater wells and boreholes irrespective of whether or not they have household connections or public taps (Tapela *et al*, 2011a; Tapela, 2009; Van Koppen, 2010, 2006; Maluleke *et al*, 2005; AWARD, 2005; Mendiguren & Mabelane, 2001). Such water is used for multiple livelihood requirements, including subsistence irrigation of food crops (*ibid.*).

Evidence that the single-use design of formal public water schemes continues to be at variance with multiple-use practices of local communities and households needs to be juxtaposed with evidence from experiences in implementation of contract farming. The latter shows that while contract farming has assisted some African farmers to improve their lot, in many cases such institutional arrangements have been accompanied by a range of practical disadvantages. Disadvantages have included poor extension services, low prices to farmers due to haphazard pricing of produce and higher risk to producers (Glover & Kusterer, 1990) (*ibid.*). Disadvantages have also included the poor bargaining power of farmers and their dependence on firms for inputs and credit (Fulton & Clark, 1996) and environmental degradation due to over-exploitation of land and water resources (Siddique, 1998). Small-scale farmers, who wield less power and control within contract farming arrangements, have often been more vulnerable to risks associated with highly competitive

commercial agriculture (Jacobs, 2001: 28; Mayson, 2003; Cousins, 2003; Da Silva, 2005; FAO, 2006). Producers' control of the production process has been reduced, and cash crops produced at the expense of local food production and food security (Jacobs, 2001: 28). In light of such disadvantages, contractual joint ventures are viewed to be a new form of exploitation and a mechanism through which private investors spread the risk of engaging in an increasingly complex and capital-intensive sector, while gaining market and political credibility in the process (Mayson, 2003).

2.6.5 CONCLUSION

In light of the foregoing debates and issues, the study sought to examine, through empirical research, whether or not agricultural commercialization, as articulated mainly through contractual joint ventures and strategic partnerships, provides an adequate construct for achieving rural livelihood sustainability within impoverished smallholder irrigation scheme communities in Limpopo Province. The following chapter (Chapter Three) presents a review and research findings on the RESIS Programme in Limpopo Province, the latter of which are based on rapid appraisals of various case studies, including Makuleke and Phetwane. Chapters Four, Five and Six respectively present in-depth research findings from Hereford, Phetwane and Makuleke Irrigation Schemes.

2.7 ISRDP IN THE CONTEXT OF SMALLHOLDER FARMER SUPPORT IN GREATER SEKHUKHUNE DISTRICT

This section examines, by way of example, the institutional context for ISRDP support to smallholder irrigation farmers in Greater Sekhukhune District, which is home to seven out of eight study sites empirically examined by the study. These were Hereford, Phetwane, Elandskraal-Balemi/EBIS, Elandskraal-Kgotlelelo, Tswelelopele, Strydkraal A and Krokodilheuwel. No similar contextual examination is made of Vhembe District, where Makuleke Irrigation Scheme is located. Although the latter poverty node was identified in September 2003, it was never gazetted and therefore the ISRDP was therefore not formally implemented in the district. Nonetheless, municipal IDPs recognize localized rural poverty nodes, such as Makuleke, and target them for development interventions. The singular focus of examination on the ISRDP context in Greater Sekhukhune should not significantly detract, however, from the usefulness of insights yielded by this poverty node to this thesis,

since there are broad similarities in the geographical, historical and institutional contexts of both districts.

2.7.1 HISTORICAL BACKGROUND

Peter Delius (1996) succinctly summarizes the history of Greater Sekhukhune District as follows:

Sekhukhuneland was the heartland of the formidable Pedi Kingdom which long held the Swazi, the British and the Boers at bay. In the twentieth century it was transformed into an impoverished and overcrowded "reserve" but remained a byword for rural resistance; in the 1980s it achieved national notoriety as the epicentre of witch burnings.

It is worth noting that black people of Greater Sekhukhune District have historically played a significant role in rural resistance to both colonialism and apartheid, within a context where much of the resistance in post-Second World War South Africa was urban proletariat based. People like the late Flag Boshielo, after whom the water supply dam above the Phetwane Irrigation Scheme (the research site not included in this report) is named, are documented as having actively pioneered the initial armed resistance against apartheid. The historical onslaught on the local political power structure, dispossession of land and related resources and erosion of livelihoods appear to have provided a strong impetus to the early phases of resistance to colonialism by the Pedi of Sekhukhuneland. After this, the rural-urban linkages between Sekhukhuneland and urban-industrial centres also fostered the rural resistance to colonialism, and later to apartheid. This was articulated mainly through the migrant labour system. Sekhukhuneland became a major source of cheap labour for the colonial political economy following the defeat of Sekhukhune by the combined British, Boer and Swazi onslaught. The term "Nebo", which today refers to a densely populated region within Makhuduthaga local municipality in Greater Sekhukhune District, originated as an acronym for "Native Employment Bureau Office". Following the re-alignment of municipal boundaries in terms of the Municipal Demarcation Act of 2000, the contemporary configuration of Greater Sekhukhune district has brought together rural people with a diversity of backgrounds and cultures, mainly the Pedi, Ndebele, Ntwane (Tswana) and the Swazi,

among others. Although these have historically experienced varying degrees of conflict over time, conditions of poverty and inequality have been an enduring common factor.

2.7.2 GEOGRAPHICAL SETTING

Greater Sekhukhune District one of six district municipalities that comprise Limpopo Province. Prior to the government's abolition of cross-border municipalities in 2005, Greater Sekhukhune was a cross-border district municipality straddling the boundary between the Limpopo and Mpumalanga Provinces. The district is also one of the thirteen rural poverty nodes identified in 2001 for accelerated rural development through the erstwhile ISRD. The active role played by the rural people of Greater Sekhukhune in the struggle against colonialism and apartheid, and the prevailing impoverishment and inequality seem to have been strong compelling factors for the government to prioritize the district for the ISRD. The question though, was whether or not such prioritization would translate into tangible improvement of livelihoods for rural people living within or close to smallholder irrigation schemes.

The spatial extent of the district is approximately 1 326 437 hectares (Greater Sekhukhune Cross Border District Municipality (CBDM), 2005; Greater Sekhukhune CBDM, 2002). Significant proportions of the district (and Limpopo Province) fall within the Olifants/Lepelle River Basin, which is a constituent of the transboundary Limpopo watercourse system shared by South Africa, Mozambique, Zimbabwe and Mozambique. The district is located close to larger urban centres such as Pretoria, Polokwane and Nelspruit. The five local municipalities constituting Greater Sekhukhune District are Makhuduthamaga, Fetakgomo, Greater Tubatse, Elias Motswaledi (formerly Greater Groblersdal) and Ephraim Mogale (formerly Greater Marble Hall) (Figure 7). Until 2005, Greater Groblersdal, Greater Marble Hall and Greater Tubatse were cross-border local municipalities. The study gave attention to sites located within Elias Motswaledi (formerly Greater Groblersdal) and Ephraim Mogale (formerly Greater Marble Hall) Local Municipalities.

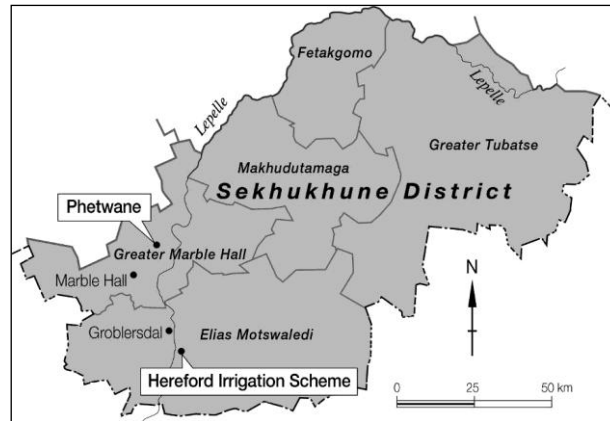


FIGURE 7 GREATER SEKHUKHUNE DISTRICT: DEMARCATION OF MUNICIPAL BOUNDARIES

Greater Sekhukhune District has a dualistic socio-economic structure of the kind found in many of South Africa's rural municipalities demarcated since the promulgation of the Municipal Demarcation Act of 2000. The settlement pattern indicates the social and physical segregation of communities. The relative affluence of the formerly designated 'white' commercial areas contrasts with the high levels of poverty and unemployment in the non-commercial former 'black' areas. The latter have lower Human Development Indices (HDIs), with large backlogs in services and infrastructure, and very small or non-existent economic bases. There have been recent moves to promote economic integration and equity through various 'black economic empowerment' initiatives, including the commercialization of small-scale irrigation schemes. However, the underlying dualism largely endures in many sectors and areas within the district.

Commercial agriculture provides the bulk of the employment opportunities in the district, but more than half of the population (64.8 per cent) is unemployed (StatSA, 2002), particularly the youth (age group 15 to 35 years). While the government service sector in the past provided a significant number of the jobs in the district, this sector has since become smaller and therefore less able to absorb prospective labour (Greater Sekhukhune IDP, 2002). Lack of employment opportunities has reinforced the migration of significant proportions of the rural population to various urban centres, including those in the Gauteng Province. Table 6 summarizes selected socio-economic characteristics of the district around the time of inception of the ISRDP. Data shows that salaries and wages, remittances, pensions, grants and access to agricultural land made significant contributions to livelihoods in the district. There were relatively low proportions of households with access to land for

agriculture (30.4 per cent) and engaged in crop farming (30 per cent). There were very low proportions of households engaged in livestock farming (1.2 per cent) and horticulture (0.3 per cent), as well as households which depended on the sale of farm produce as the main source of income (1.2 per cent). Early 2000s discourses around IDPs and local economic development (LED) in the district indicate that land redistribution and greater involvement of black people in the commercial farming sector were priority issues in Greater Sekhukhune (Tapela, 2002; Greater Sekhukhune IDP, 2002; Greater Sekhukhune District Status Report, January to July 2003).

TABLE 6 GREATER SEKHUKHUNE: SUMMARY OF SELECTED LIVING CONDITIONS, 2002

Characteristic	Measure (as a percentage: %)
Unemployment rate (in terms of the expanded definition)	64.8
Proportion of households living below minimum living level (R1 100 p.a.) [Source: Sekhukhune IDP Document, 2002: 20]	77.4
Proportion of female-headed households [Source: Sekhukhune IDP Document, 2002: 20]	58.6
Proportion of households with access to land for agriculture	30.4
Proportion of households engaged in field crop farming	30.0
Proportion of households engaged in livestock farming	1.2
Proportion of households engaged in horticulture	0.3
Proportion of households which never had a problem in satisfying their food needs	28.9
Proportion of households which depend on sale of farm produce as main source of income	1.2
Proportion of households which depend on remittances as the main source of income	29.1
Proportion of households which depend on pensions and grants as their main source of income	37.8
Proportion of households which depend on salaries and/or wages	21.6
Proportion of households which depend on other sources of income	6.9
Proportion of households with NO income	3.3

Source: StatSA, 2002

Delius (1996) observes that contemporary conditions in the Sekhukhune region exemplify the daunting task of reconstruction demanded of South Africa's democratically-elected government. According to the District Status Report for January to July 2003, key challenges for development in Greater Sekhukhune District Greater were poor social and economic infrastructure in all areas of the municipality, poor social and physical integration of the communities of the district, high poverty levels, gender inequality, inaccessibility of basic services such as health and education, lack of economic opportunities and wealth creation for the majority of the population, landlessness, environmentally unsustainable utilisation of

resources in the area, under-utilisation of the tourism potential within the nodal area and under-utilisation of agricultural potential in both production and agri-processing.

Identified challenges excluded water scarcity, which has been identified as a major challenge within the district (Tren & Schur, 2000; Ligthelm, 2001). Not only is the Limpopo Basin drought-prone, but all the available water appears to have already been allocated, mostly to commercial irrigation, tourism, industrial and domestic uses. While discrepancies in various data sets regarding water availability and usage in the Limpopo Basin make it difficult to determine the precise nature of the water scarcity problem, there is agreement that the established commercial farming sector accounts for the bulk of water usage while black farmers had insufficient water (Tren & Schur, 2000). During the course of the study, a number of interventions were underway to improve water access for this sector. One of these was the DWAF Policy on the Financial Assistance to Resource Poor Irrigation Farmers, which was launched in 2005.

From around 2002 the development of platinum mining in the eastern rim of the district appears to have led to heightened concerns over water scarcity. This pitted mining sector's water demands against increasing demands for irrigation water by the RESIS Programme, thereby compelling institutional actors to take clearer positions on which water uses would be prioritized. Competition due to envisaged increases in water demand by smallholder irrigation and mining sectors gave rise to intense inter-sectoral competition over water (Farrolfi & Perret, 2002). The competition prompted some government officials and scholars to argue that productive water should be re-allocated primarily on the basis of 'efficiency' of use (Ibid.). The study found that institutional actors conceived efficiency from neo-liberal and New Institutional Economics perspectives, using principles such as 'user pays', 'crop-per-drop' and transaction costs. In the smallholder irrigation sector, this potentially elevated agricultural commercialization above food security objectives. In light of such shifts, a key concern by the study was whether or not policies and institutions of the RESIS Programme and related initiatives reflected livelihood interests of the poor.

2.7.3 ISRDP IMPLEMENTATION IN GREATER SEKHUKHUNE: CHALLENGES

2.7.3.1 Overview

Research findings were that implementation of the ISRDP in Greater Sekhukhune was beset by obstacles relating to local government reform. Institutional capacity was lacking or not robust enough. There were insufficient administrative skills, inadequate office infrastructure, high staff turn-over, lack of coordination between the technical and the political champions of the ISRDP and difficulties in mobilizing funding for anchor projects. Residual differences in the budgeting cycles of the district municipality and national and provincial departments also posed a difficulty to the financing of projects prioritized in the IDPs. The District Municipality faced problems in coordinating projects across local municipal jurisdictions. To some extent, this problem appears to have been due to the failure by the District Municipality to overcome the negative effects of competition among the various local municipalities.

Coordination problems were compounded by the persistence of a sectoral approach, wherein many government officials continued to work within the ambit of their line departments irrespective of the requirements for integration. Municipal actors expressed frustration about apparent disregard by many senior government officials of the municipalities' legal mandate to coordinate development within local authority jurisdictions. Such disregard involved the generally inconsistent attendance of municipal meetings by senior government officials, who often sent junior officials despite such meetings requiring input from officials with decision-making authority.

Interviews conducted during 2003 with senior government officials revealed a perception that the governance process prescribed by the Municipal Systems Act was too cumbersome and time-consuming for effective delivery. Given the requirements of the Performance Management System introduced by government, many officials therefore tended to prioritize activities within their key performance areas (KPAs), to the detriment of the development coordination activities of municipalities. Members of staff in institutions providing support to the Greater Sekhukhune municipality expressed the view that there was a need for government to make active participation in development coordination activities mandatory for all relevant senior officials. It was also acknowledged that the

municipality needed to be proactive in ensuring that it had the capacity to play the coordination function effectively.

The problem of institutional participation appears to have been associated with the early phase of the local governance framework that emerged in 2001 following the passing of the Municipal Systems Act of 2000. The problem might be interpreted as having been one of institutional inertia, in which government officials continued with procedures and practices that had become out-dated by governance policy and legal reforms. Since 2004, however, there was a reported shift towards more active participation by government officials in various development coordination committees, within and outside municipal structures in Greater Sekhukhune. The general view by people working in government departments, NGOs and the private sector remained that development coordination by municipalities needed to be improved.

The aforementioned challenges were exacerbated by the cross-border administration that characterized Greater Sekhukhune District until 2007. Integration challenges related to the fact that the district and some of the local municipalities straddled the boundary between Mpumalanga and Limpopo Provinces. Cross-border local municipalities included the then Greater Groblersdal (now Elias Motswaledi), where Hereford Irrigation Scheme is located, and Great Marble Hall (now Ephraim Mogale), where Phetwane Irrigation Scheme is located. Local respondents expressed concerns over possible capture of resources by people belonging either to "Mpumalanga" or to "Limpopo" Provinces. Such concerns were mostly associated with the then Greater Groblersdal Local Municipality, whose delineation brought together not only the formerly white commercial areas, black township areas around Dennilton and Lebowa homeland, but also people of different ethnic identities.

Beyond perceptions of resource capture, there were practical governance issues around coordinating the enforcement of differing by-laws of two provinces within the same cross-border municipality. Funding of projects in the cross-border municipality by provincial departments tended to be split along provincial lines. Where one province allocated more funding than the other, this has created the public impression that the municipality favoured areas in that province over areas in the other. In an attempt to resolve the cross-border coordination problems, an Inter-Provincial Coordination Committee (IPCC) was

established in 2003. The study could not establish how effective this structure was. The existence of this provincial level structure did not, however, change public perceptions of differential treatment. The cross-border problem was ultimately resolved when government abolished cross-border municipalities in 2007.

2.7.3.2 Challenges of Smallholder Irrigation Farmer Support

At the inception of the RESIS Programme in 2001, smallholder irrigation schemes were among the seventeen listed ISRDP anchor projects for the Greater Sekhukhune District. ISRDP documents made particular reference to irrigation schemes in the Mid-Arabie Olifants (i.e. Middle Olifants/Lepelle) and Lepellane (i.e. Lower Olifants/Lepelle) sections of the Olifants/Lepelle River Basin below Flag Boshielo (formerly Arabie) Dam. Four of the five case studies that were rapidly appraised for this thesis are located in these two sections, while a fifth as well as Phetwane Irrigation Schemes are located upstream in the Upper Olifants/Lepelle section. Smallholder irrigation schemes in all three sections constitute Cluster 11 of the RESIS Programme.

The ISRDP and its key institutional mechanism, the IDP, sought to promote the entry by black farmers into commercial agriculture. Smallholders in irrigation schemes were among the targeted group. There were basically two types of small-scale irrigation schemes associated with black economic empowerment through joint ventures. The first type comprised schemes located in the formerly white commercial farming areas, such as Hereford Irrigation Scheme. This type of scheme, often associated with DLA's LRAD Programme, the National Department of Agriculture (NDA)⁷ Farmer Settlement Programme and DLA's erstwhile Settlement and Land Acquisition Grant (SLAG), was not very common. The second type of irrigation scheme included government-owned schemes located in communal lands of the former Lebowa homeland, such as the Upper Arabie, the Mid-Arabie Olifants and the Lepellane Irrigation Schemes. Both types of schemes involved a shift towards transferring of land rights, water allocations and responsibility for irrigation management to black smallholders, with financial, material, technical and other support from government departments, civil society and the private sector.

⁷ During government restructuring in 2009, the NDA was reconstituted to be the Department of Agriculture Forestry and Fisheries (DAFF).

It is worth noting that joint ventures in small-scale irrigation schemes were not a new phenomenon in the Sekhukhune region. In both commercial and communal farming areas, smallholders had experienced involvement in joint ventures prior to 1994 (De Lange, 2004). A common refrain in their accounts is dissatisfaction with the manner in which joint ventures were implemented. Problems include private investors' lack of transparency and accountability, a sense of disempowerment among irrigation farmers and the ultimate failure of the joint ventures, resulting in losses of livelihoods and assets (Ibid.).

Prior to the abolition of cross-border municipalities, moves to promote the entry by black farmers into commercial agriculture were commonly termed 'revitalization' in Greater Sekhukhune. However, the 'Revitalization of Smallholder Irrigation Schemes' (RESIS) Programme formally focused specifically on government-owned smallholder irrigation schemes located in former homeland areas, such as those in the Middle and Lower Olifants/Lepelle River Basin. By contrast, the term 'revitalization' was informally used to refer to on-going projects in small-scale irrigation farmers in formerly white settlement schemes located in commercial farming areas, such as Hereford. This distinction was largely due to challenges relating to cross-border administration (see Section 2.2.5.1). On the one hand, the RESIS Programme was driven by the Limpopo Provincial Department of Agriculture (LDA), which consequently focused funding to smallholder irrigation schemes located in its respective portions of the cross-border district municipality. Hereford Irrigation Scheme, on the other hand, is located in an area that fell under Mpumalanga Province and therefore could only receive revitalization support from its respective Department of Agriculture and Land Administration (DALA). Since abolition of cross-border municipalities and inclusion of the entire Elias Motswaledi (formerly Greater Groblersdal) Local Municipality into Limpopo Province, Hereford has become part of the RESIS Programme.

Under the rubric of ISRDP, the promotion of entry by black farmers into commercial agriculture prior to 2007 was articulated through collaborative efforts involving clusters of institutional stakeholders. For areas under Mpumalanga Province, Coordination Committees for Agricultural Water (CCAWS) provided revitalization support to smallholders in irrigation schemes, such as Hereford, among other irrigation farmers. For areas under Limpopo Province, the Economic Cluster of the Limpopo PGDS provided support to the RESIS

Programme. Such collaborations involved provincial departments of agriculture, DLA, the NDA, the Department of Water Affairs and Forestry (DWAF)⁸ and the national and provincial departments of Public Works (NPWD and PDWs). A number of institutions actors from NGOs and the private sector were also actively involved, the latter through implementation of infrastructure rehabilitation, skills development, project facilitation and direct contracting within joint ventures. Greater Sekhukhune District IDP documents captured details of such collaborative efforts.



⁸ At Ministerial level, DWAF was reconstituted in 2009 to be the Department of Water and Environmental Affairs (DWEA), while at departmental level the Department of Water Affairs (DWA) continued to function distinctly from the Department of Environmental Affairs (DEA).

CHAPTER THREE

REVITALIZATION OF SMALLHOLDER IRRIGATION SCHEMES PROGRAMME (RESIS): LIMPOPO PROVINCE

3.1 INTRODUCTION

The Revitalization of Smallholder Irrigation Schemes (RESIS) Programme defines 'revitalization' as "a holistic approach to re-building socially uplifting, profitable agribusiness on existing schemes" (De Lange, 2004: 107) and "a comprehensive programme to structure, train and capacitate the smallholder farmers to run their scheme profitably and sustainably" (De Lange, 2004: 107; Shaker, 2005: 19). According to Van Averbeke & Mohamed (2006), the RESIS Programme can be construed as the fourth era (or 'Irrigation Management Transfer (IMT) and Revitalization Era) in the history of smallholder irrigation development in South Africa since the beginning of and after the colonial era. It was preceded by the first era or 'Peasant and Mission Diversion Scheme Era, which occurred during the 19th century and coincided with the early part of the individual diversion scheme era identified by Backeberg & Groenewald 1995 in Ibid.). The second era lasted from 1930 until about 1960 and can be referred to as the 'Smallholder Canal Scheme Era' (Ibid.). It coincided with the era of public storage schemes in the history of national irrigation development described by Backeberg & Groenewald (1995 in Ibid.), and more specifically the second phase of this era, referred to as the Great Depression and the Second World War by Bruwer & Van Heerden (1995 in Van Averbeke & Mohamed, 2006). The third era third period of smallholder irrigation development lasted from about 1970 until 1990 and was an integral part of the economic development of the homelands (Ibid.). Specifically, the establishment of these new irrigation schemes with funding from South Africa formed part of the economic development strategy of the homelands (Van Rooyen & Nene, 1996 in Ibid.; Lahiff, 2000), which were - without exception - islands of underdevelopment and poverty (Beinart, 2001 in Van Averbeke & Mohamed, 2006).

During the course of the study, the regulatory framework governing the RESIS Programme was at the national level, while implementation was done at provincial level. Within Limpopo Province, the programme began in 1998 with a pilot phase that ended in 2000.

This was followed by RESIS Phase 1, which extended from 2000 to 2002 and was termed the 'Watercare Programme'. The third phase was the earlier RESIS Phase 2, which ran from 2001 to 2004 and was commonly termed 'RESIS'. The latter part of RESIS Phase 2 began in 2005 and was named 'RESIS-Recharge'. The study was concluded during the course of the RESIS-Recharge phase.

Land and water-related challenges to commercialized small-scale irrigation farming in Greater Sekhukhune and Vhembe Districts raise questions on the extent to which RESIS can contribute to enhancing the livelihoods of the majority of rural people in Limpopo Province. In addition to providing secure land tenure, water access rights, technical skills and managerial support, there seemed to be a need for small-scale irrigation farmer development to take into account the multiple realities, needs and aspirations of black farmers, and to give particular attention to the poorest and most vulnerable people within the schemes.

This chapter begins by presenting a synopsis of the historical background to the resurgence, under the RESIS Programme, of contract farming in South Africa. This is followed by an overview of the RESIS Programme framework in Limpopo Province. Finally, an outline of the common implementation framework and approach of RESIS-Recharge Phase is presented. The RESIS-Recharge Phase merits particular attention since it represents a major shift away from the original RESIS Programme objectives. Emphasis is on the generic contract structure used by LDA, contract implementation and key issues raised by smallholders in all targeted sites. Such examination synthesizes findings from rapid appraisals of various case studies, which also include Makuleke and Phetwane (Chapters Five and Six respectively).

3.2 PRECURSOR OF RESIS PROGRAMME: RESURGENCE OF CONTRACT FARMING IN SOUTH AFRICA

In the run-up to RESIS Programme implementation, many small-scale farmers in South Africa and Limpopo Province, in particular, were increasingly drawn into industrialised and globalised commercial agriculture. Such developments were largely influenced by broader changes in world agri-food systems (see Sections 2.3.1 and 2.3.2). There was a burgeoning of government-supported contractual joint ventures and strategic partnerships between black smallholders and private firms. Contract farming, however, was not a new

phenomenon in South Africa, as various studies attest (Kirsten & Sartorius, 2002; Porter & Phillips-Howard, 1998; Bembridge, 1988; Fairall 1988 in Kirsten *et al*, 1998).

Kirsten & Sartorius (2002) state that South Africa has a long history of farming under contract, which embraces a wide range of sharecropping arrangements dating back to the early twentieth century. Outgrower schemes were the contract farming model most commonly used in contractual arrangements involving black small-scale producers prior to 1994. According to Kirsten *et al* (1998:133), the concept of an outgrower scheme was pioneered by the sugar industry in Kwazulu-Natal, when sugar companies contracted large scale commercial farmers and small-holders on communal land to supply sugar mills. Since inception of these schemes in 1972, approximately 19,000 small-scale sugar cane growers have benefited from outgrower schemes in Kwazulu-Natal (Fairall 1988 in Kirsten *et al*, 1998). Similar outgrower schemes were initiated between the 1970s and 1980s in the Transkei homeland, where small-scale farmers were mainly involved in tea production in Magwa and Majola Tea Estates in Lusikisiki area (Porter & Phillips-Howard, 1998; Bembridge, 1988). Sugar schemes have generally been successful in generating employment and incomes for farmers (Kirsten *et al* - van Rooyen & Ngqangweni, 1998:133).

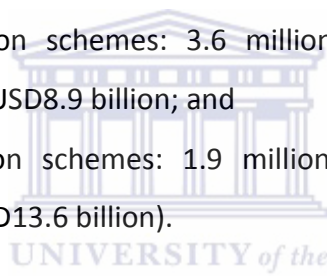
While changes in world agri-food systems have influenced the resurgence of South African interest in contract farming, in rural contexts like smallholder irrigation schemes, such interest has been conflated with the need to address Millennium Development Goals (MDGs). In 2003, the Pan-African Implementation and Partnership Conference on Water, which was convened by the African Ministers' Council on Water (AMCOW) and the UN-Water/Africa in Addis Ababa from 08 to 13 December, underscored the urgent need for strategic interventions and synergies to enhance prospects of achieving MDGs targets for food and water security (UNEP, 2003; IISD, 2003). For smallholder irrigation scheme contexts, identified challenges included:

- Malnutrition, food insecurity, poverty and environmental threats;
- Lack of improvement on per capita food production and climatic variability impacts;
- Declining investments in agriculture and in irrigation, as well as the poor reputation of investments in irrigation;

- The need for policy recognition of the clear linkage between water and reduced poverty, which is seen to contribute to positive economic growth; and
- The need to promote greater investment in water for agriculture.

In light of such challenges, the Forum for Agricultural Research in Africa (FARA) asserted that an annual increase of agricultural production of 6 per cent was needed to achieve food security by 2015 (Shaker, 2005). The FAO stated that, of the 6 per cent growth, 75 per cent should come from agricultural *intensification* and 25 per cent from agricultural *expansion*. Based on these targets, NEPAD recognized the importance of investment in agricultural water and, in particular, the important role of 'water control' in increasing productivity and reducing hunger (Ibid.). NEPAD set specific targets for 2015 as follows:

- Small-scale water control: 14.2 million ha of agricultural land to be developed at a cost of USD14.4 billion);
- Rehabilitation of irrigation schemes: 3.6 million ha of agricultural land to be rehabilitated at a cost of USD8.9 billion; and
- Development of irrigation schemes: 1.9 million ha of agricultural land to be developed at a cost of USD13.6 billion).



3.3 RESIS PROGRAMME IN LIMPOPO PROVINCE: ORIGINS

According to Shaker (2005), the “roots” of the RESIS Programme are in the Water Law Review process of 1997. During this process, a total of 63 workshops were conducted with smallholders and commercial farmers in all South African provinces. The workshops sensitized farmers to envisaged shifts towards Integrated Water Resources Management (IWRM) and its emphasis on fair and equitable access to water, efficiency in water use and sustainability of the resource, ecosystem and socio-economic activities and livelihoods.

Following the Water Law Review process of 1997, Limpopo Provincial Department of Agriculture (LDA) initiated the RESIS Programme in 1998 under auspices of the Netherlands-funded “Planning and Implementation of Irrigation Schemes” Programme. The programme involved the ‘revitalization’ of 126 irrigation schemes in the province, with direct benefits to approximately 12 432 farmers and indirect benefits to a wider rural population living on or near the 19 730ha of land comprising the schemes. The targeted farmers collectively held

agricultural infrastructure to the replacement value of R4 billion. Objectives of RESIS were to transform:

- Rural society through substantially raising incomes of households on irrigation schemes and in surrounding villages within the programme duration from 2004 to 2010; and
- Government service delivery through staff training, capacity building and streamlining of government systems.

The first objective closely linked RESIS to the ISRDP goal to improve opportunities and well-being for the rural poor within nodal districts such as Greater Sekhukhune (Figure 8). The second objective was linked to the broader Integrated Provincial Support Programme (IPSP), which was initiated in 2000 by the Department of Public Service and Administration (DPSA) through funding by DFID and support from GTZ (Figure 8). The IPSP provided a significant portion of funding for RESIS. Both of the overarching objectives of RESIS articulated the Limpopo Provincial Growth and Development Strategy (PGDS).

The PGDS for Limpopo was based on three pillars namely, mining, tourism and agriculture. While investment and growth in Limpopo's mining and tourism from 2000 to 2005 had been remarkable within the national context, such achievements were described as "jobless growth" (DPSA, 2005: 20). The rationale was that the mining sector in the province, for example, created 8 jobs with every R1 million invested, whereas agriculture created up to 50 jobs with the same investment. Consequently, a prevailing view was that the resolution of challenges of poverty, unemployment, food insecurity and development in Limpopo depended largely on investment and growth in the agricultural sector. With specific regard to smallholder irrigation schemes located in the former Venda Bantustan and homeland areas of Lebowa, Gazankulu and KwaNdebele, such investment was envisaged to build upon existing infrastructure and farming skills within the 126 schemes.

Many of these schemes were developed after publication in 1955 of the Tomlinson Commission Report on *Socio-economic Development of the Bantu Areas within the Union of South Africa* (Perret, 2001). Despite that in proposing the development of labour reserves (or Bantu areas), the Tomlinson report emphasised the creation of a class of small property owning farmers, most of the recommendations of this commission were rejected by the

government (Vink & Kirsten, 2000: 5). Vink & Kirsten (Ibid.) comment that the government "...subsequently created the vision and practice of ethnically based homelands. This in turn was the ideological precursor of forced removals, Trust land purchase and consolidation of homelands..." The absence of commercial farming in homelands was subsequently ascribed to a lack of managerial and entrepreneurial ability among black farmers, despite a long history to the contrary (Bundy, 1979; Keegan, 1981; Matsetela, 1981; Beinart *et al*, 1986). This served to justify the use of public institutions and expatriate management to 'develop' agriculture, resulting in large scale centrally managed projects with little or no community participation. In a latter adaptation, some of the schemes appear to have been adjusted to settle selected labourers as 'project farmers' under the control of central management.

Despite the apartheid government's rejection of most recommendations of the Tomlinson Commission, some recommendations pertaining to subsistence farming were implemented, with significant effects on settlements, land use patterns and irrigation development in black rural areas (Perret, 2001:2). Examples of such recommendations included the Commission's suggestion, which was based on information on existing schemes that irrigated holdings of between 1.3 and 1.7 ha could adequately "provide a family with a living that would satisfy them, whereby the whole family would work on the holding". Such recommendations also included a proposal that "All schemes should be placed under proper control and supervision, with uniform regulations as regards water rates, credit facilities and conditions of settlement" (Perret (Ibid.)).

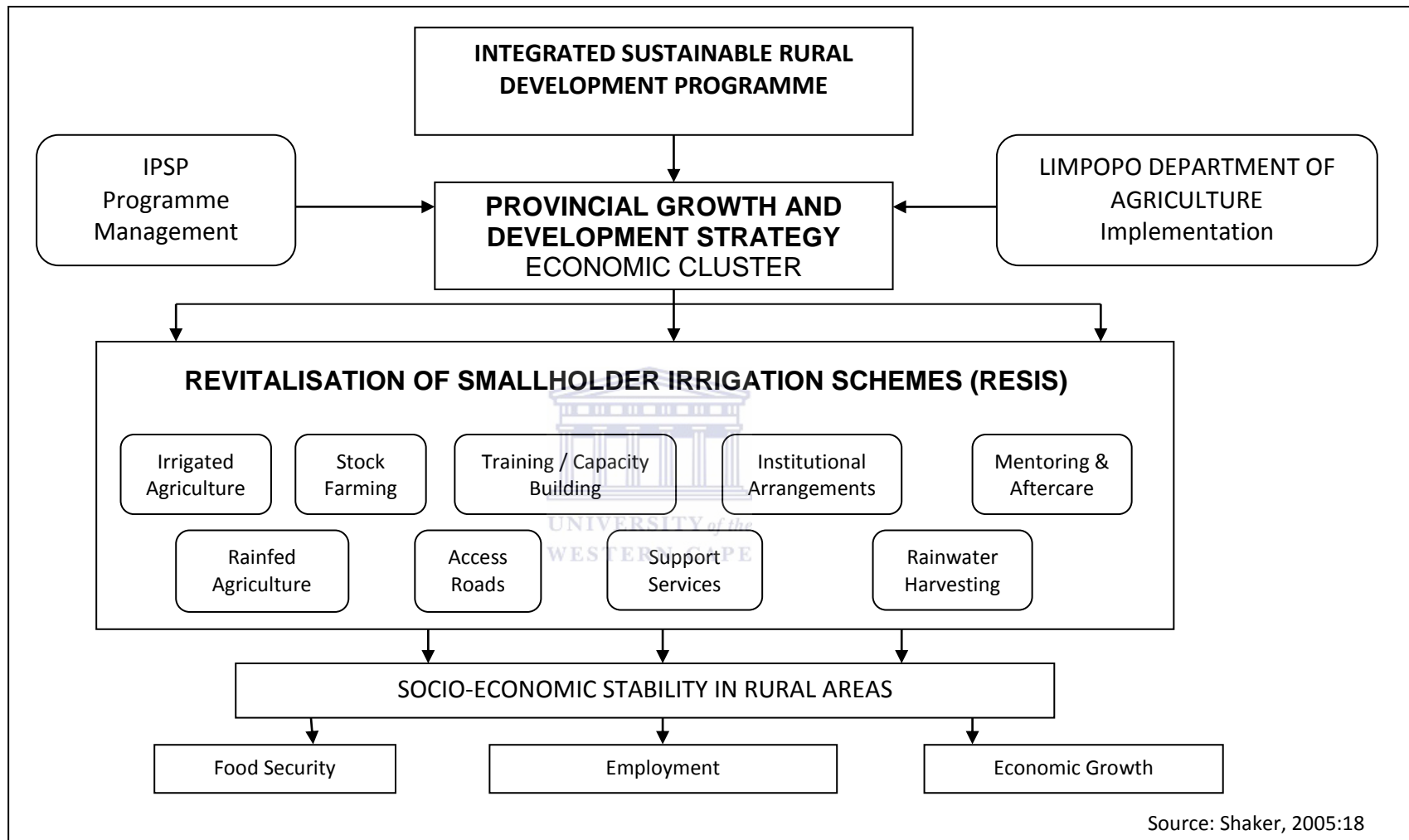


FIGURE 8 RELATIONSHIP BETWEEN RESIS AND ISRDP

This approach, which sought to achieve subsistence for an estimated 36 000 black ‘families’ farming on 56 000ha of irrigated land (Perret, Ibid.), was initially propped up by subsidies from the apartheid government. Following the political and administrative “independence” of labour reserves, central government withdrew subsidies and Bantustan and homeland area authorities assumed responsibility for providing the subsidies.

After 1994, owing to perceptions that the schemes were under-productive and inefficiently run, and due to budgetary constraints of provincial governments and the government’s intention to dismantle apartheid machinery in Bantustans and former homelands, the post-apartheid government abruptly withdrew state subsidies upon which the schemes depended (Perret, 2001; Bembridge, 2000). Subsequently, many schemes ceased to function and became dilapidated. The withdrawal of state subsidies was also linked to the government’s macro-economic policy shift from the RDP to GEAR around 1999, and the adoption of neo-liberal elements inherent in the latter (Perret, 2001). Although post-1994 reforms have sought to address challenges of poverty and inequality, the immediate result of the sudden withdrawal of subsidies was a deepening of food and livelihood insecurity for resource-poor small-scale farmers and rural communities living in the neighbourhoods of irrigation schemes. In light of this, the longer term plan became to eventually transfer irrigation management to farmers, in accordance to similar developments in many countries globally.

3.4 PROGRAMME IMPLEMENTATION FRAMEWORK

During the course of the study, four distinct phases of the RESIS Programme could be distinguished in Limpopo Province (Figure 9). Firstly, the Pilot Phase of the RESIS Programme, which lasted from 1998 to 2000. Secondly, RESIS Phase 1, which was termed the ‘Watercare Programme’ and which extended from 2000 to 2002. The third phase was the earlier RESIS Phase 2, which was termed ‘RESIS’ and ran from 2001 and to 2004. The fourth phase was the latter part of RESIS Phase 2, which was named ‘RESIS-Recharge’ and occurred from 2005 to 2007.

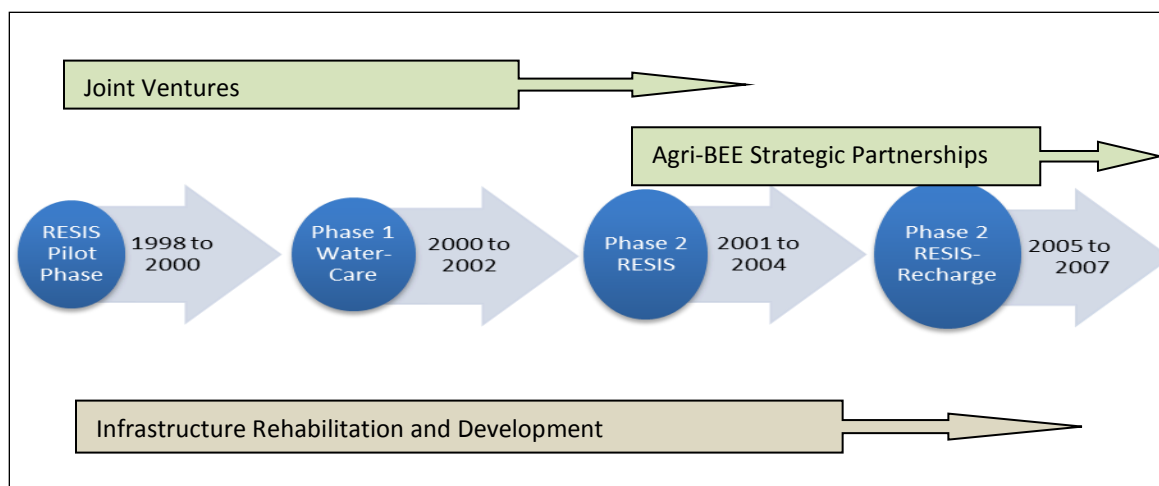


FIGURE 9 PHASES OF RESIS PROGRAMME IN LIMPOPO

Following the Pilot Phase of 1998 to 2000, the RESIS Programme began as a ‘Watercare Programme’ that extended from 2000 to 2002. Between 2003 and 2004, the Watercare Programme was re-constituted as the “RESIS Programme”. The RESIS Programme had two successive phases namely, ‘RESIS’ Phase and ‘RESIS-Recharge’ Phase, respectively. The RESIS Phase occurred between 2001 and 2004 and the subsequent RESIS-Recharge Phase ran from 2005 to 2007. Each of the successive phases was preceded by a pilot stage. The pilot stage of the RESIS Phase was from 1998 to 2000 while that of the RESIS-Recharge Phase ran from 2002 to 2004.

The four phases of the RESIS Programme ran concurrent with irrigation infrastructure rehabilitation and upgrading projects. During the Pilot Phase and Phase 1 of RESIS, there was a general tendency to confuse revitalization initiatives, which were driven by LDA, with infrastructure rehabilitation and upgrading projects, which were led by LDA⁹ in collaboration with the provincial Department of Public Works. De Lange (2004) makes clear distinction that revitalization approaches represented an outgrowth from the more common practice of ‘rehabilitation’, which involved “the engineering centred re-construction of dilapidated infrastructure”. Ultimately, however, revitalization and rehabilitation were both essentially components of the RESIS Programme implementation framework.

⁹ In 1998, LDA was named the Northern Province Department of Agriculture, Land and Environment.

Towards programme implementation, smallholder irrigation schemes were grouped into clusters and prioritized according to requirements of each respective phase of the RESIS Programme. Cluster delineation was mainly based on geographical proximity. There were variations in the number of smallholder irrigation schemes in each cluster.

3.5 EARLIER PHASES OF RESIS IMPLEMENTATION

The earlier phases of RESIS Programme implementation were underpinned by the need to achieve NEPAD targets for 2012 (see Section 3.2), which considered pre-requisite factors to include an enabling policy and institutional environment, identification of innovative best practice and learning of lessons from the past (Shaker, 2005). This section presents an outline of the RESIS Pilot Phase from 1998 to 2000, Phase 1 or 'Watercare Programme' from 2000 to 2002, and the earlier 'RESIS' stage of Phase 2 from 2003 to 2004.

3.5.1 ENABLING POLICY AND INSTITUTIONAL ENVIRONMENT

In the case of South Africa, the semblance of a conducive policy and institutional environment was created by various post-1994 policy shifts and institutional reforms. These included adoption by government of the IWRM approach in 1997, formulation of various national institutional frameworks to support historically disadvantaged black small-scale farmers and the emergence of ISRDP as an institutional rationalization framework for rural poverty nodes in 1999. The World Summit on Sustainable Development, which was held in Johannesburg in 2002, brought international focus to bear upon the manner in which 'developmental' municipalities exercised governance within ISRDP poverty nodes, such as Greater Sekhukhune (Tapela, 2002a). Such scrutiny created an additional imperative for government interventions to be seen to be effective in addressing issues of poverty and inequality and, in particular, redressing historical injustices and empowering black farmers. Hence, contrary to expectations in 1999 that macro-economic policy shifts away from RDP to GEAR would lead to an emphasis on economic objectives at the expense of poverty concerns, the ISRDP and Limpopo PGDS embraced, at least in rhetoric, both sets of macro-economic policy objectives. Similarly, early RESIS Programme interventions were characterized by a dual emphasis on commercialization and food security objectives.

3.5.2 IDENTIFICATION OF INNOVATIVE BEST PRACTICE

Around the time when LDA initiated the RESIS Programme in 1998, programme design actively drew insights from international best practice in Irrigation Management Transfer (IMT), through support from organizations such as the International Water Management Institute (IWMI) and the Water Research Commission (WRC). Furthermore, extensive empirical research was conducted on smallholder irrigation schemes in Limpopo Province. Such studies focused on land tenure issues (Claassens, 2001; Piontek, 2000; Lahiff, 2000; 1999), water issues (Farolfi & Perret, 2002; Shah et al, 2002; Perret, 2001; Tren & Schur, 2000), income, food security and productivity (Mphahlele *et al*, 2000) economic viability (Kamara et al, 2002) and extension and support services (Machethe & Mollel, 2000).

On the basis of insights from international best practice and local research, RESIS Programme management identified what constituted innovative best practice within smallholder irrigation scheme contexts in Limpopo Province. What remained to be seen was how programme implementation would grapple with the diversity of such contexts at the local level. When the design and implementation of the pilot phase and Phases 1 and 2 of RESIS commenced, a key feature of programme structure was the adoption of contractual joint ventures between smallholders and private investors. Such institutional arrangements were facilitated by LDA, through delegated responsibility to consultancy organizations or ‘professional service providers’ (PSPs).

3.5.3 LEARNING OF LESSONS FROM THE PAST

The RESIS Programme as a whole drew from past experiences with LDA programmes, such as Limpopo Agricultural Development Programme (LADEP) and “Participatory Extension Approach” (PEA) (De Lange, 2004). By contrast, Phase 2 of RESIS was largely a product of lessons learnt during the RESIS Pilot Phase and Phase 1 or Watercare Programme (Shaker, 2005). Shaker (2005: 20) states that from the Pilot Phase emphasis on infrastructure rehabilitation in irrigation schemes, such as Thabina, there was an attempt in the subsequent Phase 2 of RESIS to shift towards a more balanced emphasis on preparatory planning, farmer training, organizational development and the establishment of institutions. However,

observations were that the RESIS Phase (i.e. Phase 2 from 2001 to 2004) did not assimilate as much of the critical lessons as intended by implementing agencies (De Lange, 2006: 21, 22). Observations were also that RESIS joint ventures often exposed smallholders to risks associated with capital intensive farming without imparting requisite skills or generating anticipated incomes.

Chapters Four, Five and Six of this thesis respectively provide detailed insights into implementation of earlier phases of the RESIS Programme in Hereford, Phetwane and Makuleke Irrigation Schemes. Earlier phases could be construed to have been 'lessons learning' and 'best practice innovation' phases, which effectively contributed to adjustments of the programme during the subsequent RESIS-Recharge Phase.

3.6 SHIFT FROM RESIS TO RESIS-RECHARGE PHASE

With progression from earlier RESIS Phases to the latter RESIS-Recharge Phase from 2005 to 2007, LDA made adjustments to the RESIS Programme structure. Such adjustments related to the formulation of contract farming arrangements and capital expenditure. These adjustments were made in accordance with a new BEE Framework instituted by LDA in 2005. The sourcing of service providers, private investor partners and targeting of farmers were all re-orientated towards the empowerment framework. What was not clear was to what extent RESIS Programme adjustments took into account prior lessons learnt about other interests than the narrow economic viability, technological efficiency and commercial orientation of crop production. While programme adjustments were purportedly based on identified innovative best practice, the manner in which RESIS-Recharge implementation grappled with the diversity of farmers in smallholder irrigation schemes had yet to unfold.

In both the RESIS and RESIS-Recharge phases, significant financial expenditure was directed towards rehabilitation and development of irrigation infrastructure and promotion of crop production. Between 2001 and 2004, LDA set aside a total of R224 million to fund the earlier RESIS phase of the programme. A further R248 million was allocated towards funding the latter or "RESIS-Recharge" phase, of which R84 million was budgeted for 2005 to 2006 and R164

million for 2006 to 2007. While some of the funding went towards installation of centre pivots in a few irrigation schemes, a larger proportion of RESIS-Recharge funding went towards development of floppy sprinkler irrigation systems in a greater number of smallholder irrigation schemes. With progression from RESIS to RESIS-Recharge, however, there was a shift in the focus of government interventions.

Whereas emphasis during the earlier RESIS phase was on infrastructure rehabilitation and ‘joint ventures’ as means to “re-building socially uplifting [and] profitable agribusiness” through “a comprehensive programme to structure, train and capacitate smallholder farmers to run their scheme profitably and sustainably” (De Lange, 2004), RESIS-Recharge phase objectives shifted towards infrastructure development and strategic partnerships. Infrastructure technology development and market incentives increasingly became the drivers for RESIS Programme interventions in Limpopo Province, rather than rural poverty reduction and, thereby, livelihood and food security.

It was not clear whether or not the shift in RESIS Programme interventions was predicated on a clearly articulated and formalized provincial and/or national policy. However, it seemed likely that changes in world agri-food systems as well as national initiatives, such as AsgiSA, and regional responses, such as NEPAD’s CAADP, contributed to shaping LDA’s approaches to agricultural commercialization in the RESIS-Recharge phase. A consistent feature within the progression from RESIS to RESIS-Recharge phases, however, was the adoption of ‘contracts’ as institutional arrangements for regulating relations between smallholders and private commercial agricultural enterprises, reducing transaction costs and integrating small-scale farmers into mainstream agricultural market chains. The RESIS-Recharge phase also saw the emergence of a more focused approach to targeting smallholders.

3.7 DEFINITION AND TARGETING OF IRRIGATION FARMER CATEGORIES

This thesis uses the term ‘smallholder’, for practical purposes, to refer to all farmers with plots of land in state-sponsored irrigation schemes. The terms ‘emerging commercial farmer’ and ‘subsistence food producer’ are extensively used as short-hand to distinguish between

commercially-orientated and subsistence-orientated farmers. Prior to and during the RESIS Programme, both groups of farmers were beneficiaries of state support through infrastructure development, contract farming arrangements and other means. With shifts towards the RESIS-Recharge Phase, programme adjustments produced clearer definition and targeting of different categories of farmers.

Denison & Manona's (2007) attempt to characterize RESIS farmer categories (Table 7) seems to have contributed to improving the definition and targeting of irrigation farmer categories. However, the implementation of RESIS-Recharge seems to have dispensed with the traditional 'one-size-fits-all' approach in favour of narrowly targeting one category of smallholders, the equity labourer, to the exclusion of all others. Despite the need for further refinement of Denison & Manona's typology, this study found these scholars' work to be particularly useful. According to Denison & Manona (Ibid.), the development of strategies for irrigation revitalization was predicated on four groups of farming styles. These were 'The Business Farmer', 'The Equity Labourer', 'The Smallholder' and 'The Food Producer' (Table 7).

The Business Farmer type was typically an individual or group of individual farmers with greater commercial interest, skills, market capability and financial resources. Such farmers were entrepreneurs and were close perhaps to the stereotypical 'emerging commercial farmer'. They would generally need large farm sizes of between 5 and 40 ha depending on crops grown (Table 7). By contrast, the Equity Labourer was characteristically a member of collective of plot holders on large, complex or expensive irrigation schemes, where the reality of scheme running costs and operational management called for commercial partners to invest in or run the farming enterprise. Although details of partnership contracts were diverse, the equity labourer type applied to those cases where there was in effect a wholesale handover of the soils, water and infrastructure assets in return for some dividend and a guarantee of jobs at the minimum wage (Table 7). Denison & Manona (Ibid) observe that many partnerships, including contract farming and outgrower schemes, will apply to both the business farmer and equity labourer types. While there are overlaps in characteristics of the two types of farmer, distinction can be based on the locus of decision making authority. While the business farmer maintains a degree of

autonomy in decision making, the equity labourer is basically a worker, with very little influence on decision making.

The Smallholder was typically a plot holder with a more diversified range of livelihood strategies, within which farming plays a smaller role in the overall mix of livelihoods and income (Table 7). Smallholder farmers were often poorly-resourced and they typically preferred to engage in lower risk farming styles. According to the RESIS Programme framework, such an approach was unlikely to be a financially feasible proposition in many of the irrigation schemes with high running costs, where operational costs reduced cash returns, or with pumped hydraulic systems, which had a higher risk of failure. The smallholder type of farmer, however, could survive in schemes with lower running costs, typically gravity flood schemes. Denison & Manona (Ibid.) further state that the argument for recognition of this type of farmer was that successful small-scale farming was not necessarily a scaled down version of mainstream commercial farming systems. Rather, the relatively low levels of inputs and dependence on markets for outcomes, which characterized the smallholder type of farmer, had real advantages for the survival of many resource-poor farmers. As such, some of the objectives of support to these farmers necessarily had to be risk reduction and lower reliance on external cash exchange (Table 7).

According to Denison & Manona, the Food Producer was typically a plot holder who was “at the baseline of poverty”. This type of smallholder therefore had limited access to labour and financial resources and generally did not often engage in irrigated field cropping because of investment costs, risks and aptitude. Given start-up support, however, the food producer was more likely to engage in food production in a home garden, which characteristically might be a few hundred square metres in area. There were cases though in which food producers were found in irrigation schemes. Such instances usually occurred in gravity schemes with low running costs, where food producers either ‘gardened’ in allotted plots or obtained informal permission to use dormant plots. Irrespective of whether they were located in home gardens or irrigation schemes, food producers tended to exhibit risk aversion behaviour, often manifest in small sizes of gardens, mixed cash sale and home food production motives. Due to inability or

disinterest, the food producer effectively had too few immediate options to move beyond their current state and engage in field cropping at any scale. Food producers therefore fell outside the broader category of ‘emerging commercial farmers’.

TABLE 7 TYPOLOGY OF FARMERS IN SMALLHOLDER IRRIGATION SCHEMES TARGETED BY RESIS PROGRAMME

<p>The Business Farmer: This is an individual or group of individual farmers with greater commercial interest, skills, market capability and financial resources. They are entrepreneurs, the more powerful in the community, possibly in leadership, and are close perhaps to the stereotypical ‘emerging commercial farmer’. They would generally need large farm sizes of between 5 and 40 ha depending on crops grown. Such crops would usually be those with more robust market opportunity, defined as a mix of commodity and medium value. An exception is where higher value crops are grown on smaller holdings of around 1 to 2 ha, in which case a contract arrangement is probably essential to provide the management and marketing outlets that high value crops demand. Since a commercial orientation is likely to call for higher yields and accept higher risks associated with adopted farming styles, land consolidation is clearly a key intervention, as well as farm systems and marketing support initiatives. Such initiatives include mentorships, NGO partnerships, academic partnerships and/or joint venture arrangements (i.e. strategic partnerships).</p>
<p>The Equity Labourer: The equity labourer is defined as typically a member of collective of plot holders on large, complex or expensive irrigation schemes, where the reality of scheme running costs and operational management call for commercial partners to invest in or run the farming enterprise. While this type of farmer is suited to large and complex schemes, it can also apply to any scheme. Although details of partnership contracts are diverse, the equity labourer type applies to those cases where there is in effect a wholesale handover of the soils, water and infrastructure assets in return for some dividend and a guarantee of jobs at the minimum wage. Many partnerships, including contract farming and outgrower schemes, will apply to both the business farmer and equity labourer types. While there are overlaps in characteristics of the two types of farmer, distinction can be based on the locus of decision making authority. While the business farmer maintains a degree of autonomy in decision making, the equity labourer is basically a worker, with very little influence on decision making.</p>
<p>The Smallholder: This type of farmer is typically a plot holder with a more diversified range of livelihood strategies, within which farming plays a smaller role in the overall mix of livelihoods and income. Smallholder farmers are often poorly-resourced and they typically prefer to engage in lower risk farming styles. According to the RESIS framework, such an approach is unlikely to be a financially feasible proposition in many of the irrigation schemes with high running costs, where operational costs reduce cash returns, or with pumped hydraulic systems, which have a higher risk of failure. The smallholder type of farmer, however, can survive in schemes with lower running costs, typically gravity flood schemes. The smallholder category would apply to many existing farmers in irrigation schemes, who typically engage in crop production for multiple purposes namely, home consumption, cash sale and animal fodder. Argument for the recognition of this type of farmer is that successful small-scale farming is not necessarily a scaled down version of mainstream commercial farming systems. Rather, the relatively low levels of inputs and dependence on markets for outcomes that characterize the smallholder type of farmer have real advantages for the survival of many resource-poor farmers. As such, some of the objectives of support to these farmers should be risk reduction and lower reliance on external cash exchange.</p>
<p>The Food Producer: This type of farmer is typically a plot holder who is “at the baseline of poverty”. The smallholder has therefore limited access to labour and financial resources and generally does not often engage in irrigated field cropping because of investment costs, risks and aptitude. Given start-up support, the food producer is more likely to engage in food production in a home garden, which characteristically might be a few hundred square metres in area. However, there are cases in which food producers are found in irrigation schemes. Such instances usually occur in gravity schemes with low running costs, where food producers either ‘garden’ in allotted plots or obtain informal permission to use dormant plots. Irrespective of whether they are located in home gardens or irrigation schemes, food producers tend to exhibit risk aversion behaviour, often manifest in small sizes of gardens and mixed cash sale and home food production motives. Due to inability or disinterest, the food producer effectively has too few immediate options to move beyond their current state and engage in field cropping at any scale. Food producers therefore fall outside the broader category of ‘emerging commercial farmers’.</p>

Source: Adapted from Denison & Manona (2007)

The scholars, however, identified food producers as posing a challenge to implementation of the RESIS Programme. This was because these farmers, by virtue of their poverty and vulnerability, tended to hold onto their irrigated plot rather than lease it out in an informal arrangement. They feared to lose the plot since it represented “one of the last few resources” that they had. From such perspective, therefore, the scholars surmised that the food producer was “important because he or she is one of the reasons for unutilized plots on schemes”.

Towards making such land available for those who can or want to use it, Denison & Manona put forward two propositions. The first was that there should be a land registration and leasing initiative to allow the food producer type of farmer to hold onto the land while gaining a small income from leasing it out. The second proposition is that there should be an alternative home gardening initiative to motivate the food producer type of farmer to vacate the irrigated plot but still be able to produce food and safeguard against vulnerability.

While Denison and Manona’s typology provides useful insights into the differentiation of smallholders, it falls short of capturing the broader diversity of farmers as well as their class relations. It seems necessary therefore to draw from both this typology and Cousins’ (2010) class-analytic typology, which identifies six categories of small-scale producers in South Africa. These include, ‘supplementary food producers’, who work on small plots or gardens, do not have access to wage income and rely on additional forms of income such as social grants, craftwork or petty trading for their simple reproduction; ‘allotment holding wage workers’, who work on small gardens but are primarily dependent on wages for their simple reproduction; ‘worker peasants’, who farm on a substantial scale but are also engaged in wage labour and combine these in their simple reproduction; ‘petty commodity producers’, who are able to reproduce themselves from farming alone, or with minor additional forms of income; ‘small-scale capitalist farmers’, who rely substantially on hired labour and can begin to engage in expanded reproduction and capital accumulation; ‘capitalists whose main income is not from farming’, and who farm on a small-scale but their main source of income is in another business.

3.8 RESIS-RECHARGE PHASE: IMPLEMENTATION OF PILOT PROJECT

From 2002 to 2004, the pilot phase of the RESIS-Recharge Phase was implemented in Elandskraal Irrigation Scheme, which is located on the opposite bank of Olifants/Lepelle River, a few kilometres downstream of Phetwane. During that time, ten out of thirty-eight members of Elandskraal Balemi Irrigation Scheme (EBIS) Trust, who had relatively larger 5 ha plots, participated in a trial partnership with AWC. EBIS Trust and AWC developed a mutual relationship with support from LDA. The pilot project was a partnership to produce and market potatoes and maize. AWC provided practical skills development in crop production, harvesting, grading and packaging of harvested potatoes, among other skills. The LDA brought groups of smallholders from other similar schemes, such as Makuleke and Phetwane, to observe the model of partnership that was used in the pilot project.

At the end of the pilot phase, LDA convened a meeting with various key stakeholders, primarily including members of EBIS Trust and AWC. The objective was to discuss future options and, in particular, an envisaged 'empowerment' model for RESIS-Recharge strategic partnerships. The proposed empowerment framework required strategic partners, such as AWC, to subscribe to criteria set out in the Broad-Based Economic Empowerment Framework for Agriculture (AgriBEE). This entailed the formation of a strategic partnership between Elandskraal farmers, on the one hand, and, on the other hand, a newly-formed private entity called Temong cc, which was to be jointly owned by a black former agricultural extension officer turned entrepreneur, Mr Lazarus Mosenza, and Mr Arthur William Creighton, an established white agribusiness farmer. Responses to proposals by government officials showed a split among smallholders. While twenty (20) of the thirty-eight (38) members of EBIS Trust accepted the proposed empowerment model, eighteen (18) rejected it and instead opted for a modified version of the pilot phase contract, which was silent on the empowerment objective but gave smallholders more decision-making power.

The difference was mainly due to an antecedent conflict within EBIS Trust. This was due to perceptions that, at the end of the pilot phase, the more affluent among smallholders had significantly benefited from the disposal of centre pivots while many others, including the

resource-poor, had been excluded from such benefits. The conflict undermined consensus on commonly-perceived problems with the proposed contract model.

One such problem was that the proposed model was seen to be taking away significant degrees of power away from smallholders and inordinately vesting such power within government officials and strategic partners, with strategic partners accounting to the department and not to EBIS Trust. This contrasted with the greater degrees of power and autonomy exercised by smallholders in the pilot phase contract.

A second problem pertained to perceived inequalities in the proposed empowerment framework. Some members of EBIS Trust questioned LDA's basis for empowering a historically disadvantaged individual (HDI) from outside the ranks of smallholders namely, Mr Lazarus Mosená, while within such ranks there were HDIs with ambition and potential to become fully-fledged commercial farmers. There were also suspicions of corruption with regard to preference by senior LDA officials of this specific empowerment partner, who formerly worked for the department as a locally-based extension officer. Contestations over inequitable sharing of pilot phase benefits contributed to smallholders' failure to act collectively with respect to commonly perceived problems. Those smallholders who chose to accept the new model broke away from EBIS Trust, established themselves as a splinter group named 'Kgotlelelo' and cooperated with the department in its efforts to implement the empowerment model of strategic partnerships. The rest remained within the parent organization and retained its name.

3.9 RESIS-RECHARGE PHASE: OVERVIEW OF PROGRAME IMPLEMENTATION

3.9.1 INSTITUTIONAL ARRANGEMENTS

Institutional arrangements for agricultural commercialization in the RESIS-Recharge phase involved contract-based strategic 'partnerships'. Partnerships were commonly defined as formal or informal relationships between various state and non-state parties, in which all participants agree to work together towards achieving a common objective or performing a specific task and to share risks, responsibilities, resources, competencies and benefits (Malena, 2004). RESIS Programme strategic partnerships have entailed formal contracts primarily

between commercial agricultural enterprises and smallholders, but also involving the provincial department of agriculture as a third party. Overviews of strategic partnerships that have emerged during the RESIS Recharge era show that most of the contracts have followed a particular generic model. This model is a modified version of an approach that was developed during the pilot phase of RESIS-Recharge and subsequently extrapolated to various smallholder irrigation schemes within the province. Dynamics surrounding the pilot phase provide a useful background for examining contracts that have emerged in the RESIS-Recharge era.

In January 2005, while EBIS Trust and AWC entered into a ten-year modified version of the pilot phase contract, preparations got underway to roll out the new strategic partnership approach in Elandskraal and in the broader province. During 2005, LDA formulated an 'Empowerment Framework' for strategic partnerships, which required strategic partners, such as AWC, to subscribe to enterprise ownership criteria set out in the Broad-Based Economic Empowerment Framework for Agriculture (AgriBEE). Within the same year, AWC and the former agricultural extension officer established Temong cc as an empowerment company of AWC in which each had a 50 per cent share. Around the same time, a process began to formally constitute Kgotlelelo as a legal entity. In March 2008 Kgotlelelo, constituted as Elandskraal Kgotlelelo Balemi Irrigation Cooperative, entered into a three-year contract with Temong cc.

Against a backdrop of failure by many joint ventures of the earlier RESIS era (Tapela, 2008; Denison & Manona, 2006; Veldwisch, 2004), LDA took a decision to replicate modified versions of the pilot AWC - EBIS Trust partnership in other smallholder irrigation schemes in the province. While the replicated model adopted the same established private agricultural enterprise as strategic partner, LDA insisted that AWC should comply with the department's Empowerment Framework by forming an 'empowerment' company that would partner with smallholders. Towards curbing financial losses and possible exposure of smallholders to risks associated with debts and production of high value crops, the department placed obligations upon the strategic partner to ensure the profitability of farming enterprises and to avoid undue exposure to debts. Prior to such roll-out, the department took smallholders from irrigation schemes, such as Makuleke and Tswelelopele, to Elandskraal where they were exposed to an

example of a 'successful' partnership. Although the post-pilot empowerment approach was subsequently extrapolated to a number of smallholder irrigation schemes within the province, concerns raised by Elandsdraal smallholders do not seem to have been taken into account. In particular, concerns raised over issues of power remained unresolved.

3.9.2 ANALYSIS OF RESIS-RECHARGE 'EMPOWERMENT' CONTRACTS

While the earliest post-pilot phase contract between AWC and EBIS Trust was silent on the empowerment objective, all the other contracts included this objective as a means to addressing AgriBEE requirements. With the exception of EBIS Trust, whose post-pilot phase partnership with AWC had a ten-year long tenure from to 2016, all other RESIS-Recharge strategic partnerships commenced as from 2006 onwards and were of three-year durations (Table 8). Also excepting the AWC - EBIS Trust partnership, all other contracts were similar in content, with variations in the identities of signing parties, percentage shares of profits and dates of commencement and end of agreement. While all other strategic partnerships were facilitated by LDA since on-set of the RESIS-Recharge phase, the partnership between AWC and EBIS Trust evolved from a pilot phase trial partnership between AWC and some of the members of EBIS Trust. The relatively high degree of uniformity among RESIS-Recharge strategic partnership contracts was due to the approach adopted by the LDA after the Elandsdraal pilot project.

The term, 'empowerment contracts', is used herein to refer to those RESIS-Recharge institutional arrangements that subscribed to the LDA Empowerment Framework. The term therefore excludes the AWC – EBIS Trust contract, which commenced before the adoption by LDA of the Empowerment Framework in 2005. Inclusion of the anomalous AWC - EBIS Trust partnership among case studies for this thesis is mainly because there is direct link between this and the newer RESIS-Recharge strategic partnerships, whereby the former was used as a pilot for latter institutional arrangements.

7.2.2.1 Statement of ‘Historical Background’

Clause 1.1 of all the ‘empowerment’ contracts examined was entitled ‘history’. However, the term ‘history’ was technically a misnomer since contents of the section were not about the historical background to the contract. Rather, Clause 1.1 provided information on the location and areal extent of the particular irrigation scheme and stated that the scheme formed part of the “project” of the Limpopo Department of Agriculture. Further to that, Clause 1.1.1 of each contract specified the number of hectares (ha), type of irrigation infrastructure, number of farmers and types of crops under consideration. Given that the pre- and post-1994 history of many of smallholder irrigation schemes is characterized by varied and often negative experiences with equity labour arrangements (Vink *et al*, 1998:77), silence on such precedence left out an important benchmark for RESIS-Recharge empowerment contracts.

By contrast, the contract between AWC and EBIS Trust made a clear statement about weaknesses of the preceding pilot phase institutional arrangement and how the new contract would improve upon past shortcomings. For example, Clause 2 of the AWC – EBIS Trust contract stated, “Mr Creighton was allowed to relinquish and sell one centre [pivot] every three years to a group of ten (10) farmers. This model was found to significantly benefit few farmers creating animosity amongst farmers. On the other hand the majority of farmers were struggling to get proper, reliable and timely mechanization services to prepare their land on time. The farmers took a decision to investigate a new arrangement whereby all farmers could benefit”. The AWC - EBIS trust contract therefore clearly articulated a key basis for the new arrangement. This provided a useful benchmark for assessing whether or not the contract constituted a better construct than the preceding arrangement.

7.2.2.2 Objectives of Strategic Partnerships

Clause 1.2 of all empowerment contracts stated that objectives of smallholders’ cooperatives with respect to the appointment of AWC to operate the irrigation schemes were that AWC shall:

- Operate the irrigation scheme, as part of the project of the Limpopo Department of Agriculture, to its optimum potential capacity, on a profitable commercial basis;

- Train the farmers and transfer the required skills to empower them to be able to operate the irrigation scheme themselves, in the long term, which includes training in the areas of finance, quality control, marketing, management, operational, technical and business administration;
- Stimulate the production of potatoes and other cash crops;
- Create for farmers a carefully managed sales outlet for potatoes and other cash crops, thereby optimizing profits for both potatoes and cash crop sales and for processing and sales of value added products;
- Utilize the experience and expertise of an established role player in the farming industry, to the benefit of farmers;
- Ensure that a Profit Sharing Formula Arrangement is implemented among the two parties namely, Strategic Partner and the Farmers during the three year period under the agreement; and
- Comply with the implementation of the Empowerment Framework of the Limpopo Department of Agriculture.



7.2.2.3 Main Agreement

Smallholders agreed that AWC would use the land, water and infrastructure on irrigation schemes for durations of three (3) years, according to varying profit sharing arrangements (Table 42). In some cases, such as Makuleke, Kgotlelelo and Tswelelopele, the strategic partner would get 60 per cent in the first year while smallholders' cooperatives got 40 per cent; and thereafter each party would get an equal share (50 per cent). In other cases, such as Phetwane, Strydkraal and Krokodilheuwel, strategic partners and smallholders' cooperatives would get equal shares (50 per cent) throughout the three-year duration of contracts. The exit strategy for the private investor, according to Clause 13 of contracts, envisaged that upon expiry of the strategic partnership agreement, AWC would relinquish his shares in the partnership, at no cost, in favour of smallholders' cooperatives or such shareholders that may be nominated for this purpose by LDA.

7.2.2.4 Parties to the Contract

RESIS-Recharge strategic partnership contracts were in effect ‘multi-partite’ institutional arrangements. Contracts were agreements principally between commercial agricultural enterprises, as strategic partners, and smallholders’ cooperatives, as equity labourers. Contracts were co-signed by chairpersons of cooperatives or trusts, on behalf of smallholders, and Mr Arthur William Creighton, on behalf of either AWC or Temong cc. The signing was witnessed by four other persons. Although LDA was not a signatory to the contract, indications were that the department was in effect a third party to all empowerment contracts. Firstly, Clause 10 of empowerment contracts stated that “the relationship between smallholders’ cooperatives, Limpopo Department of Agriculture and AWC will be governed by the terms of this agreement”. Secondly, contracts specified responsibilities and obligations of AWC to the Limpopo Department of Agriculture. Thirdly, Clause 3 stated that the department remained involved in the management of the contract at board level to ensure that objectives of strategic partnership transactions are achieved. Smallholders alluded to “the middle man”, who played a key intermediary role but was not mentioned in strategic partnership contracts. Contracts therefore often involved intermediary actors, who were responsible for certain aspects of project implementation and accountable to the strategic partner.

7.2.2.5 Rights, Roles and Responsibilities

All strategic partnership contracts specified:

- *Appointment* of Arthur William Creighton (AWC) or Temong cc, duly represented by Arthur William Creighton, as strategic partner (Clause 8);
- AWC’s rights, duties and obligations *as strategic partner* operating in a given smallholder irrigation scheme (Clause 9);
- AWC’s rights, duties and obligations *as shareholder* of the partnership (Clause 10);
- AWC’s rights, duties and obligations *in respect of a given group of smallholders* (Clause 11); and
- AWC’s rights, duties and obligations with regard to the Limpopo Department of Agriculture (Clause 12).

An interpretation of terms of the contract suggests that some of the key roles, responsibilities and obligations of the private investor were that AWC shall:

- Play a lead role in decision-making, management and implementation of the whole enterprise from production, technical support, marketing to financial accounting;
- Provide smallholders with technical advice and training in the operation of the business enterprise of the irrigation scheme and ensure a transfer of skills in this regard (Clause 11.1);
- Ensure that the enterprise is profitable and does not get bogged down by debt; and
- Comply with terms of the Limpopo Department of Agriculture Empowerment Framework.

While contracts clearly spelt out the rights, roles and obligations of the strategic partner, they were not explicit on the rights, roles and obligations of smallholders. Clause 2.2 of some of the contracts stated that these rights, roles and obligations were set out in Clause 6. However, Clause 6 did not make any mention of these but stated, “All references to the singular shall include the plural, and vice versa; all references to natural persons shall include legal persons, and vice versa; and all references to the masculine shall include references to the other genders.” In the Makuleke contract, although Clause 2.2 was missing, Clause 6 was worded exactly as Clause 6 in the other contracts.

In the absence of explicit statements regarding smallholders’ rights, roles and responsibilities, such information was deduced from other clauses of contracts and cross-referenced with information given by smallholders, AWC and officials of LDA. It emerged that smallholders were required to contribute to strategic partnerships their allocated plots of land, water, irrigation infrastructure and, when required, their labour. It also appeared that delegated responsibilities of smallholders’ management committees were to engage directly with local communities regarding issues of labour, communication, theft and the distribution of benefits, such as casual employment and surplus produce.

A critical difference between empowerment contracts and the AWC – EBIS Trust agreement was that, the latter contract was silent on compliance with the Empowerment Framework of

the Limpopo Department of Agriculture, which involved Historically Disadvantaged Individuals (HDIs) from outside the ranks of smallholders. A second difference was that the AWC – EBIS Trust contract did not explicitly hand over all responsibility for operating the irrigation scheme to the strategic partner but required AWC to act in consultation with smallholders. A third difference was that, while the AWC – EBIS Trust contract was underpinned by clearly stated principles of striving towards “good and mutual relationship”, equity, poverty reduction and improvement of livelihoods, such principles were lacking in empowerment contracts. Within the latter contracts, the responsibility for managing relations between smallholders and strategic partners was vested upon LDA, while emphasis was on principles of optimizing profits and avoiding debts. In spite of the above differences, both types of contract privatized the sourcing of extension services. While the empowerment contracts vested the strategic partner with the responsibility to train farmers, the AWC – EBIS Trust contract required the strategic partner to facilitate smallholders’ access to commercial technical services and not necessarily to actively train smallholders. Both partnership models also had the same end point, which was to achieve agricultural commercialization through contract-based strategic partnerships.



TABLE 8 OVERVIEW OF RESIS-RECHARGE STRATEGIC PARTNERSHIP CONTRACTS, 2009

Name of Scheme	Area (Ha)	Number of Farmers	Average Plot Size (Ha)	Irrigation Infrastructure	Partners	Duration of Contract	Profit Sharing Arrangement
Makuleke	232	43	5	Centre pivots	Makuleke Farmers Cooperative and Mr Arthur William Creighton	01 Mar 2007 - 28 Feb 2010 (3 years)	Year 1: 60% to AWC and 40% to plot holders. Years 2 and 3: 50% each
Phetwane	52	48	1	Floppy Sprinkler	Phetoane Irrigation Farmers Cooperative Ltd and Temong cc	01 Nov 2008 – 01 Nov 2011 (3 years)	Year 1, 2 and 3: 50% to AWC and 50% to plot holders.
Elandskraal 1: EBIS	150	196	0.8	Centre pivots	Elandskraal Balemi Irrigation Scheme Trust and Mr Arthur Creighton	Jan 2005 to Jan 2016 (10 years)	NB: Verbal agreement not stated in contract: Year 1: 70% to AWC and 30% to plot holders. Year 2: 60% to AWC and 40% to plot holders. Year 3 to Year 10: 50% each.
Elandskraal 2: Kgotlelelo	197	28	7	Centre pivots	Kgotlelelo Balemi Irrigation Cooperative Ltd and Temong cc	01 Mar 2008 – 01 Mar 2011 (3 years)	Year 1: 60% to AWC and 40% to plot holders. Years 2 and 3: 50% each
Tswelelopele	440 - but only 403 used	77	5	Floppy Sprinkler	Tswelelopele Irrigation Farmers Cooperative Ltd and Temong cc	2007 – 2010 (3 years)	Year 1: 60% to AWC and 40% to plot holders. Years 2 and 3: 50% each
Strydkraal A	5	10	0.5	Floppy Sprinkler	Strydkraal Irrigation Farmers Cooperative Ltd and Temong cc	2007 – 2010 (3 years)	Year 1, 2 and 3: 50% to AWC and 50% to plot holders.
Krokodilheuwel				Floppy Sprinkler	Krokodilheuwel Irrigation Farmers Cooperative Ltd and Temong cc	2008 - 2011 (3 years)	Year 1, 2 and 3: 50% to AWC and 50% to plot holders.

Source: Fieldwork

3.10 SUMMARY OF ISSUES RAISED BY SMALLHOLDERS

During this study's fieldwork, smallholders raised a number of issues relating to implementation of strategic partnership contracts. Although they were generally appreciative of incomes from farming, many voiced dissatisfaction with the content and implementation of signed contracts. Problematic issues included:

- Lack of smallholders' involvement in decision making;
- Lack of active roles in crop production and meaningful skills development, particularly for those smallholders with an interest in becoming fully-fledged commercial producers;
- Total dependency on the strategic partner, with inadequate provisions for smallholders' capacity development, a high risk of total collapse of the enterprise at the end of the contract and 'exit strategies' that implied continued dependency on external partners, whether or not these are HDIs;
- Lack of transparency regarding financial accounts, in particular, non-disclosure about management of funds within smallholders' trust accounts and non-sharing of records relating to production costs and income, which had led to suspicions by some smallholders about the validity of dividends paid out;
- Inadequate effort by department officials to ensure that smallholders fully understand content and implications of contracts before they sign the agreements;
- Privatization of production, management, marketing and extension services;
- Transparency of processes of land consolidation into trusts and selection of BEE partners;
- Private partner's upward accountability to LDA and lack of downward accountability to smallholders;
- Poor governance of smallholders' groups, for example poor accountability by smallholders' committees to cooperative groups and lack of skills in organizational management; and
- Poor accountability by smallholders' committees to local communities.

3.11 CONCLUSION

The convergence of international, regional, national, provincial and local institutional reforms in the late 1990s appears to have contributed to the dilution of RESIS Programme objectives for agricultural commercialization with food and livelihood security objectives. Within this dilution was a conflation of interests to integrate smallholders to globalized agri-food systems and requirements for governments to ensure the achievement of MDGs, particularly for the rural poor. In principle and practice, therefore, the RESIS Programme framework seems to have been predicated upon an assumption that contract farming constituted an adequate construct for addressing both sets of macro-economic policy objectives.

In light of such assumption, the aim of the study was to determine whether or not agricultural commercialization, as articulated mainly through contractual joint ventures and strategic partnerships, provided an adequate construct for addressing rural livelihood interests within selected smallholder irrigation scheme communities in Limpopo Province. In pursuing this aim, a key concern was whether or not policies and institutions reflected the interests of the poor. Such examination was predicated on detailed analyses of livelihood portfolios and strategies in selected case study sites. Research objectives were to:

- Characterize the institutional and livelihood context for the resurgence of contract farming in selected smallholder irrigation schemes in Limpopo Province;
- Examine the institutional arrangements for joint ventures and strategic partnerships in selected smallholder irrigation schemes in Limpopo Province;
- Examine the effects of agricultural commercialization initiatives on livelihoods of petty commodity producers, subsistence farmers and other people in local communities associated with selected small-scale irrigation schemes; and
- Identify key policy and institutional issues for government interventions in smallholder irrigation schemes.

The next three chapters present empirical research findings on RESIS Programme implementation in selected study sites in Limpopo Province. Specific attention is given to interactions between contract farming arrangements and rural livelihoods in various smallholder irrigation scheme contexts.

CHAPTER FOUR

HEREFORD IRRIGATION SCHEME



4.1 INTRODUCTION

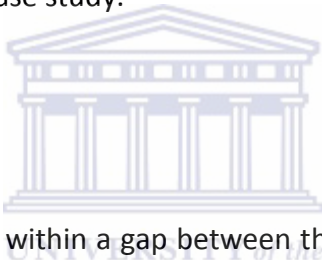
Hereford Irrigation Scheme provides an interesting study of the dynamics that have emerged in the historically white commercial farming areas following the implementation of agricultural commercialization and AgriBEE in Greater Sekhukhune District. Hereford's joint ventures provide a lens through which contracts, as institutional mechanisms for coordinating linkages between smallholders and private investors, have interacted with the livelihoods of resource poor irrigation farmers. This chapter presents findings from in-depth research that was carried out from November 2003 to July 2007.

At the time of the study, the irrigation scheme consisted of a cluster of thirty-three smallholdings, whose most obvious defining features were numerous tobacco curing barns that towered over squat cottages in varying states of repair and disrepair. A patchwork quilt of ploughed fields, flourishing gardens and fallow land spread out among the cottages and barns. Closer scrutiny revealed that the scheme was a hub of activity, with sprinklers quietly humming away and people labouring and gradually embroidering changes to the mosaic of the landscape. Such features bore testimony to self-mobilization efforts by black farmers to revive the scheme in 1997. What the idyllic vista could not reveal, however, were the historical and on-going contestations over land and water resources, as well as the changing milieu of partnerships between smallholders and the private sector.

This chapter begins by describing the location, historical background, land allocation, socio-economic profile and livelihood strategies and challenges of Hereford Irrigation Scheme. This is followed by a close examination of two initiatives to promote entry by Hereford smallholders into globalized agri-food systems. The first relates to a private investor-led joint venture project that sought to utilize existing tobacco production infrastructure as a means to promote BEE and market entry for the historically disadvantaged farmers. The second relates to a multi-stakeholder process to promote market entry by Hereford smallholders through commercial vegetable production and marketing. While both initiatives subscribed to government objectives relating to rural development, land reform and emerging farmer support or AgriBEE, the latter initiative was more firmly grounded in the newly-emerged ISRDP framework. For that reason, an empirical examination of both initiatives provides a comprehensive portrayal of both institutional processes and arrangements pertaining to this case study.

4.2 LOCATION

4.2.1 SITUATION



Hereford Irrigation Scheme nests within a gap between the Olifants River and the Hereford Canal on the eastern margins of the small town of Groblersdal in Elias Motswaledi (formerly Greater Groblersdal) Local Municipality of Greater Sekhukhune District (Figure 10). The irrigation scheme is situated south of the R33 road to Stoffberg, on portions 236, 237, 238 and 239 of 53JS Loskop South Farm along the Olifants/Lepelle River and the Hereford canal.

4.2.2 SITE AND BIOPHYSICAL CHARACTERISTICS

The scheme is sited at an altitude of approximately 1000 metres, approximately 44km downstream of the Loskop Dam, which is sited at altitude 1300m. The scheme is located within the commercial farming area administered by the Hereford Irrigation Board, in the Greater Groblersdal Local Municipality of Greater Sekhukhune District. The total land area of the irrigation scheme is 192.19 hectares (ha). Hereford Irrigation Scheme is part of a larger area of approximately 2 140 ha that is managed by Hereford Irrigation Board.

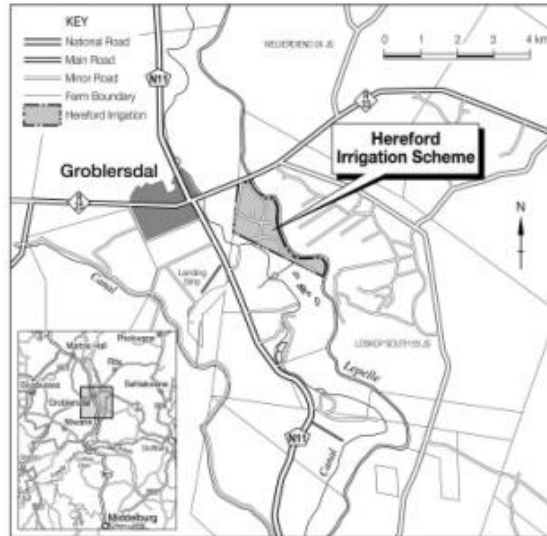


FIGURE 10 LOCATION OF HEREFORD IRRIGATION SCHEME

4.3 HISTORICAL BACKGROUND

4.3.1 ORIGINS OF HEREFORD IRRIGATION SCHEME: 1926 TO THE 1980s

The commercial farming area along the Hereford canal, which is presently managed by the Hereford Irrigation Board, was proclaimed in 1926 in terms of the Irrigation and Conservation of Water Act 12 of 1912 (Tren & Schur, 2000). Private landowners established irrigation farming following the construction of a small weir and a canal by two farmers, Meissner and Beukes. After the Second World War, following the accession of the National Party government in 1948, the Hereford area was developed as a welfare settlement scheme for white workers who were pensioned early from mines and other industrial sectors (Butler, 1994). These workers were among the National Party's key constituencies (Kruger, 2001: 2).

Portions 236 to 239 of 53JS Loskop South farm, in which the Hereford Irrigation Scheme is located, were developed by the government specifically as a white settlement scheme for soldiers returning from the war. These war veterans-cum-tenant farmers abandoned the land in the 1980s for a number of reasons, including the failure of a tobacco joint venture and insecurity due to anti-apartheid activism. Deprived of gainful employment, the scheme's black farm workers were compelled to relocate to Tafelkop and Motetema

settlements, between 10 and 15 km to the north-east of Groblersdal. For ten years, the land lay fallow and infrastructure was vandalized and became dilapidated.

4.3.2 NON-VIOLENT OCCUPATION AND THE PROCESS TOWARDS FORMALIZATION OF LAND RIGHTS: FROM 1997 TO 2000

On the 1st of February 1997, a group of 32 black farmers invaded and occupied the unused state land within portions 236 to 239 of 53JS Loskop South Farm. The farmers were members of the Tafelkop Farmers' Association (TFA), then composed of more than 800 members. Most of the 32 farmers who invaded Hereford had spent their childhoods working on the Hereford smallholdings alongside their parents.

The black small-scale farmers' interests in the four portions of 53JS Loskop South farm related primarily to the availability of water for irrigation, the possibility of secure tenure on arable land as well as access to funds to buy tractors and other agricultural inputs. The opportunities to generate livelihoods through farming in the impoverished communal lands around Tafelkop and Motetema had been very limited and poverty and food insecurity rife. These constraints and hardships, however, were not the principal motivation for invading the land.

The main reason for invading the four portions of 53JS Loskop South Farm was that in 1993, a group of black small-scale farmers from Tafelkop had been given agricultural training and promised settlement on the vacant farm, as part of a pilot project of the Mpumalanga Provincial Department of Agriculture. No further feedback was given for four years, until the caretaker put up a sign indicating that the farm had been sold. This prompted the farmers to invade and forcibly occupy the land.

After the invasion, there was heated debate over the legitimacy of the occupation. All the relevant stakeholders, including the National Department of Agriculture, the Department of Land Affairs (DLA), the National Department of Public Works, the Groblersdal Resettlement Committee, the Groblersdal Civic Association, the ANC Youth League, the Groblersdal Taxi Association and local Traditional Leaders (*diKgoshi*), agreed at a meeting that the invasion

was justified¹⁰. The Hereford Irrigation Scheme was then established, the farmers initially referring to themselves as the TFA, but later changing their name to "Hereford Farmers Association" (HFA) to distinguish the particular group of farmers from the larger parent organization. The DLA then began a process to lease the land for a renewable three-year term to the small-scale farmers, with the provision that land ownership would eventually be transferred from the state to the farmers¹¹.

The DLA prioritized this project under the name "Hereford Irrigation Scheme". Since the land was not under the control of the Department of Land Affairs (DLA), the DLA had to motivate for a transfer of title from the responsible department, then the National Department of Public Works (NDPW), to the farmers. The NDPW was to transfer the four portions of land to the National Department of Agriculture (NDA), who would then transfer the land to the Mpumalanga Provincial Department of Agriculture¹². The provincial Department of Agriculture would then transfer the land to the DLA, for lease and eventual transfer to the small-scale farmers. The transfer process, however, was complicated by a number of factors.

Firstly, there was a stand-off between the farmers and the provincial and regional department officials, with the farmers refusing to speak to these officials¹³. Consequently, the DLA resorted to involving national departments and not the provincial or regional offices in the land transfer process, motivating the transfer of land from the National Department of Public Works to the National Department of Agriculture. The DLA also proceeded to provide support to the farmers through a contracted consultancy, the 'Mpumalanga-West Consortium'. The National Department of Agriculture prepared to enter into three-year lease agreements with the 32 identified farmers, with an option for the farmers to purchase

¹⁰ Memorandum of Understanding (MOU) between the DLA and the Hereford small-scale farmers ("Tafelkop Farmers Association (TFA)") on Farmer Settlement on the state-owned Portions 236 to 239 of 53JS Loskop South Farm, dated 14 February, 1997; Memorandum from the DLA office in Mpumalanga Province to the Minister of Agriculture and Land Affairs, dated 11 May 1997; Farmer's Weekly, October 17 1997.

¹¹ Memorandum of Understanding (MOU) between the DLA and the Hereford small-scale farmers ("Tafelkop Farmers Association (TFA)") on Farmer Settlement on the state-owned Portions 236 to 239 of 53JS Loskop South Farm, dated 14 February, 1997

¹² Memorandum of Understanding (MOU) between the DLA and the Hereford small-scale farmers (TFA) on Farmer Settlement on the state-owned Portions 236 to 239 of 53JS Loskop South Farm, dated 14 February, 1997.

¹³ Minutes of a Meeting held on 25 September 1997.

the land. The farmers then applied for assistance from the National Department of Agriculture's Farmer Settlement Support Fund and received approval from the Minister of Land Affairs and Agriculture. This would have effectively been a duplication of government assistance. The then Minister of Land Affairs and Agriculture, Dereck Hanekom, was called upon to intervene in the resolution of the complexities that emanated from the process surrounding the LRAD project at the Hereford Irrigation Scheme.

The Minister responded firstly by cautioning against further similar land occupation. Secondly, the Minister decided that the settlement of the farmers should be facilitated through three-year lease agreements, with the option to buy¹⁴. He also wrote:

The National Department of Agriculture should not in any way be directly involved in the settlement of farmers, the leasing or administration of land. It just confuses matters. Agency agreements should be entered into with provincial departments or local government to administer leases or manage certain farmer settlement programmes. The two DGs should please meet to discuss the rationalization necessary to locate the leasing function which is done by NDA in DLA. (In the face of substantial demand for land, 5 hectares of irrigated land is a lot – the conditions of lease extensions should include performance assessment)¹⁵

The farmers accepted the minister's decision, and gave assurance that the precedent set by the Hereford case would not be repeated, but that the other members of the TFA would follow the normal procedure of applying for land acquisition through the DLA District Office. A business plan outlining the proposed use of the land was then drawn up with the help of Africare, an NGO operating under a bilateral development aid agreement between the governments of South Africa and the United States. The farmers were to be granted the land on the basis of the anticipated lease agreements from the Provincial Department of Agriculture and Land Administration and the farmers' business plan.

The land transfer process, however, encountered further problems. Following the Minister's decision, title was transferred from the National Department of Public Works to the

¹⁴ Minutes of a Meeting held on 25 September 1997

¹⁵ Response by the Minister of Agriculture and Land Affairs to Memorandum from the DLA office in Mpumalanga Province, dated 12 July 1997.

Agricultural Research Council (ARC)¹⁶. This created tension among the small-scale farmers¹⁷, who were reported as being threatened by outside parties claiming that the small-scale farmers had no right to the land¹⁸. The small-scale farmers were also reported as alleging that a third force from the past was preventing progress, and various political parties were reported as actively following the progress made on the Hereford project¹⁹. Some key respondents describe transfer of land to the ARC as a "suspicious" manoeuvre by certain government officials to forestall the allocation of land to black small-scale farmers. Some of the respondents link this transfer to the sign-post that prompted the invasion and occupation of the scheme.

It is worth noting that the rest of the portions of 53JS Loskop South farm - excluding portions 236 to 239 - then belonged to the Mpumalanga Provincial Department of Agriculture. This department motivated for a transfer of its portions of the farm to the ARC around the time that portions 236 to 239 were to be transferred from the National Public Works Department, through the National Department of Agriculture, to DLA and then leased to the small-scale farmers. For some reason, the land transfer from the Provincial Department of Agriculture to the ARC included the land earmarked for the small-scale farmers²⁰. There had to be a reversal of the transfer of land to the ARC back to the Department of Public Works before the process of transferring land to the small-scale irrigation farmers could begin. There was a delay of three years before the lease agreements could be effected (Kruger, 2001). The inception of the LRAD Programme in 2001 provided a mechanism with which the land transfer could be effected²¹.

At the time of the study, the lease agreements entered into on 16 August 2000 had lapsed and had since been renewed on an annual basis with the Department of Public Works²². The four lots of land, portions 236 to 239, of 53JS Loskop South farm had been surveyed,

¹⁶ Letter from the Deputy Director of the DLA Northern Highveld Regional Office in Mpumalanga Province to the DLA National Office, dated 18 March 1999.

¹⁷ Letter from the TFA to the Minister of Agriculture and Land Affairs, dated 13 May 1999.

¹⁸ Letter from the Deputy Director of the DLA Northern Highveld Regional Office in Mpumalanga Province to the DLA National Office, dated 18 March 1999.

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ Interview with the Projects Officer at the Maloeskop Office (Groblersdal) of the Provincial Department of Agriculture and Land Administration, 14 October 2004.

²² Memorandum from the Mpumalanga Department of Agriculture and Land Administration to the National Department of Public Works, 25 August 2004.

subdivided into 33 plots and the title deeds registered at the Deeds Office in Pretoria²³. The land had yet to be transferred from the Department of Public Works to the Provincial Department of Agriculture and Land Administration, and the farmers had yet to be formally granted ownership rights.

The first few years following the occupation of the Hereford Irrigation Scheme by black farmers appear to have been marked by ongoing tension between the occupiers and established white farmers in the Hereford commercial farming area. In in-depth interviews with the black farmers, respondents alluded to conflicts, mistrust, low levels of cooperation and exclusion from water governance by the Hereford Irrigation Board during the early phase of settlement. Piontek (2000) documents small-scale farmers' experiences during this phase. Respondents linked their earlier problematic relations with the established white farmers to their lack of ownership rights to the land. The respondents also pointed out that the support from a few white commercial farmers in the immediate aftermath of the occupation had gradually evolved into a broader and more cooperative relationship with the farmers.

4.4 LAND ALLOCATION

The exact land area of the Hereford Irrigation Scheme was 192.19ha. This land was subdivided into 34 plots. Initially, 33 plots were surveyed and allocated to members of Hereford Farmers Association, which was one farmer more than the number of farmers identified during the land invasion, occupation and rights formalization process. A 34th plot was subsequently surveyed, which members of the association reserved for collective use.

At the time of the study, some of the farmers who were in the original list of beneficiaries submitted to the DLA in 1997 had since fallen out of the group. Other farmers had since replaced three of the farmers who occupied the scheme, attempted commercial farming and then exited (Table 9). According to the chairman of the Hereford Farmers' Association, changes in the composition of the farmers' group were mainly due to failure by those replaced to "demonstrate a commitment to the collective goal of becoming commercial farmers". A number of criteria were apparently used to determine the degree of such

commitment, including diligence in production activities and subscribing to the governance practices of the group.

Plot sizes ranged from 0.70 ha to 13.79ha, with a mean of 5.4 ha (See Table 9 below). The gender distribution of the allocated plots was 81.8 per cent male and 18.2 per cent female, and farmers aged 60 years and above commanded the largest share (39.4 per cent) of allocated plots (Table 10; Figure 11). Of this age group, 92.3 per cent were male. Plot size allocation did not seem to be strongly linked to income, gender or membership of the governance structure, though the largest five plots were allocated to male farmers.

TABLE 9 GENDER ALLOCATION OF SMALLHOLDINGS IN HEREFORD IRRIGATION SCHEME, 2004²⁴

Plot Number	Emerging Farmers prior to 2004		Emerging Farmers in 2004		Plot Size (in ha)
	Name	Gender	Name	Gender	
F	<i>Matthew Mokolobetsi</i>	M	Richard Kenosi	M	5.15
N	<i>Spencer Mahlatini</i>	M	Moscow Masuku	M	6.02
L	Phineas Sithole	M	Phineas Sithole	M	5.37
T	Johnson Mathake	M	Johnson Mathake	M	3.78
V	Timothy Mambazo	M	Timothy Mambazo	M	4.9
M	Goitsewang Pelotona	F	Goitsewang Pelotona	F	7.31
A	Kgositsile Boikhutso	M	Kgositsile Boikhutso	M	9.01
B	Bohutsanyana Modimo	M	Bohutsanyana Modimo	M	5.53
J	Refilwe Monageng	M	Refilwe Monageng	M	4.88
K	Thabang Raperekisi	M	Thabang Raperekisi	M	7.25
SO	Kleinbooi Sibanda	M	Kleinbooi Sibanda	M	6.16
Y	Kedibonye Motsamai	M	Kedibonye Motsamai	M	3.79
Z	Jorosi Mdluli	M	Jorosi Mdluli	M	5.05
P	Kereng Maphala	M	Kereng Maphala	M	8.53
Q	Jabulani Stimela	M	Jabulani Stimela	M	9.09
RN	Mosimane Phuti	M	Mosimane Phuti	M	3.06
D	Themba Shabangu	M	Themba Shabangu	M	5.43
C	John Dlamini	M	John Dlamini	M	7.42
IH	Freddy Molapisi	M	Freddy Molapisi	M	1.94
H	Tirelo Sontaga	M	Tirelo Sontaga	M	7.05
CG	Maria Thulare	F	Maria Thulare	F	2.99
AW	Nakedi Sebolelo	F	Nakedi Sebolelo	F	0.71
UQ	Paul Basimane	M	Paul Basimane	M	0.70
I	Mqeda Nkathazo	M	Mqeda Nkathazo	M	6.38
W	Kabelo Mabalane	F	Kabelo Mabalane	F	2.79
TP	Rapelang Ramushu	M	Rapelang Ramushu	M	4.87
X	Nkele Simelane	M	Nkele Simelane	M	6.95
U	<i>Mmegi Ntoane</i>	M	Reneilwe Mofokeng	M	4.59
O	Lethlohonolo Thupane	F	Lethlohonolo Thupane	F	6.49
R	Pinkie Dube	F	Pinkie Dube	F	5.57
S	Serobe Molapo	M	Serobe Molapo	M	6.06
E	Petros Mphuchane	M	Petros Mphuchane	M	13.7
G	Kgabo Letsatsi	M	Kgabo Letsatsi	M	2.70
MI	Hereford Farmers Association	N/a	Hereford Farmers Association	N/a	2.79

²⁴ The names and plot numbers have been changed to protect the identity of persons referred herein.

Several factors seem to have determined the pattern of allocation that had emerged. Variations in plot size were inherited from the demarcations that were made originally for tenants of the welfare settlement scheme. One respondent explained that the pattern of occupation of plots had largely been determined by events of the morning of 01 February 1997. Prior to occupation, the group had agreed that as soon as each farmer occupied a plot, he or she would hang some 'laundry' on a line outside to indicate that the plot had been claimed. Among plot holders who occupied the plots from 2004 to 2007, however, were farmers who were recorded as having been too afraid to invade, although they had been part of an original group that had signed up to invade Hereford (Piontek, 2000). Also among plot holders were farmers who replaced original occupants who either subsequently "left" their plots or were removed due to "failure to demonstrate commitment to the collective goal".

TABLE 10 HEREFORD IRRIGATION SCHEME: DISTRIBUTION OF SMALLHOLDINGS BY GENDER, 2004

Age group	Male	%	Female	%	Total	%
40 - 49	8	24.2	2	6.1	10	30.3
50 - 59	7	21.2	3	9.1	10	30.3
60 and above	12	36.4	1	3	13	39.4
Total	27	81.8	6	18.2	33	100

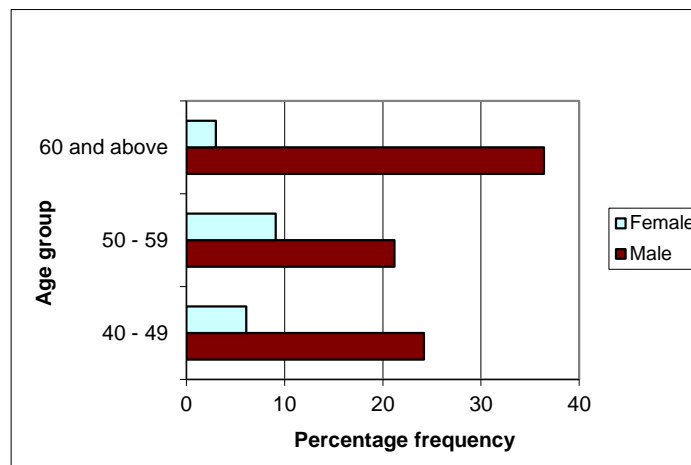


FIGURE 11 HEREFORD IRRIGATION SCHEME: PERCENTAGE FREQUENCY DISTRIBUTION OF SMALLHOLDINGS BY GENDER, 2004

Although smallholders initially obtained formally recognised usufruct rights to the land, through three-year lease agreements signed in 1997 with the National Department of Agriculture (NDA²⁵), such leases lapsed in 2000 and became renewable on an annual basis with the Department of Public Works. Many of the smallholders were not clear on the exact status of their land tenure rights. Responses to questions about smallholders' perceptions about the nature of their tenure ranged from "partial ownership", "almost mine", "not yet mine" to "leased from government" (12 per cent). It was also evident that smallholders were confused about who assumed responsibility for receiving land rentals. While smallholders generally maintained a façade of optimism that they would be granted ownership rights, uncertainty and distress was evident in statements such as:

We do not know what is going on. The leases lapsed and have not been extended. No one is talking to us about where we stand. We have a problem²⁶.

4.5 SOCIO-ECONOMIC PROFILE

4.5.1 INTRODUCTION

Emerging black small-scale farmers such as those in the Hereford Irrigation Scheme are often described as 'resource poor farmers'. From a sustainable livelihoods perspective, this terminology can be interpreted as relating to a deficit in all or some of the five livelihood capitals. Such capitals include the physical, natural, economic and/or financial, social and human resources required for a means of living (Chambers & Conway, 1992: 7). Livelihoods are considered sustainable when they can cope with and recover from stresses and shocks, maintain or enhance their capabilities and assets, and provide net benefits to other livelihoods locally and more widely both at present and in the future, without undermining the natural resource base (Carswell, 1997; Hussein & Nelson, 1998). From such perspective, a deficit or poverty in all or some of the livelihood capitals therefore would be assumed to restrict a farmer's capacity to optimize available opportunities and resilience against vulnerability-inducing factors. Resource-poor farmers would therefore be assumed to be those for whom a deficit or poverty in livelihood capitals detracts from the sustainability of their livelihoods.

²⁵ NDA was restructured in 2009 and re-named 'Department of Agriculture Forestry and Fisheries (DAFF).

²⁶ Interview with the Chairman of the HFA, 14 February 2005

This section outlines the characteristics of the farmers' households in terms of household composition, livelihood capitals and strategies. Although by no means unique, notable findings were that Hereford smallholders were characteristically defined by firstly, combination of farm-based and off-farm livelihood strategies, secondly, straddling between the irrigation scheme and rural communities elsewhere and, thirdly, diversification of farming to include crops and livestock.

4.5.2 CHARACTERIZATION OF HOUSEHOLDS

4.5.2.1 Language Composition

Hereford smallholders' households consisted of people who spoke various languages, primarily Pedi (73 per cent), Zulu (15 per cent), Tswana (6 per cent), Swazi (3 per cent) and Ndebele (3 per cent). Despite such diversity of languages, there seemed to be a degree of social coherence amongst the smallholders. While the observed coherence seemed to indicate that these households had gradually developed into a community, there were problems with attempting to delimit the boundaries of the group and establish the precise population comprising this community.

4.5.2.2 Gender Composition

The gender composition of the adult (over 18 years) population surveyed was 55 per cent male and 45 per cent female. This excluded farm workers, many of who were casually or seasonally employed. Despite the higher male population, and in spite of the tendency by many women to divide their time between Hereford and Tafelkop or Motetema, women were more visible than men in the day-to-day work in the fields and gardens. This visibility of women was in contrast to the predominance of men in the allocation of smallholdings.

4.5.2.3 Definition of 'Community' and 'Household': Challenges

Attempts to profile the population of the Hereford Irrigation Scheme challenged by complexities associated with concepts of 'community' and 'household'. Firstly, there was the phenomenon of 'straddling', whereby smallholder's households had retained the use of homestead sites in either Tafelkop or Motetema after occupying the small-holdings within the Hereford Irrigation Scheme (Box 2). The reason for the dual occupation of homesteads was to optimize access to livelihood generation opportunities available in Hereford

Irrigation Scheme while simultaneously retaining access to social services in Tafelkop and Motetema. Such services were absent within the irrigation scheme.

Box 2 Responses on 'straddling' by smallholders' households, 2004

- Kabelo Mabalane (Plot W): A widowed female pensioner farmer aged 63.
"My children, five adult unmarried girls and one adult son, and nine grandchildren remained in the Tafelkop home. I support them as they are all unemployed. They do get child support grants of R140 per child, but this can only buy soap and a few other things. The bulk of the support is from me."
- Pinkie Dube (Plot R): A married female farmer aged 60.
"My nine children, four boys and five girls, remained in Tafelkop. Two are married and two are working. The five younger children are still staying at home in Tafelkop and attending school."
- Phineas Sithole (Plot L): A 67-year old male farmer with two wives, Maina (47) and Mercy (63).
Phineas: *"I have five children, three of who live at home in Tafelkop. The first born is married and the second born passed away recently, as did my second wife. Maina was the third wife. Maina manages the farming and works on the crops on a day-to-day basis, with the help of two hired hands. My first wife, Mercy, lives at home in Tafelkop and looks after my elderly mother and the children.... Hereford is where we work, Tafelkop is home."*
Maina: *"I do most of the work on the plot. With the income and food we produce here, we support the family in Tafelkop.... I have no children of my own."*
- Tryphine Masuku (Plot N): Aged 52, farmer and wife of Moscow Masuku, who is fully employed at a furniture store in Groblersdal.
"We have one girl child aged 23 who lives in Pretoria, looking for a job. No-one is staying at home in Motetema. On weekends, when my husband is available to supervise work on the plot, I go to Motetema to check if everything is alright. The problem with having two homesteads is the cost of commuting. One cannot commute daily due to financial constraints. Commuting takes money away from investment in crop production. There is also the constant worry over the safety of goods in the Motetema homestead that is unoccupied during the week."
- Freddy Molapisi (Plot IH): Male pensioner farmer aged 75.
"We all move up and down...My wife and I have three children and three grandchildren. She mostly lives with them in Motetema. They are not working, so we support the whole household with both our pensions and the income from this plot..."
- Refilwe Monageng (Plot J): Male farmer aged 62.
"Having two homesteads is not easy. We virtually live in Hereford, while two of our children live in Tafelkop, mostly with my wife (Johanna), and attend school there."

The general trend was that many of the married women divided their time between working on the scheme and caring for children and elderly relatives in Tafelkop and Motetema. The more consistent presence of women on the scheme was often associated with polygamous

households (6.1 per cent), in which one of the wives - often the younger - resided and worked in the scheme while the other - often the older - resided in Tafelkop or Motetema caring for younger children and elderly relatives. The more consistent presence of women in the scheme was also associated with elderly women with grown up children (42.4 per cent) and with women who either held land rights in their own capacity or who were the main breadwinners in their households (18.2 per cent). Owing to the observed straddling, therefore, definition of a household as 'a group of people who share the same cooking pot', which is often used by StatSA, was not easily applicable.

Secondly, the complexity of social relationships as well as interwoven links between Hereford smallholders and the broader Tafelkop Farmers Association compounded the difficulties of defining 'community'. Furthermore, the lack of clear-cut distinctions between the nuclear and extended families living both within and outside of smallholders' homesteads made it difficult to define 'household'. Some household members moved in and out of the homesteads for various reasons at different times, while continuing to view themselves as belonging both to given smallholders' households and to other non-smallholder households elsewhere. Others appeared to be more consistently present within the household, although dividing their time between the homestead on the scheme and that in Motetema or Tafelkop.

In a number of instances, farm workers were virtually part of smallholders' households, sharing food from the same pot and, in some cases, also sharing the same house. However, the transient nature of employment for many of the farm workers posed difficulties regarding whether or not to include such workers in definitions of households.

Consequently, the study adopted whichever definitions respondent smallholders deemed to be applicable to their specific contexts. In other words, smallholders defined what they understood to be their households, and the researcher deliberately avoided imposing technicist definitions that could be at variance with smallholders' diverse contexts. Mostly, smallholders' definitions excluded farm workers but included nuclear and extended family members, whose primary base was largely the particular smallholders' kinship group, whether or not such relatives resided in the scheme, Tafelkop, Motetema or elsewhere.

Married children were not considered to be part of smallholders' households, but unmarried adult children often were.

4.5.2.4 Crop Production

The main commercial crops grown in the Hereford Irrigation Scheme were tobacco and vegetables (Figure 12). These were grown within joint ventures between the farmers and private investors. Two of the farmers also grew cotton. Subsistence crops included maize and wheat. Most of the farmers (94 per cent) grew crops primarily for commercial use and set aside a small proportion of their produce, particularly vegetables, for subsistence. At the time of the questionnaire survey in May 2004, lack of irrigation infrastructure limited access to water by four smallholders (12.5 per cent) on plots 30, 31, 32 and 33. These smallholders were therefore compelled to produce a limited quantity of crops primarily for subsistence, although small quantities of surplus produce were sold. These farmers later obtained access to water after a canal was constructed to link them to a rehabilitated storage dam on the scheme. After that, the four smallholders commenced crop production primarily for commercial purposes.

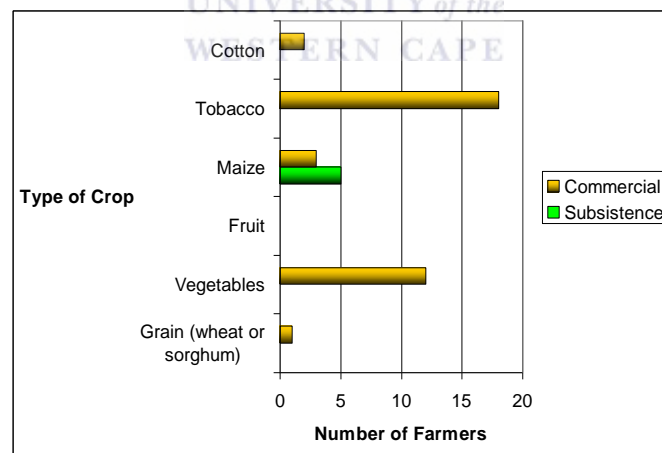


FIGURE 12 HEREFORD: CROP PRODUCTION, 2004

4.5.2.5 Employment

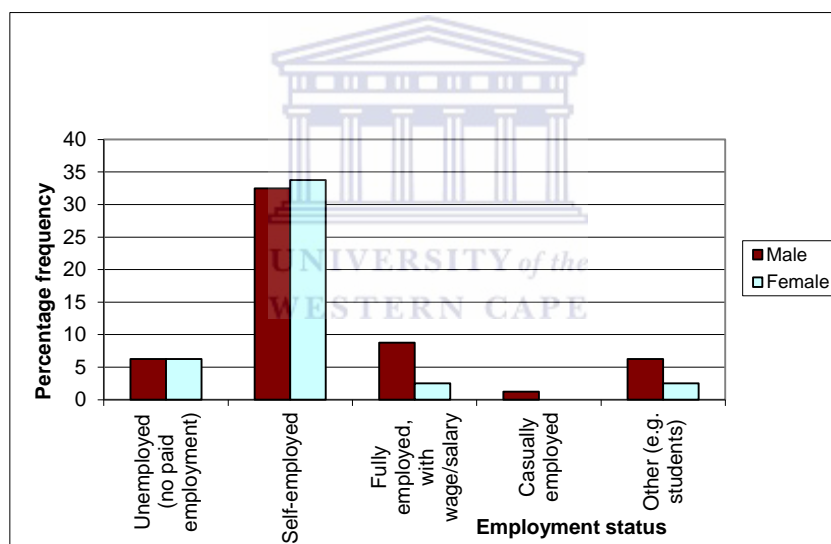
Most of the respondents (66.25 per cent) - and slightly more women (33.75 per cent) than men (32.5 per cent) - considered themselves self-employed, mostly within the Hereford Irrigation Scheme (Table 11; Figure 13). More men than women had full-time, paid employment outside the scheme. This partly explained the observed greater visibility of

women engaged in day-to-day work on the scheme. Some (12.5 per cent) of the resident adult household population were unemployed, while a small number (1.25 per cent) was casually employed.

TABLE 11 HEREFORD: EMPLOYMENT STATUS OF ADULT²⁷ MEMBERS OF HOUSEHOLDS RESIDENT IN THE IRRIGATION SCHEME, 2004

Employment Status	Male		Female		Total	
	n	%	n	%	n	%
Unemployed (no paid employment)	5	6.25	5	6.25	10	12.5
Self-employed	26	32.5	27	33.75	53	66.25
Fully employed, with wage/salary	7	8.75	2	2.5	9	11.25
Casually employed	1	1.25	0	0	1	1.25
Other (e.g. students)	5	6.25	2	2.5	7	8.75
Total	44	55	36	45	80	100

FIGURE 13 HEREFORD: PERCENTAGE FREQUENCY OF ADULT MEMBERS OF HOUSEHOLDS BY EMPLOYMENT STATUS



The presence of unemployed members of households within the scheme indicated that the decision to engage in farming activities was not universally shared within smallholders' households. For some of the adult household members, residing at Hereford Irrigation Scheme was advantageous in terms of proximity to employment opportunities in the town of Groblersdal (Box 3), which was located between 0.5 and 2km from the scheme (see Figure 10 in Section 4.2). The scheme was therefore seen by some as a vantage-point for accessing employment in the urban centre.

²⁷ Aged 18 years and above.

Box 3 Example of linkage between on-farm and off-farm livelihood strategies

Elsie Maphala was a 30 year old unmarried woman who resides on Plot P. The plot was allocated to her father, Kereng Maphala, who was 76 years old. Elsie was the eldest daughter of the family and had two children aged 7 and 2, who lived in the Tafelkop home with her mother. Elsie worked in the informal sector in the nearby town of Groblersdal. She explained her own livelihood strategy as follows:

"I work for a woman who sells pap and meat at the 'bus rank' [bus station] in Groblersdal. She does not pay me any money, but whenever I need food and soap for my two children, she helps me. Selling food at the bus rank is not easy. We make between R100 and R200 per day at the month-end. On a good day during the month, we make between R40 and R50. However, in the middle of the month, we sometimes get only R14 per day, which is the price of one plate of pap and meat. We then have to carry the rest of the food back home to eat."

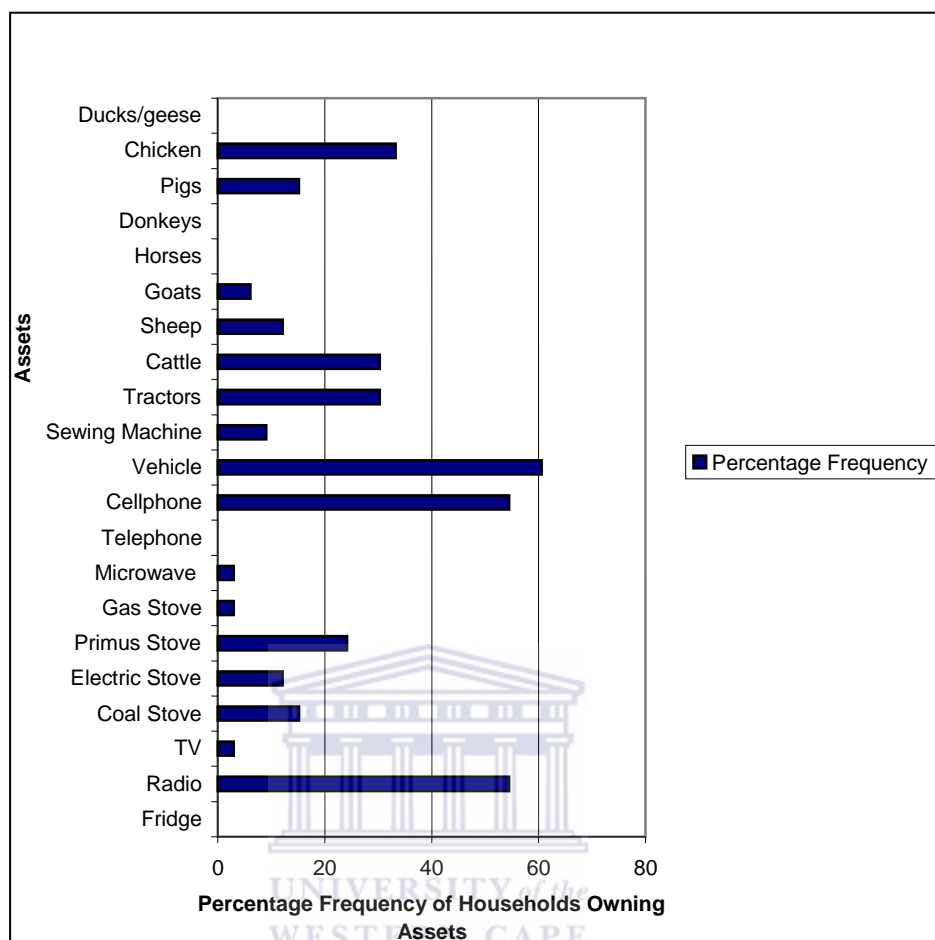
4.5.2.6 Income

The questionnaire survey revealed that mean monthly household incomes ranged from zero to R4000. Follow-up in-depth interviews, however, showed that respondents were either afraid or reluctant to disclose their incomes, and consequently tended to exclude certain social grants, payments in kind and remittances. Respondents also excluded consumed subsistence produce from their calculations of income, partly because they do not keep records of such consumption and, in part, because they perceived 'income' in monetary rather than non-monetary terms. It was interesting to note, however, that households that were involved in a tobacco joint venture in 2004 displayed greater anxiety over incomes those that were not.

4.5.2.7 Household Material Resources

Household material resources included all identified assets in both Hereford and Tafelkop or Motetema. The rationale was that livelihoods in both locations were inter-linked, with farming activities in Hereford being an extension of opportunities in Tafelkop, Motetema and elsewhere. Table 12 shows quantitative data on household ownership of selected material assets. Listed assets do not include dwelling structures and other buildings owned or occupied by households, although qualitative assessment of such data revealed socio-economic differentiation.

TABLE 12 MATERIAL ASSET OWNERSHIP BY HOUSEHOLDS IN HEREFORD IRRIGATION SCHEME, 2004



While smallholders were commonly considered to be resource-poor, ownership of productive assets varied among households, with some households having greater concentrations of material resources than others. While a significant proportion (57 per cent) of households did not own any gas, electric, coal or primus stoves and relied on wood fuel for cooking, others (15.2 per cent) owned two types of stove. The latter households also owned a range of other productive assets, including sewing machines (60 per cent) and tractors (60 per cent), for example. Many (60 per cent) of such households were also found to be involved in a tobacco joint venture and most (80 per cent) of these had debts that mostly ranged from R5000 to R10 000. Household communication resources mainly included cellphones (54.5 per cent) and radios (54.5 per cent). One household owned a television set, and none had a telephone connection. A significant proportion of households (61 per cent) owned vehicles, mostly small trucks ("bakkies") that were used to transport

produce to markets. A number of households (30.3 per cent) owned tractors, many of which were purchased with loans from the Land Bank. Such households regularly hired out the tractors to smallholders without the requisite means.

One household owned a tractor that was independently purchased by the smallholder and his wife. The couple considered, however, that their tractor was too small to plough at depths required for commercial crop production. Consequently, the couple was often compelled to hire the larger tractors from Hereford Farmers' Association members, who had bought trucks with loans secured through the tobacco joint venture. The hired tractors were mostly used on portions that the smallholder independently decided to allocate to commercial farming. Portions of the plot that were under subsistence production were mostly ploughed using the small self-financed tractor.

None of the households owned donkeys or horses for draught power. About a third (30.3 per cent) owned cattle, but these were used for milk rather than draught power. A few of such cattle had been bought by individual farmers. Many were provided through a government-facilitated joint venture involving Hereford International, whose objective was to enhance food security within the scheme and neighbouring rural localities, such as Tafelkop and Motetema.

One household owned 51.9 per cent of the total of 27 head of cattle in Hereford Irrigation Scheme. Two households owned the 25 goats in the irrigation scheme, one household of which owned 80 per cent of the goats. Most (83.3 per cent) of the 48 sheep belonged to one household. The 27 pigs were owned by five households, two of which almost equally shared 77 per cent of the total pig population. The total chicken population was 97. Chickens were by far the most widely distributed livestock, with one third (33.3 per cent) of Hereford households owning several chickens. One of the chicken-owning households owned a significant share (20.6 per cent) of all chickens counted. Ownership of livestock tended to be concentrated within particular households. One household, in particular, owned relatively large numbers of more than one type of livestock.

There did not seem to be a significant difference in material asset ownership between Hereford smallholder households and other farm-based or non-farming rural households in

Greater Sekhukhune District. However, compared to smallholders in similar irrigation schemes elsewhere in Limpopo Province, Hereford smallholders had made greater investments in agricultural assets. Hereford farmers also appeared to enjoy greater food security and access to opportunities for generating livelihoods through farm-based and off-farm employment. Debts associated with contractual joint ventures and the attendant risks of producing capital intensive crops were a major threat to Hereford smallholders' material asset ownership, livelihood security and sense of well-being.

4.5.3 SELECTED LIVELIHOOD STRATEGIES AND CHALLENGES

4.5.3.1 On-Farm Livelihood Diversification Strategies

Although Hereford Irrigation Scheme was often associated with crop production, findings by the study were that there was a growing trend towards diversification of farming to include livestock. While levels of livestock ownership were relatively low, livestock contributed to food security and income for livestock-owning households. In one of the households, a single dairy cow provided milk for self-sustenance and for sale to other households within the scheme. The income generated from milk sales contributed towards purchase of a miscellaneous range of day-to-day requirements for the household.

For another household, which occupied one of the smallest plots (1.94ha) on the scheme, livestock farming took precedence over crop farming (Box 4). This particular smallholder concentrated on sheep, pig and poultry farming, and supplemented the limited grazing on his plot with stock-feed. The elderly (76 years old) smallholder and his wife both owned 40 sheep, 10 pigs and 8 chickens. They also practiced intensive vegetable production on a portion of land just under 1 ha in extent, which was approximately half of the relatively small plot. The total household income derived from the couple's combined monthly pension of R1480 and sale and consumption of surplus livestock and vegetables. On average Molapisi sold between three and four sheep per month at R500 to R550 each, thus earning a monthly income of between R1500 and R2200 from sheep sales. In some months, he sold 4 pigs at R2000 each, thus earning R8000.

Box 4 An example of diversified farming and livestock contributions to household income, 2004

Freddy Molapisi is a 75-year old male, married plot-holder residing on Plot IH. He was born in Bushbuckridge. He worked as a religious minister in Lydenburg, Burgersfort, Groblersdal and Hammanskraal before retiring and settling in Motetema in 1994. Both his wife and he support three unemployed adult children and three grand children. Molapisi rears 40 sheep, 10 pigs and 8 chickens on his 1.94ha plot. He also grows vegetables mainly for household consumption in a garden of less than 1ha. The household income derives from the couple's combined monthly pension of R1480 and the sale and consumption of livestock and surplus vegetables. Molapisi sells between 3 and 4 sheep per month at R500 to R550 each, earning a monthly income of between R1500 and R2200. In one month, he sold 4 pigs at R2000 each, thus earning R8000. Chickens are for household consumption and are slaughtered whenever Molapisi's wife, who controls their use, decides to do so. Molapisi controls the larger livestock, which bring in monetary income, and the couple shares the tending of all livestock. The Molapisis employ 2 male workers at a salary of R550 per month, mealie-meal, a share of food crops and additional money after the sale of produce. Livestock therefore makes a significant contribution to household income and food security. Livestock also contribute to the incomes and food security of the farm workers employed by Molapisi.

From an initial flock of 5 sheep in 1998, Molapisi now has an average of 40 sheep at any given time. For him, the Hereford Irrigation Scheme is ideal for intensive livestock rearing in that water and fodder, in the form of scrap vegetables from local commercial farmers, are abundant. In 2001, he obtained a loan of R10 000 from the land bank to grow vegetables. He has since settled this loan and decided to scale down vegetable production in favour livestock rearing. A realization that his plot size is too small, the water too limited and the risks too great to sustain commercial vegetable production has informed his decision.

Although the couple shared all farming responsibilities, there were clear gender divisions of labour and decision-making pertaining to specific assets. For example, chickens were for household consumption and were slaughtered whenever Molapisi's wife, who controls their use, decided to do so. Molapisi controlled decisions over the larger livestock, which brought in monetary income, although the couple shared responsibility for tending all livestock. The Molapisis employed two male workers at a salary of R550 per month, plus a month's supply of mealie-meal, a share of food crops and additional bonus payments after the sale of produce. Given that the smallholder and his wife eked out livelihoods from a relatively small plot, the diversification strategy, combined with intensification of production, had made significant contributions to household income and food security. The strategy also contributed to enhancing incomes and food security for farm workers employed by Molapisi.

To a large extent, it appeared that the smallholder's control of the entire production enterprise gave him a high degree of freedom to adopt strategies that he deemed appropriate for his particular context. For example, when he realized that his plot size was

too small, the water too limited and risks too great to sustain commercial vegetable production using borrowed funds, he settled his bank loan and took a decision to scale down vegetable production in favour livestock rearing.

Examples such as described above seem to have encouraged Hereford Farmers Association and individual smallholders to review their singular focus on crop farming. The leadership of Hereford Farmers Association began to proactively solicit assistance from external agencies regarding initiation of a livestock rearing project that would be compatible with commercial crop irrigation.

4.5.3.2 Debts

At the time of the survey, the majority (71 per cent) of households had debts ranging from R120 to between R10 000 and R50 000, with a third (33.3 per cent) of the households having between two and four sources of debt. Many (41.9 per cent) of the larger debts were incurred mainly to finance the acquisition of commercially productive assets, such as tractors, which were owned by nearly a third (30.3 per cent) of the households. Other debts were incurred to pay school fees (16.1 per cent), buy food (9.7 per cent) and set up Small-Medium- and Micro-Enterprises (SMMEs) (9.7 per cent).

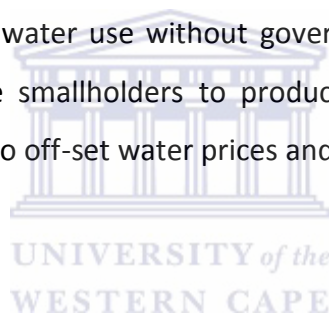
More than half (57.6 per cent) of the households involved in a tobacco joint venture showed the greatest concern over debts. For such households, "debts" ranged from R6 449.80 to R22 328.82. The debts related to a deficit in the repayment of loans advanced to cover direct production costs. The debts were not linked to costs of renovating dilapidated cottages, as some respondents among the smallholders assumed. The latter cost was funded through a 'social responsibility' donation by British American Tobacco (BAT) South Africa).

Water account arrears for Hereford Irrigation Scheme amounted to R281 165.00 in 2003. The arrears constituted a major source of collective debt for Hereford smallholders. Although Mpumalanga provincial Department of Agriculture and Land Administration (DALA²⁸) settled the 2003 water account, farmers continued to appeal to government for

²⁸ DALA has since become Mpumalanga Department of Agriculture Rural Development and Land Administration

assistance with the settling water-related costs. In 2006, the smallholders benefited from a government subsidy worth approximately R2.2 million, which was provided through the DWAF Policy on the Financial Assistance to Resource Poor Irrigation Farmers²⁹. The subsidy was meant to ensure that water prices remained constant despite upgrading of agricultural infrastructure, thereby ensuring that smallholders continued to have access to water without incurring large water-related debts.

Although the subsidy grant cushioned smallholders against the negative effects of debts, such assistance did not seem sustainable in the longer term given that the debts, which had largely been due to production of capital intensive crops within joint venture contracts, were likely to persist so long as such arrangements and the requirement for users to pay for water at its economic value existed. In the event that smallholders became independent of joint ventures and strategic partnerships, it seemed debatable whether they would be able to sustain profitable productive water use without government subsidies. Such possibility seemed as if it might pressurize smallholders to produce high value crops using water-efficient methods in an attempt to off-set water prices and bank loans, or else to trade away their water allocations.



4.5.3.3 Vulnerability

Vulnerability, according to questionnaire responses by Hereford smallholders, was mainly associated with lack of clean water to drink (100 per cent), natural disasters such as floods, drought, frost and strong winds (87.9 per cent), loss of possessions and theft (36.4 per cent), serious accidents (12.1 per cent), serious illness in the household (21.2 per cent) and violence in the community (3 per cent).

Shortage of clean drinking water was perceived by all respondents to be a major constraint to well-being in Hereford Irrigation Scheme. Although the Groblersdal Water Purification Works were situated a 'stone's throw' away, directly across the R33 Stoffberg road on the northern boundary of the scheme, smallholders used raw irrigation water diverted from the Hereford canal for drinking and other domestic purposes. A water purification plant that was installed in 1997 had since broken down. Since then, Hereford Irrigation Board had

²⁹ Interviews with DWAF official, Mr Tshilidzi Mathobo, 20 February 2007.

constructed sluice gates and storage tanks along the line portion of Hereford canal to provide smallholders with access to raw water for domestic purposes (Figure 14). This was a temporary measure to tide smallholders until a more acceptable and permanent solution was found. Despite this, the threat of water-borne disease remained a common concern for all the households. Smallholders had yet to submit to Greater Groblersdal Local Municipality an application for potable water supply services.



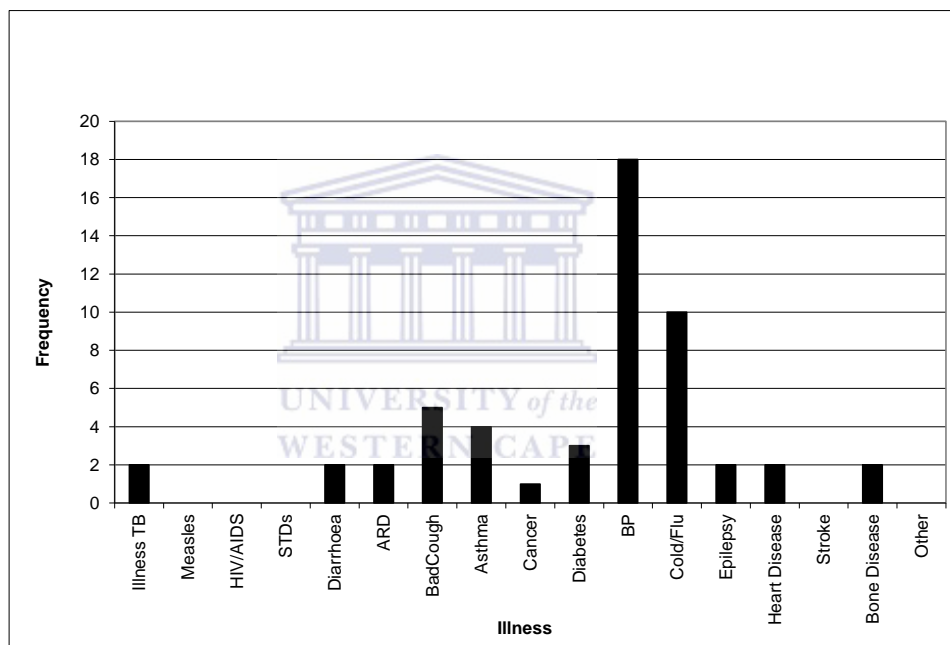
FIGURE 14 HEREFORD: ABSTRACTION POINT AND CANVAS-PROTECTED TANKS FOR TEMPORARY SUPPLY OF RAW WATER FOR DOMESTIC USE, 2004

A significant proportion (87.9 per cent) of smallholders considered natural disasters, such as floods, drought, frost and strong winds, to be contributing factors to livelihood vulnerability. A flood event that all respondents alluded to was when in 2000 the Olifants/Lepelle River overflowed and inundated low-lying areas along the banks. In Hereford Irrigation Scheme, flooding resulted in extensive damage to crops and infrastructure and in deepening feelings of insecurity. By contrast, reference to droughts related mainly to the low rainfall received in some of the years following smallholders' occupation of the irrigation scheme in 1997. Frosts and strong winds were said to be less common but nonetheless had negative impacts, particularly on vegetable crops produced.

Crime was mainly associated with theft of possessions. More than a third of households had been exposed to such crime. Some women expressed their anxiety about having to commute between the irrigation scheme and homesteads in Tafelkop and Motetema, since absence from either homestead left property exposed to possible theft. Straddling therefore created difficulties in securing household material assets.

Serious illness was present in approximately a fifth of the households. Disclosed illnesses included bad coughs, colds and flu, heart disease, high blood pressure, diabetes, asthma and diarrhoeal diseases (Table 13). HIV and Aids (HIV/AIDS) were not reported in any of the households. There was universal qualitative awareness, however, of the prevalence and means of contracting of HIV/Aids. Ailing household members were whispered to mostly reside in homesteads in Tafelkop and Motetema, although such members were often said to belong to 'other' people's households than those of respondents.

TABLE 13 HERFORD IRRIGATION SCHEME: FREQUENCY OF DISCLOSED ILLNESSES IN SMALLHOLDER HOUSEHOLDS, 2004



Fear of violence in the community affected one out of the thirty-three households on the scheme. The issue seemed to be a sensitive one as the respondent showed reluctance to discuss the details. There was evidently less fear of violence in 2004 than in the years following occupation, when tensions between the black and white farmers were high and vagrants had yet to accept that the irrigation scheme was no longer a *de facto* open access resource.

4.5.3.4 Shortage of Irrigation Water

Shortage of irrigation water was a major constraint to crop production. Smallholders irrigated their crops for a limited time on three days per week, taking turns to access their

shares of available water. Water use was monitored by one of the smallholders, who also acted as a pump attendant. Crops were sometimes subject to water stress, which impacted negatively on produce quantity and quality.

Hereford Irrigation Board allocated sufficient water to irrigate 160ha (or 83.2 per cent) of the 192.2ha of land in the scheme. Such allocation was in terms of a water allocation system that applied to all farms under the Board's management, wherein all farmers along the Hereford canal were allocated 7 200 cubic litres/ha/year, which covered approximately 80 per cent of water requirements for each hectare on a farm or smallholding. However, at the time of the study, less than half of the 160ha in Hereford was actually under irrigation. Under-utilization of the smallholders' allocation was ascribed to shortage of irrigation water due to inadequacy of irrigation infrastructure. This specifically related to the water storage dam in the scheme and the unlined section of Hereford canal, upstream of the irrigation scheme.

DALA rehabilitated the water storage dam in 2003, at a cost of R7million, and barely a year later in 2004 the bentonite lining of the earth bed had developed cracks that led to increased rates of seepage and thereby reduced storage capacity (Figure 15). A greater portion of water loss, however, was from the unlined section of the Hereford canal (Figure 16). The Hereford canal began at the Loskop Dam on the upper reaches of the Olifants River and stretched for approximately 44km before discharging water back into the Olifants River. In 2004, the upper 17km were unlined while the lower 27km were concrete-lined. The Hereford Irrigation Scheme was situated below the unlined section of the canal. Prior to the concrete lining of the lower 27km of the canal, seepage rates were high and the estimated water loss was 60 per cent. Persistent water loss of 30 per cent, which was reported by key respondents to in-depth interviews, was largely due to excessive seepage in the unlined 17km of the canal.



FIGURE 15 HEREFORD IRRIGATION SCHEME: WATER STORAGE DAM AND ABSTRACTION POINT ALONG LINED PORTION OF HEREFORD CANAL, 2004



FIGURE 16 HEREFORD: UNLINED SECTION OF HEREFORD CANAL, 2004

Ground-truthing revealed fields and access roads that had been inundated by water from the canal. Massive stands of 'Queen of the Night' (*Cereus jamacaru* DC), which is declared under the Conservation of Agricultural Resources Act (CARA) to be an invasive alien plant species, grew along parts of the unlined canal. To alleviate these problems, Hereford Irrigation Board hired private operators to compact the unlined canal banks and clear the Queen of the Night stands, at a relatively high cost³⁰. Towards resolving the water loss problem, both black and white farmers reached consensus on the need for emerging small-scale farmers to apply for assistance from government to cover part (R2.2 million) of the R12 million required to cover the costs of lining the upper section of the canal.

Water loss affected most of the farmers along the Hereford canal, particularly those below the unlined section. However, smallholders on Hereford Irrigation Scheme appeared to be more vulnerable than established white commercial farmers. This was because the latter had larger landholdings and therefore greater water allocations. Established farmers also seemed to have greater leeway to manipulate their water allocations by irrigating smaller

³⁰ Hiring of machines for soil compaction along the 17km of unlined canal reportedly cost the irrigation board more than R300 per hour per machine in 2004. Interview and field survey with the water control officer/bailiff, Mr John Barnardie, 13 October 2004.

parcels of land than the 80 per cent coverage per hectare prescribed by Hereford Irrigation Board. This enabled them to irrigate their crops more effectively than smallholders. Some of the observed established commercial farmers had combined access to between two and five sources of irrigation water, including the Hereford canal, the Olifants River, the Loskop canal and the Moses River. Such water was stored in storage dams within their private farms, and was for their private use. Such a strategy enabled these farmers to effectively double, triple, quadruple or even quintuple their stocks of irrigation water and guard against possible shortage. Such practices contributed to inequitable access to productive water use and, in particular, the vulnerability of Hereford smallholders' livelihoods.

Sources of vulnerability for smallholders were two-fold. Firstly, vulnerability emanated from risks associated with water shortage, which threatened farm-based livelihoods in particular. While threats of poor crop and livestock yields affected both members and non-members of joint ventures, the former were at greater risk. This was due to the basis of joint ventures upon legal contracts, wherein failure by smallholders to satisfy contractual obligations with respect to produce delivery could result in income failure, defaults on loan repayments and/or losses of livelihood assets. Secondly, vulnerability could arise from requirements to off-set costs of lining the Hereford canal and re-sealing the bottom of the water storage dam in Hereford Irrigation Scheme. Such requirements made access to water potentially unaffordable to smallholders, who already had difficulty with paying the 2004 tariff of R802/ha/year³¹. According to projections by Hereford Irrigation Board's water bailiff, the 2004 tariff of R720/ha/year [note the discrepancy] could rise by an additional R750/ha/year following the lining of Hereford canal. In light of anticipated risks, Hereford Irrigation Board, which represented established commercial farmers, and smallholders reached a consensus on the need for concerted effort to solicit government assistance. Between August and September 2004, both parties lodged applications for government financial assistance to cover the costs of lining the Hereford canal.

During consideration of the plight of smallholders, what became clear was that objectives of the Agricultural Sector Strategy to support these farmers in their quest to enter mainstream commercial agriculture would not be tenable without significant government subsidies.

³¹ Letter from the Chairperson of the Hereford Farmers Association to the Mpumalanga Provincial Department of Agriculture and Land Administration, 15 September 2004.

Towards resolving the evident constraints, DWAF adopted a new policy on Financial Assistance to Resource Poor Irrigation Farmers in September 2004. The policy was intended to provide grants to 'resource poor' irrigation farmers, such as Hereford smallholders. It was through this policy that the smallholders obtained the grant of R2.2 million to cover their share of infrastructure upgrade costs.

A newly formed institutional structure called Mpumalanga provincial Coordination Committee for Agricultural Water (CCAW) assisted Hereford smallholders in their mission to secure access to productive water use. CCAW CCAW was responsible for agricultural water use issues and comprised a cluster of government departments, such as Environmental Affairs, Water Affairs, Agriculture and Land Administration, among others. Prior to the granting of the smallholders' subsidy, CCAW requested a written confirmation from the Department of Public Works that the lease agreements would not be terminated. It remained to be seen whether or not policy interventions, as well as the apparent emerging unity of purpose among black and white Hereford farmers, would strengthen the smallholders' quest to enter mainstream commercial agriculture.

Besides efforts to secure government financial support, smallholders also began to be more proactive in staking their claim to equitable access to key decision-making platforms namely, Hereford Irrigation Board and Groblersdal Local Municipality. This contrasted with the smallholders' lack of confidence and information in the earlier years of occupation, when they resorted to bringing in a traditional healer to help them to get more water through prayers for rainfall. Through increased confidence, access to information and self-assertion, smallholder began to direct grievances about insecure access to relevant water governing bodies. They also demanded direct representation in the canal-wide Hereford Irrigation Board as a means of guarding against allowing others to take water allocation decisions that might negatively affect their livelihoods.

4.5.4 SUMMARY

Although Hereford smallholders were classified as 'resource poor', there was evidence that they were gradually increasing their livelihood resources. After gaining access to land through occupation and enduring a lengthy process to formalize their tenure, smallholders

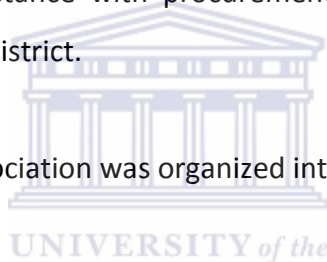
had proceeded to adopt a range of strategies to secure their livelihoods against risks and hazards. Such strategies were based partly based on social networks with key role-players in government, civil society and the private sector. Formal and informal joint venture partners and facilitatory NGOs featured prominently among such networks, ensuring that smallholders gained production skills, technology, management services and access to credit facilities and markets. The shadow side of such ventures, however, was an increase in the incidence of debts in farmer households. What seemed to count in the smallholders' favour were the relatively high degrees of freedom that this group individually and collectively enjoyed, as well as the increasing bargaining strength of Hereford Farmers Association, particularly in dealing with external institutional actors. These strengths were demonstrated by the farmers' pro-active strategy to secure access to productive water use through government subsidies, inclusion and self-representation in the Hereford Irrigation Board and use of formal and informal social networks to obtain required resources.

4.6 FARMER ORGANIZATION

Hereford smallholders were organized into a collective structure named 'Hereford Farmers Association'. A key underlying principle of Hereford Farmers Association was to actively involve women and youth in commercial farming activities. The executive committee was elected by simple majority of all members 'in good standing' at an Annual General Meeting. Funding was obtained through contributions of annual membership fees. The extent to which stated governance principles had actually been articulated within formally and informally within Hereford Farmers Association was of interest to the research project. However, obtaining such insights involved a lengthy process of building and gaining the farmers' trust, necessarily because smallholders were keenly aware that they had been publicly labeled land 'invaders' and their agency negatively compared to the politicized and orchestrated land occupations in Zimbabwe. Consequently, Hereford smallholders were wary of engaging with new researchers. With time, sufficient trust was built to enable open communication.

Hereford smallholders had linkages both within the group and with other organizations. According to the chairman of the Hereford Farmers Association, smallholders derived their organizational identity from Tafelkop Farmers Association (TFA), which was established on

10 February 1994 by a group of black farmers from disadvantaged communities in the Sekhukhune area. Objectives of the TFA were to enable landless black farmers from neighbourhood rural communities to gain access to productive land, use the land for agri-business purposes, create jobs and contribute towards social and economic growth in the region. TFA was affiliated to the National African Farmers Union (NAFU), and had grown into an 800-member organization that transcended boundaries of four provinces namely, Mpumalanga, Limpopo, the North West and Gauteng³². TFA membership included men, women and youth. The organization's national office was currently based at the Hereford Irrigation Scheme. The chairman of Hereford Farmers Association was also the chairman of TFA. The term "Hereford Farmers Association" was used formally to distinguish the 33 smallholders in Hereford Irrigation Scheme from the rest of TFA members. Hereford Farmers Association was also closely linked to the Bakgaga ba Kopa Cooperative, an organization that provided assistance with procurement of agricultural inputs for black farmers in Greater Sekhukhune District.



Internally, Hereford Farmers Association was organized into the following structures:

- Management Committee;
- Hereford Vegetable Growers Association (HVGA), which was registered as a cooperative;
- Hereford Tobacco Growers Association
- Hereford Women's Project; and
- Hereford Youth Project.

The Management Committee for Hereford Farmers Association also served as the Management Committee for TFA and Bakgaga ba Kopa Cooperative. The committee consisted of five executive and five ordinary members. HVGA and Hereford Tobacco Farmers Association were most closely linked to joint ventures in the scheme. The Women's and Youth Projects were described as "struggling" due to lack or inconsistency of funding.

A key respondent from the local office of the DALA identified yet another structure, which was the Hereford Irrigation Committee. However, the chairman of Hereford Farmers Association denied the existence of this structure. According to him, this structure was suggested to them and they decided not to form it. Smallholders had been asked to form an

³² Interview with the Chairman of the Hereford Farmers Association, 11 December 2003)

irrigation committee, which would nominate one member to represent them in Hereford Irrigation Board. However, drawing from their past experiences with the irrigation board, which consisted almost entirely of white commercial farmers, smallholders perceived that such inclusion would simply further white farmers' intentions to avoid transforming the Board. This was in contradiction to requirements of the National Water Act of 1998. Hereford Farmers Association contended that the suggested irrigation committee would eventually become a Water User Association (WUA), which meant that the black farmers would be formally excluded from the Hereford Irrigation Board. Members of the Hereford Farmers Association pointed out the stark contrast between their possible exclusion from the Board with historical inclusion of white smallholders who previously occupied the same portions of farm 53JS Loskop South that comprised Hereford Irrigation Scheme.

While perceived and actual conditions that determined racially-based exclusion and inclusion from the irrigation board were not clear, it was evident that black farmers had a low degree of trust in both white members of the Irrigation Board and some of the local officials in the water and agriculture sectors. Despite efforts to support smallholders, the local officer of DALA, in particular, was perceived to be sympathetic to white farmers' interests, to some extent, by virtue of being married to a white spouse. In light of this, the Executive Committee of Hereford Farmers Association had since May 2004 formally expressed their dissatisfaction with being represented by the DALA official on the Hereford Irrigation Board, and to demand direct representation by one of the own members. However, smallholders wanted such representation to be in their own terms.

Indications were also that there are a few smallholders who were dissatisfied with power dynamics in the organization. Some of the smallholders expressed concerns about what they perceived to be a unilateral style of leadership that left very little space for individual voices to be heard within the group. However, there were also very strong fears about voicing dissent, as well as fears that the leadership would find out that some within the executive had taken initiative to communicate directly with the researcher. With the passage of time, however, such fears subsided and the research process was able to facilitate open discussions on key issues of concern to smallholders. In such platforms, many smallholders communicated without fear, and leadership made an effort to account to

ordinary members on certain burning issues, such as expenditure versus lack of progress on some government-funded initiatives.

4.7 REHABILITATION AND 'REVITALIZATION' OF THE HEREFORD IRRIGATION SCHEME: STAKEHOLDER INTERESTS AND RESOURCES

Following formal acceptance of smallholders' occupation of Hereford Irrigation Scheme in 1997, a number of stakeholder institutions contributed funding towards rehabilitating the infrastructure and services on the scheme. Table 14 provides a summary of direct financial assistance provided by identified stakeholders. Although there was significant expenditure on social needs, the biggest financial investments were related to water supply and crop production. For example, in 2003 and 2004 respectively DALA provided R7million for dam rehabilitation and a post-settlement grant of R550 000 for the construction of a vegetable pack house. In 2004 DALA in conjunction with CCAW settled, on behalf of smallholders, an outstanding water bill of R281 165. In 2006, DWAF provided a subsidy of approximately R2.2 million towards lining of the upper reaches of Hereford canal.

Table 14 HEREFORD: KEY FUNDING FOR REHABILITATION AND UPGRADING OF INFRASTRUCTURE AND REVITALIZATION OF FARMING, 2000 - 2006

Date	Purpose	Source of Funding	Amount in Rands
2000	Surveying and sub-division of plots in sections 236 to 239 of 53JS Loskop Farm South	Mpumalanga Provincial Department of Agriculture	60 469.56
2000	Construction of a canal to link plots 29, 30, 31 & 32 to water storage dam	Mpumalanga Provincial Department of Agriculture	+/-1500.00
	Drilling of boreholes for domestic water supply	Mpumalanga Provincial Department of Agriculture	50 000 – 75 000
2001	Grant for domestic electricity installations and training (no connections)	ESKOM Development Foundation	99 724.30
2003	Rehabilitation of storage dam	Mpumalanga Provincial Department of Agriculture	7 000 000
2003	Settlement of outstanding water account	Mpumalanga Provincial Department of Agriculture	281 165
2004	Post-settlement grant towards the construction of a pack house for the HVGA	Mpumalanga Provincial Department of Agriculture	550 000
2006	Smallholders' contribution towards concrete lining of Hereford canal	DWAF financial assistance (subsidy) for resource poor irrigation farmers.	2 200 000

Source: Fieldwork

Alongside efforts to rehabilitate irrigation infrastructure and revitalize farming in the scheme, smallholders individually and collectively developed complex linkages with government departments, such as DALA, DWAF, DEAT, DLA and Public Works, as well as other institutional structures and actors (Figure 17). Linkages were with the following, among others:

- Individual white commercial farmers within the Hereford area
- Africare (REAP Programme)
- Sekhukhune Farmers Development Trust (SFDT)
- Greater Sekhukhune District Municipality
- Greater Groblersdal Local Municipality (LED Committee on Agriculture)
- Mpumalanga Coordinating Committee on Agricultural Water
- Hereford Irrigation Board
- ESKOM Development Foundation
- British American Tobacco (BAT), TobaccoSA, Golden Leaf Ltd. and Limpopo Tobacco Processors Pty Ltd (ex-MKTV): Tobacco Joint Venture with Hereford Tobacco Growers
- OBARO
- Nature Choice Farms/ NFM Marketing Pty Ltd: Vegetable Joint Venture with Hereford Vegetable Growers Association (HVGA)
- Limpopo Tomato Growers Association (information sharing)
- Swallow International
- Yukon International
- University researchers
- Other local and international donor organizations

Following occupation of the scheme in 1997 and infrastructure rehabilitation, Hereford smallholders became involved in several contractual joint ventures with private investors. The most notable among these entailed contract farming of vegetables and tobacco. A number of less formal partnerships also emerged between individual smallholders and established commercial farmers from the broader Hereford area. The following sections examine the formulation and implementation of selected formal and informal contract farming arrangements for tobacco and vegetable production in Hereford Irrigation Scheme.

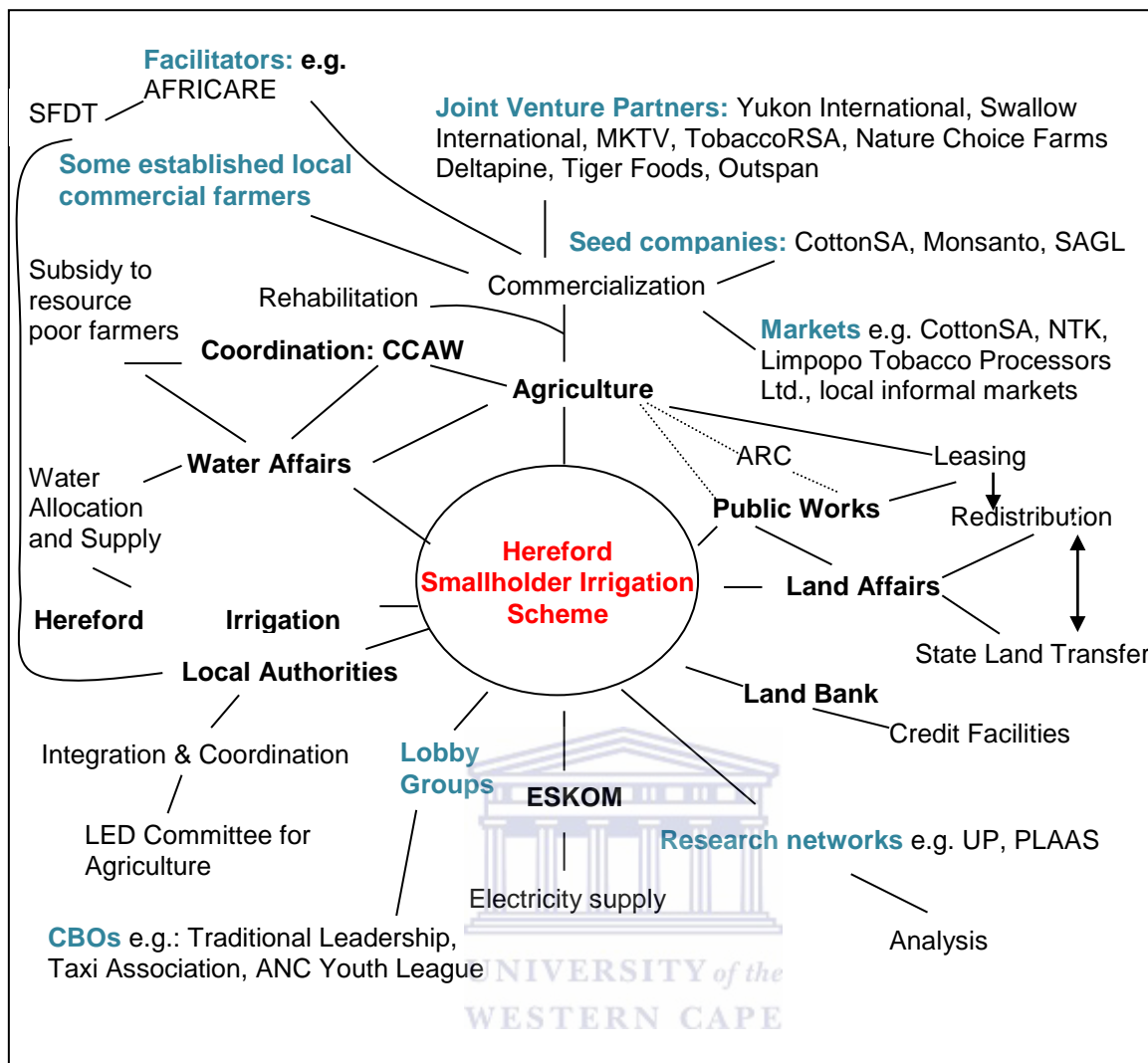


FIGURE 17 HEREFORD IRRIGATION SCHEME: STAKEHOLDER SUPPORT NETWORKS FOR SMALLHOLDER MARKET ENTRY

4.8 HEREFORD TOBACCO PROJECT: PRIVATE INVESTOR-LED JOINT VENTURE, 2003/2004

4.8.1 ORGANIZATION OF THE PROJECT

The Hereford Tobacco Project was a joint tobacco production venture that was initiated in 2001. The joint venture had two distinct phases. The earlier phase ran for two years from 2001/2002 to 2002/2003, and was administered by a private tobacco growers' company called the Magaliesbergse Kooperatiewe Tabakplanters Vereniging (MKTV). The latter phase lasted one year, which was 2003/2004, and was administered by Tobacco RSA.

The project was aimed at the "social and economic empowerment of small farmers to become independent tobacco farmers within five years"³³. The project involved 19 of the 33 smallholders in Hereford Irrigation Scheme and a consortium of three private sector institutions namely, Tobacco RSA, British American Tobacco (BAT-South Africa) and SA Gold Leaf (SAGL).

The agreement between the farmers and the private investors was that each farmer would set aside at least 1ha for the growing of tobacco. The private investor was responsible for all project administration, including provision of production inputs such as seeds, pesticides and fertilizer, skills training, crop harvesting, processing and marketing, and payment of farmers' labour costs and profits. Employees of Tobacco RSA carried out the key production activities, including ploughing, planting, cultivation, application of pesticides and fertilizer, harvesting, sorting and processing. Smallholders closely watched these activities so as to learn the production skills. There was also some training through workshops and literacy classes. The smallholders' main responsibilities were to irrigate the crop at specified times, and to assist with weeding. Provision was made within the project for remuneration of such labour, which involved between two and five workers, depending on crop hectareage. Smallholders tended to hire farm labourers from outside their households. Although the project provided for remuneration at minimum wage rates, some farm labourers appeared to earn less than that. A few of the smallholders and farm workers interviewed indicated that the latter's cash income was supplemented by food obtained through working on the plots. Such food was either produced or purchased by smallholders and shared with the workers.

Regarding the joint venture agreement, there was no written contract between the smallholders and private investors³⁴, but only a "nominal" contract³⁵. Nevertheless, all the farmers committed themselves to planting 1ha of tobacco for the joint venture. BAT-South Africa donated funding for the project. SAGL provided management and technical expertise. At the time of the study in 2004, Tobacco RSA played the leading role, administering the project funds. In this role, Tobacco RSA had replaced MKTV, which had been actively

³³ Tobacco RSA Press Release, May 2004

³⁴ Interview with Tobacco RSA Manager for Black Economic Empowerment (BEE) Projects, 13 October 2004

³⁵ Interview with CEO for TISA and Tobacco RSA, 09 March 2005

involved at the beginning of the project but had since filed for bankruptcy and been liquidated.

MKTV had worked with officials from the Provincial Department of Agriculture in providing support to the small-scale farmers. This was through supplying funds for the operation of machinery from the Department of Agriculture, camping allowance for the operators (government officials) and restoration of the community hall on the scheme. The future plans of MKTV were to provide R3 million to cover costs of production, renovation of the dilapidated houses on the scheme, provision of electricity supply to the community hall and houses and construction of tobacco sorting rooms, among other costs. As Table 13 in Section 5.7 shows, ESKOM Development Foundation rehabilitated electricity supply infrastructure and provided electricity to the irrigation scheme but did not make connections to smallholders' houses. BAT-South Africa provided a donation of approximately R3.2million towards renovation and construction of houses (R1 034 823) and curing barns (R686 610) and to cover other capital, direct and indirect production costs of the joint venture. SAGL provided extension and technical services, and Tobacco RSA gave management and administrative support to the joint venture. There seemed to be a strong link between projected production and funding plans expressed by MKTV in 2001/2002 and subsequent provision of funding by BAT-South Africa. Under the 2003/2004 joint venture agreement, BAT-South Africa, through Tobacco RSA, funded much of the activities and expenditure planned by MKTV in 2001/2002.

The perception by some respondents was that after filing for bankruptcy, MKTV had re-emerged under a different name - "OBARO" - and with links to Tobacco RSA and another company named Limpopo Tobacco Processors. This view seemed to have been informed by the re-employment of MKTV's employees in Tobacco RSA and Limpopo Tobacco Processors. The joint venture manager, for example, was dually employed by both companies. Perceptions also seemed to have been informed by the fact that the office of Tobacco RSA was located within the same premises that MKTV had previously occupied, the difference being that instead of "MKTV", the signage on the premises had changed to "OBARO". Key respondents who were interviewed by the study, such as the Tobacco RSA Manager for BEE

Projects *cum* Agronomist for Limpopo Tobacco Processors³⁶, could not give clear explanation about the nature of these companies' relationships. Neither could the respondents explain the process that had led to the dissolution of MKTV and the re-employment of its employees in Tobacco RSA and Limpopo Tobacco Processors. Follow-up interviews with the senior management of the Tobacco Institute of South Africa (TISA) and Tobacco RSA helped to clarify the institutional arrangements³⁷.

It emerged that TISA was an umbrella institution for all the private sector role players within the 2003/2004 tobacco joint venture. Members of TISA were BAT-South Africa, JT International South Africa and Tobacco RSA. Tobacco RSA, in turn, had ten members namely: SAGL, BAT-South Africa, Limpopo Tobacco Processors, Gamtoos Tobacco Cooperative, Swedish Match South Africa (Leonard Dingler & Best Blend), World Class Connection Trading, SA Nicecentury Trading cc, Universal Leaf SA, Dimon and Tribac cc. Within this institutional arrangement, Limpopo Tobacco Processors was directly linked to the erstwhile MKTV through having bought the liquidated company and taking over some of the MKTV staff. Because of the overlapping linkages between TISA and Tobacco RSA, the staff of both institutions performed dual functions both at head office and local levels. Further to explaining the complexity of the institutional arrangements, respondents from TISA/Tobacco RSA provided information on problems experienced by the tobacco joint venture in 2004.

4.8.2 JOINT VENTURE PERFORMANCE: 2003/2004

According to key respondents from TISA/Tobacco RSA, the joint venture experienced a crisis during the post-harvest period from September to October 2004. The promised earnings had not only fallen far below expectations, but farmers were said to have incurred large "debts". Tensions were very high. The realization that earnings from the 2004 tobacco crop were far below expectations was a primary cause for concern among the tobacco growers in the Hereford Irrigation Scheme. The reason given by Tobacco RSA for failure of the 2004 season was primarily that the tobacco crop produced by smallholders had been sub-standard (i.e. of poor quality). This was due to a number of factors, including low rainfall,

³⁶ Interview conducted in Groblersdal on 13 October 2004.

³⁷ Telephonic interviews held with Stellenbosch-based executives on 09 March 2005.

late season planting by Tobacco RSA and the inexperience and, according to one Tobacco RSA employee, “poor management” by most of the smallholders. Added to these constraints, Tobacco RSA officials considered “high expectations” by all key stakeholders to have contributed to deepening of anxiety and insecurity among smallholders.

A second source of apprehension among smallholders was that representatives of Tobacco RSA had communicated distorted information to smallholders, stating that their poor performance had resulted in significant "debts" (Column E of Table 15 below). The "debts" were actually deficits resulting from the difference between expenditure on direct production costs (Column C) in 2004 and repayments towards defraying production costs (D) from the money received from sales of tobacco (A), less the payments to the farmers (B). Since the overall cost of the joint venture had been funded through a 'donation' of approximately R3.2million from BAT-South Africa, it was not clear how the deficits could be regarded as debts. According to TISA/Tobacco RSA, conditions of the ‘nominal’ joint venture agreement had been that expenditure by Tobacco RSA on the indirect socio-economic costs, such as renovations to houses, constituted a donation, but smallholders were responsible for their share of direct production costs. Without a written contract establishing the exact structure and conditions of the financial arrangements, it was not easy to reconcile the differing views between smallholders and Tobacco RSA, and Tobacco RSA had consequently decided to write-off the smallholders’ debts.

Table 15 Shows that one farmer, Mqeda Nkathazo, had significantly higher net receipts and repayments than the others and, consequently, relatively lower deficits. Performance by this farmer was particularly significant when compared to that of two smallholders namely, Refilwe Monageng and Jabulani Stimela, whose previous experience in tobacco production resulted in profits of over R23 000 (see Table 16 in Section 4.8.4.1). The two smallholders were among a group of four who were assisted by a white local tobacco producer between 1998 and 1999. The farmer taught them production skills, and harvested and marketed the tobacco on their behalf. Smallholders participated in all the production work, including planting, weeding, application of fertilizers and pesticides and irrigation. Their tobacco crop, which was bought at the same price as that of the white farmer, generated profits. In light of such background, Hereford smallholders expressed a view that tobacco bought directly from black farmers was automatically classified as ‘scrap’ or poor quality tobacco, while that

bought from white farmers was viewed to be of higher quality. Other smallholders suspected irregularities in the manner in which Mqeda Nkathazo's account was represented in the 2003/2004 statement of accounts. Without a written contract for the joint venture and in light of complexities around institutional arrangements for the tobacco joint venture, it was difficult to establish exactly what went wrong in the 2004 season.

TABLE 15 HEREFORD: SMALLHOLDER FINANCIAL ACCOUNTS FOR TOBACCO PRODUCTION, 2003 - 2004

Name*	Plot No.	A	B	C	D	E
		Net Receipts	Paid to Farmer	Direct Costs	Repayments	Balance Due
Phineas Sithole	L	9 122.12	3 192.73	23 841.25	(5 929.36)	17 911.89
Goitsemanq Pelotona	M	16 922.43	5 992.85	29 360.06	(10 999.59)	18 360.47
Kgositsile Boikhutso	A	8 383.25	2 934.14	27 179.93	(5 449.10)	21 730.83
Bohutsanyana Modimo	B	13 739.66	4 808.88	24 826.15	(8 930.78)	15 895.37
Refilwe Monageng	J	7 610.15	2 663.55	23 214.06	(4 946.59)	18 267.47
Thabang Raperekisi	K	9 353.32	3 273.66	20 420.78	(6079.66)	14 341.12
Kedibonye Motsamai	Y	13 318.30	4 661.40	27 767.06	(8 656.90)	19 110.16
Jorosi Mdluli	Z	8 207.36	2872.58	20 010.42	(5 334.79)	14 675.63
Kereng Maphala	P	16 844.77	5 895.67	24 563.51	(10 949.09)	13 614.42
Jabulani Stimela	Q	13 742.78	4 809.97	31 261.61	(8 932.79)	22 328.82
John Dlamini	C	13 616.44	4 765.75	28 848.44	(8 850.69)	19 997.75
Themba Shabangu	D	8 373.27	2 930.65	23 468.01	(5 442.63)	18 025.38
Tirelo Sontaga	H	6 775.25	2 371.34	23 078.76	(4 403.93)	18 674.83
Mqeda Nkathazo	I	26 474.50	9 266.05	23 658.23	17 208.43)	6 449.80
Michael Somkhosi	W	13 772.78	4 820.47	17 437.07	(8 952.29)	8 484.78
Nkele Simelane	X	14 488.14	5 070.85	31 691.25	(9 417.30)	22 273.95
Pinkie Dube	R	7 270.94	2 544.83	22 845.91	(4 726.12)	18 119.79
Serobe Molapo	S	5 006.35	1 752.22	17 915.86	(3 254.13)	14 661.73
Petros Mphuchane	E	8 247.86	2886.75	25 145.85	(5 361.10)	19 785.75
TOTAL		221 269.67	77 444.34	466 534.21	(143 825.27)	322 708.94

[KEY TO TERMINOLOGY USED

Net Receipts: Amount of money received from sale of tobacco produced by the farmer.

Paid to Farmer: Amount of money paid out to the farmer by Tobacco RSA.

Direct Costs: Expenditure by Tobacco RSA on production costs (e.g. seeds, fertilizers, pesticides) in 2004.

Repayments: Amounts deducted from the net receipts received from sale of tobacco produced, to repay expenditure towards direct production costs.]

*Names have been changed to protect the identity of persons listed.

Source: Tobacco RSA, 2004

4.8.3 SMALLHOLDER PERSPECTIVES ON JOINT VENTURE PERFORMANCE: ORAL TESTIMONY

This section documents perspectives of different smallholders on the performance of the tobacco joint venture in 2003/2004. The views were obtained through in-depth interviews with individual smallholders and focus group discussions with male and female smallholders.

4.8.3.1 Refilwe Monageng*: Plot J

Background:

Age: 62; Gender: Male; Married with 2 dependent children.

Education: Never went to school, but has since attended adult education classes (ABET). Can read and write a bit.

Monageng has been growing tobacco in the scheme since 1998. He originally came from the Middelburg area and arrived in Tafelkop in 1973. He worked in Witbank as a driver until he lost his job in 1984. He had since sold vegetables that he purchased from commercial farms and subsequently bought himself a tractor. For 3 years he had produced maize from other people's disused fields around Tafelkop. He lacked secure land tenure and access to irrigation water, yet desired to grow vegetables commercially. He was among the original group of black farmers that occupied Hereford in 1997. With his family, he went through the hardship of rehabilitating the overgrown plot and dilapidated buildings and turning both into a productive asset and a home. From a tobacco production partnership that he and three other farmers had with a local commercial farmer, Joppie Graham, he earned R23 655.22 in 1998-9 (see Table 15 in Section 4.8.4.1). When he joined the MKTV-led Hereford Tobacco Project, he therefore had had training in commercial tobacco production and processing.

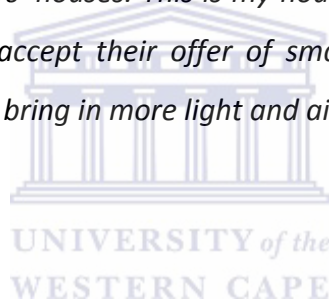
"Some time early this year, when the tobacco was thriving, we had an open day in which MKTV³⁸ representatives brought visitors to my plot to show them the crop. One visitor asked how much I expected to earn from the crop. I replied that I did not really know. The visitor then posed the question to the Tobacco RSA [Tobacco RSA/Limpopo Tobacco Processors] BEE Projects Manager, who replied that the crop should fetch at least R30 000. However, I was very surprised when after the harvest I was paid a sum of just above R2500. Yesterday afternoon [i.e. 13 October 2004, which was soon after the researcher's interview with Tobacco RSA/ Limpopo Tobacco Processors BEE Projects Manager] two employees of MKTV came and gave me a little more than R100 and said that an amount of just above R400 had been deposited into my bank account. For me, these small amounts are a far cry from the R30 000 that I expected. I am very concerned about this.

³⁸ Smallholders interchangeably used the terms MKTV and Tobacco RSA for private investor representation within the tobacco joint venture.

"My concern is also due to that when my tobacco was ready for harvesting, MKTV sent its employees to come and harvest my prime tobacco. I was not at home then. They did not weigh it, or if they did, they never informed me how much was taken or how much money I had earned. So far, my earnings have only been from the 'scrap' tobacco...."

On the assistance with renovations to the house occupied by his household:

"When MKTV began the renovations, my wife and I had already started on the renovations and had completed the roof and some windows. MKTV then provided assistance with 5 window frames and panes, 9 doors and door frames, floors for 3 rooms and all painting. My wife and I fixed everything else. The problem now is that MKTV employees keep saying that I should remove the roofing, and they will take my metal roofing sheets in exchange for their own supply to make it simple and uniform to the rest of the tobacco growers' houses. This is my house, and I like it with its heaped roof...I have also refused to accept their offer of smaller windows. I like the large windows that I installed - they bring in more light and air..."³⁹



4.8.3.2 Pinkie Dube* - Plot R

Background

Age: 60; Gender: Female; Married with 9 children, 5 of who are dependent.

Education: Never went to school, but can read and write a bit.

Dube was born in Steelport (presently within the Greater Tlalatse local municipal area). Her family was forcibly removed from Steelport in 1961. She arrived in Tafelkop as a young unmarried woman (18 years old). She worked in the farms until 1969, when she married Goodman. *"Goodman used to work in Boksburg (Gauteng) when we got married, but lost his job when we had our sixth child"*. Kgoshi Rammupudu at Tafelkop allocated her a 2ha field in which she grew maize. Because she had no knowledge of proper farming methods, she only used to get 2 bags of maize. As part of a group of black farmers, she met Agricultural Extension Officer Mr Mahlukwane, who taught them how to plough, plant, apply fertilizer, and many other things. Her production then increased to between 40 and 50 or even 80 bags of maize. She would then market her produce at a cooperative in Tafelkop.

"This is how I brought up my children. However, there was a problem with water. Our men then tried to find an alternative farming area and identified Hereford, where there was water. We then invaded Hereford as a group of 33 farmers. The place was run down, the fields overgrown and so on. We stayed, persevered and transformed Hereford into the productive place you see today. Moving to Hereford was therefore difficult - not only due to the effort used to make the place productive and habitable - but also due to the resistance by white farmers".

³⁹ Interview date: 14 October 2004.

On the issue of the earnings that fell short of expectations:

"I have grown tobacco with MKTV for 3 years. From 1ha, I got R12 000 in the 1st year and R3 000 in the 2nd year. This year (2004) I got only R500 for 3 months of my labour on the 1ha field. In addition, I have a debt. I am not sure of the amount I owe MKTV, but the figure is over R4000. The reason given was that the quality of tobacco was low. In my view, the quality of this year's tobacco was better than that of the previous years. We have a photograph taken by Deon Meyer [Tobacco RSA/Limpopo Tobacco Processors BEE Projects Manager] some time this year showing how good our tobacco was. There is no way I can understand how I now owe over R4000. I spent not more than R2000 on fertilizer, pesticide, seeds and other inputs. I need to see the statements. Nothing has been said about tobacco prices falling...In the 1st and 2nd years, we were told that we had made losses, but that these had been settled by MKTV. In the 3rd year, this has not been done. Has MKTV shifted previous losses to the 3rd year? After all the labour we expended on tobacco, we gain nothing but debts! I have decided not to grow tobacco anymore."⁴⁰

UNIVERSITY of the
WESTERN CAPE

4.8.3.3 Kabelo Mabalane*: Plot W

Background

Age: 63; Gender: Female; Widowed with 6 adult children and 9 grandchildren, all dependent. Education: Never went to school, cannot read or write.

Mabalane moved to Tafelkop after forced removal from Maloeskop (where the local district office of the Provincial Department of Agriculture and Land Administration is presently located). A land claim for this land has been submitted, and the claimants have been assured of restitution. Before occupying the land in the irrigation scheme, Mabalane practiced subsistence farming, growing maize in the land around Tafelkop. Her decision to move to Hereford was determined by water shortage in the Tafelkop area. Asked what had driven her, as a woman alone and elderly, to venture into commercial farming, she replied:

"Hunger. and the need to rely on myself, which I have done since my husband passed away in 1986".

On the issue of debt:

"At a meeting in September [2004] with the Tobacco Institute of South Africa and BAT, we were informed that we owed a lot of money. Initially I was told that I owe R20 000

⁴⁰ Interview date: 11 October 2004

or R22 000 to the Tobacco Institute of South Africa. Recently I was told that I also owed over R8000, but I am not clear what this amount is for. They also said that this would be recovered from the next tobacco crop, but we refused to grow tobacco again. We will instead grow sweetcorn and other vegetables [with a new vegetable joint venture]."⁴¹

4.8.3.4 Phineas Sithole*: Plot L

Background

Age: 67; Gender: Male; Married with 2 wives and widowed through the death of a third wife.

Dependents include 3 children and elderly mother.

Education: Never went to school but can read and write a little.

Sithole moved to Tafelkop following forced removal from Braakfontein. Before occupying the land in Hereford, he farmed maize and sometimes tomatoes for subsistence. Water shortage prompted his decision to move into Hereford. Difficulties with this move were mostly associated with having to clear the fields and make the place productive and habitable.

"We began growing vegetables like butternut, beetroot, spinach, beans, tomatoes and cabbage for sale on the streets of Groblersdal and to supply local traders. Marketing was a problem. The new partnership with NFM will assist. They [NFM] have prepared the fields and will produce sweetcorn, imparting skills to us farmers."

On the issue of losses and debt:

"We started growing tobacco last year, using hired labour that was paid by MKTV. Although BAT assisted us with the tobacco curing tower and windows for the house, we had to buy our own roofing material. The harvest this year shows that we made a loss. The reason is not clear. We all have losses. The debts that we are said to owe are from renovations to the houses..."⁴²

4.8.3.5 Elsie Maphala, daughter of Kereng Maphala*: Plot P

Background

Age: 76; Gender: Male; Married. Dependents include 3 children and 2 grandchildren.

Education: Never went to school; can read a little.

Maphala's original home was in Tafelkop. Before occupying the land in Hereford, he was self-employed, repairing tractors for farmers in the Ramokgwebane area around Tafelkop. He had no tractor himself. His wife, Cynthia, was unemployed then, and did not do any farming in Tafelkop. Maphala moved to Hereford because he felt that repairing tractors was not enough, and that farming would generate more money to look after his family.

⁴¹ Interview date: 11 October 2004.

⁴² Interview date: 11 October 2004.

On the effects of loss of livelihood assets (due to debts associated with earlier an earlier joint venture) on the smallholder's capacity to participate in tobacco joint venture:

"We grew tobacco with MKTV last year [2003]. We stopped growing tobacco some time in 2003 when the Land Bank repossessed most of our father's productive assets, including two ploughs and other machines, to settle a debt that he owed. This discouraged him from further production. This year [2004] we did not grow any crops due to lack of money....not because we lacked water. Since the repossession of assets by the Land Bank, our mother has resided mostly in Tafelkop, caring for the home and children. Our father has been self-employed, mending fences and repairing tractors...More recently, our parents have begun to anticipate being part of the new vegetable production contract between the 15 members of the Hereford Vegetable Growers Association (HVGA) and NFA."⁴³

4.8.4 JOINT VENTURE PERFORMANCE: PERSPECTIVES BY OTHER STAKEHOLDERS

This section documents views expressed by other stakeholders regarding performance of the 2003/2004 tobacco joint venture. Respondents included the DALA Projects officer based at Maloeskop office, which is located about 15km from Hereford Irrigation Scheme, a member of Hereford Irrigation Board management committee and various commercial farmers from around the Hereford area.

4.8.4.1 DALA Projects Officer, Maloeskop Local Office

In an interview held on 14 October 2011, this official stated:

"The tobacco joint venture is having serious problems. The current crisis should be viewed against the background of how some of the smallholders have done in previous years. In 1999, before the smallholders entered into a joint venture with MKTV, Joppie Graham, who owns a neighbouring commercial farm, assisted four of the farmers. These were Jabulani, Refilwe, Spencer and Matthew (Table 16). Profits were very high. Jabulani got around R23 000 and Refilwe R23 600. The others did not do so well. This is what encouraged the other smallholders to go into the joint venture with MKTV..."

⁴³ Interview date: 11 October 2004

TABLE 16 SMALLHOLDER ACCOUNTS FOR TOBACCO PRODUCTION PARTNERSHIP BETWEEN FOUR SMALLHOLDERS AND LOCAL COMMERCIAL FARMER JOPPIE GRAHAM, 1999

Producer	Production Costs (in Rands)					Total Cost	Receipts from sales	Profit
	Mechanization	Chemicals	Fertilizer	Labour	Insurance			
Refilwe Monageng	1 750.00	3 751.35	2 719.08	2018.91	5040.00	15 279.34	38 934.56	23 655.22
Jabulani Stimela	2 936.50	4 817.43	3 769.50	2 626.72	6 804.00	20 954.16	43 982.40	23 028.24
Matthew Mokolobetsi	2 861.46	4 817.43	3 716.58	2 024.75	6 804.00	20 224.22	22 527.68	2 303.46
Spencer Mahlathini	3 045.00	5 349.51	4 032.00	2 183.26	7 560.00	22 169.77	17 368.96	-4 800.81

Total Harvest per Producer:

- Refilwe Monageng: 34 763kg of tobacco harvested from a 2ha field and sold at R1.12/kg
- Jabulani Stimela: 39 270kg of tobacco harvested from a 3ha field and sold at R1.12/kg
- Matthew Mokolobetsi: 20 114kg of tobacco harvested from a 2.7ha field and sold at R1.12/kg
- Spencer Mahlathini: 15 508kg of tobacco harvested from a 3ha field and sold at R1.12/kg

Source: DALA records of Hereford tobacco production, 1999

Examination of smallholder accounts showed that insurance costs were relatively high, ranging from 30 to 34 per cent of the total production costs (Table 16). This implied that tobacco was a risky crop.

Regarding DALA's role in safeguarding smallholders against undue exposure to risks associated with tobacco production:

"I have tried to advise the smallholders to grow vegetables that have high profit margins, such as paprika. I have arranged for meetings with companies such as Tygerbrands Vegetable Canners. I have also suggested that they should plant long-term growing crops, such as table grapes, oranges and macadamia on 4 to 5ha of the communal plot [Plot MI] and on two other plots next to it. For table grapes, for example, the capital required for production in the 1st year would be R150 000 per hectare. For the next 4 years, the production costs would be R50 000 per hectare. After this the costs would become significantly lower, and the fruit would be harvested...The profits could be used by the smallholders' cooperative to buy tractors and other inputs.

Although the initial costs look prohibitive, a R3 to 4million LRAD grant is possible. In addition to this, there is possible assistance by [white] commercial farmers."⁴⁴

5.8.4.2 Stephanus Van Meulen*: Local commercial farmer and member of Hereford Irrigation Board management committee

"A proposal was made to smallholders to grow oranges or table grapes and vegetables, with subsidies from government and assistance from the white commercial farmers. Somehow, they decided to go with the MKTV tobacco scheme. From what we know, tobacco farming has never been profitable in the long run in this area. However, if the smallholders could start with vegetables and then for the longer term, also begin by planting say a hectare of grapes or oranges, things might work out better. They could then increase the hectare of fruit according to what they can afford. The capital costs of establishing the orchard would be relatively high to begin with and the turn over would take a while – say 4 to 5 years - but eventually the profits would be higher."⁴⁵

5.8.4.3 Marie Van Niekerk*: Commercial farmer formerly resident in the Greater Groblersdal area

"We used to own a farm along the Vaalfontein Road between Groblersdal and Marble Hall, and have since moved to the States [USA]. We entered into a tobacco production scheme with MKTV, and it failed. The reasons for the failure were not very clear, although there was talk of reduced tobacco prices. As crime and violence increased in the area, with one of our relatives murdered, we ultimately gave up and migrated to America..."⁴⁶

5.8.4.4 Gerhadus Booyens: Local respondent with links to the Hereford commercial farming sector

"The activities of MKTV in this area have been known for a while. The land that is presently occupied by the small-scale farmers in Hereford was abandoned by white tobacco producers due to failure by a production scheme they entered into with MKTV.

⁴⁴ Interview, 14 October 2004

⁴⁵ Informal Interview, 13 October 2004

⁴⁶ Informal interview, 15 October, 2004

*MKTV is now under different ownership since filing for bankruptcy. There are rumours about the whole issue and it is not clear what exactly has happened. We have tried to advise the smallholders, but they suspect that we just want to discourage them. The activities of MKTV really need to be investigated...*⁴⁷

4.8.5 PERSPECTIVES FROM SENIOR MANAGERS OF TOBACCO RSA AND TISA⁴⁸

4.8.5.1 Issue of Joint Venture Losses

According to senior managers of Tobacco RSA and TISA, joint venture losses were due to a number of factors. There had been a dry spell and low rainfall in the early part of the planting season. Consequently, planting was done late in December instead of October. Most of the smallholders were inexperienced and hence did not properly supervise the tobacco production on the plots. For example, some of the farmers had gone off to do other business in town when the harvesting began. Despite all this, the farmers had unrealistic expectations. They “thought that by simply going into commercial tobacco production, they would become rich overnight... [however]... Growing growing tobacco is not easy, and in the farming industry in South Africa, a farmer can often make a living but not get rich. This takes a lot of work, even during weekends...”

4.8.5.2 Issue of Irregular Harvesting of Monageng's Prime Tobacco Crop⁴⁹

Tobacco RSA and TISA respondents conceded that mistakes might have been made along the way, and that they were still learning. They further said that they normally communicated with smallholders through meetings, where private investor representatives informed farmers about what was happening and what needed to be done. One respondent stated: “We might not have got it all right and this is regrettable.” However, the private investor representatives did not seem to have considered making reparations for smallholders like Monageng, who clearly had been unjustly deprived of their rightful income. Such omission seemed to imply that these representatives deemed adequate the *ad hoc* R100 that was given to Monageng on the afternoon of the researcher’s visit to the

⁴⁷ Interview: 13 October, 2004

⁴⁸ Interviews on 9 March, 2005

⁴⁹ See Section 5.8.3.1

Groblesdal offices of Tobacco RSA/Limpopo Tobacco. Given that prior to irregular harvesting of Monageng's crop, the estimated income was R30 000, the flippant dismissal of such injustice was tantamount to robbery and contrary to the ethic of corporate social responsibility espoused in the various company policies.

4.8.5.3 Issue of Debts

One of the respondents confirmed that the debts have been written off. The respondent pointed out that debts incurred by the farmers during the 2003/2004 joint venture were not the only debts smallholders had. When Tobacco RSA came into the joint venture, many of the smallholders already owed debts totaling about R200 000 to local input suppliers like OBARO and NTK. Such debts were associated with earlier initiatives, whereby smallholders produced cotton, tomatoes and other crops. The consortium of private investors, which included Tobacco RSA, BAT-South Africa and SA Golden Leaf, paid the debts for them. Smallholders also owed a lot of money to the Land Bank who, when they heard that "something" was coming up in Hereford, also wanted to get their money back. The consortium refused to enter into any arrangement with the Land Bank, and therefore the proceeds of the joint venture were never linked to the Land Bank debts. Hereford smallholders had also made losses in a preceding tobacco joint venture with MKTV. When MKTV was liquidated, the debts were also written off. The respondent commented that smallholders' debts were part of MKTV's financial problems since MKTV had financed the joint venture."

4.8.5.4 Issue of Profile and Status of MKTV

A respondent from Tobacco RSA and TISA explained that MKTV Tobacco (Pty) Ltd was founded in 1909 and was the oldest tobacco cooperative body in South Africa. Over the years, MKTV played a lead role in the development and protection of the South African tobacco industry. MKTV was also a pioneer in marketing, modernization and export requirements for its members and for the tobacco industry. The company was also instrumental in the formulation of tobacco related statutory regulations and bodies. Due to a number of reasons, MKTV went out of business between 2002 and 2003, and a new company called Limpopo Tobacco Processors (LTP) was formed.

4.8.5.5 Envisaged Way Forward

One respondent stated that after the tobacco harvest, private investors had held two to three meetings with smallholders between October and November 2004. He further said:

"At the meetings, we tried explain how the joint venture works. However, the farmers wanted guarantees that they would not end up with debts if they went ahead with tobacco production. Of course there are no guarantees in the farming industry. It is a risky enterprise and therefore we could not give any assurances. As a result, 17 farmers have declined to proceed with the joint venture."

According to senior managers of Tobacco RSA/TISA, only two of the 19 farmers had agreed to continue growing tobacco. The rest had refused. Part of the problem was that there were internal politics and conflicts within the group of farmers, whereby "some led others astray and influenced them not to grow tobacco." One respondent concluded":

"I don't think there is a recipe for success in joint ventures involving emerging small-scale farmers. If the smallholders are willing to grow cash crops like tobacco, they need to be willing to work hard. There is also a need to manage expectations. A farmer can mostly make a living and not become rich from farming. We need to identify the right areas to grow tobacco without irrigation. Perhaps irrigation schemes are not the appropriate places to grow the crop. What is most important in our view is that there should be partnership with government and financing institutions in these joint ventures. In this case, BAT provided funding and Tobacco RSA provided project management services. Partnerships with government and financing institutions would lead to the development of proper business plans for the joint ventures. However, the problem for us at the moment is that government is hostile to tobacco. Hence there is also a need to change attitudes within government because tobacco production can lead to the creation of jobs and to economic growth."

4.8.7 SUMMARY

Experiences in this joint venture showed that black economic empowerment in agriculture required attention to be given to issues of power, gender, accountability, transparency, communication and risks associated with capital intensive crops such as tobacco. There was

also a need for support to strengthen farmer organizations so that they could engage more effectively and equitably both within the group and with external role-players. Research findings pointed to strengths and weaknesses in the governance of the Hereford Farmers Association.

Strengths derived from the farmers' pro-active move to claim secure access to land, water and other resources in the irrigation scheme, and from their growing confidence and support from government and other stakeholders. Among these factors, land gave smallholder the principal motivation to claim further rights of access to water, decision making and government funding. There were also strengths associated with the support given by private investors in the tobacco joint venture. Such strengths mainly related to the transfer of crop production skills to the small-scale farmers. All the respondents expressed an appreciation of the knowledge gained from the extension and technical services provided by Tobacco RSA. Skills transfer was largely through direct observation, training workshops and literacy classes. Such skills transfer and education were critical to building confidence among the smallholders.

Weaknesses related mainly to the management of power relations within the joint venture, the smallholder group and households. Power distributing cleavages included wealth, socio-economic class, degrees of social organization, gender, age and politics, among others. The prevalence of power dynamics indicated a need to ensure sound governance practices within the joint venture and Hereford Farmers' Association.

4.9 OVERVIEW OF A MULTI-STAKEHOLDER PROCESS TO PROMOTE SMALLHOLDER ENTRY INTO GLOBALIZED VEGETABLE AGRI-BUSINESS

4.9.1 INTRODUCTION

This section presents findings on a process through which a multiplicity of stakeholders contributed towards ensuring entry by Hereford smallholders into the globalized vegetable agri-business sector. The process had its roots in the multi-stakeholder consultation process that took place after occupation by landless black farmers of the deserted Hereford Irrigation Scheme in February 1997. The section traces such process from 1999 to 2006.

Many of the issues around the process revolved around provision of a vegetable packing house (commonly termed “pack house”). The pack house symbolized the key to Hereford smallholders’ success in entering the globalized agri-food systems. Smallholders’ expectations of joint venture success were closely tied to the possibility of realizing a longstanding vision for a pack house located within Hereford Irrigation Scheme. Indeed, throughout my fieldwork from 2003 and 2006, the Hereford case study was dominated by talk of the pack house. The dream appeared to finally come into fruition following approval in 2004 of a government post settlement grant of R550 000.

4.9.2 HEREFORD VEGETABLE PACK HOUSE: ORIGINS

The idea of a vegetable pack house for Hereford smallholders emerged in 1999 through the Rural Enterprise and Agribusiness Programme (REAP), which was driven by a United States based NGO named Africare. The initiative was part of a bigger programme by Africare to promote commercialization of small-scale irrigation farming in the Greater Sekhukhune District. Ten rural communities were involved in this initiative, whose four components were extension and training, marketing, water development and cooperative development. Following a decision to grant land rights to smallholders occupying Hereford Irrigation Scheme, under auspices of the LRAD Programme, Africare and other stakeholders collectively selected the irrigation scheme to be a pilot project to promote entry by black farmers into the highly competitive export-orientated commercial farming and agri-business sectors.

Africare contracted a private firm named ‘Yukon International’ to conduct a feasibility study on 40ha of land in the Hereford Irrigation Scheme and in other small-scale irrigation schemes in the Nebo Region of Greater Sekhukhune. The initial assessment of Hereford Irrigation Scheme showed that although smallholders had access to water and were well-organized as a group, they lacked access to markets. The verdict of Yukon International was that a pack house was feasible, and that three high value vegetable crops that could be produced were courgettes, baby cauliflowers and paprika. As a result of that verdict, plans were made for the construction of a pack house on the Hereford Irrigation Scheme.

In an attempt to address this need, Africare facilitated the formation of a joint venture between smallholders and two private marketing firms namely, Yukon International and

Swallow International, which were buyers and exporters of vegetable commodities. Yukon International was based in the United States while Swallow International was based in Swaziland. In both arrangements, production of “baby” vegetables for the export market was considered to be a viable niche for Hereford smallholders.

During the first year of baby vegetable production in 1999, the farmers attended a training course to develop skills in quality control and marketing. They also harvested and sold produce over a five month period from May to September. The initial attempt to export crops of high quality floundered because of failure by smallholders to meet international standards for export of perishable produce. Drawbacks included distance from airports and unavailability of refrigerated transport, which led to spoilage of crops and subsequent reduction of value. A key shortcoming, however, was the lack of a 'pack house' of acceptable international standards, in which to prepare and package produce under the required export processing conditions.

This initial experience reinforced the concept of a pack house located in Hereford Irrigation Scheme primarily to serve its members but also other vegetable producers within the locality. Working in collaboration with the National Department of Agriculture, Africare secured funding of R1.4 million to initiate the pack house project. The REAP project was expected to generate and improve farm-based and non-farm based livelihoods, directly for 217 small-scale farmers and 61 people employed in the pack house and nursery, and indirectly for 2 500 people working within the production cooperative. At least 50 per cent of Greater Sekhukhune District's more than 10 000 farmers were envisaged to utilize the pack house. A further 50 per cent of farmers were expected to see a large improvement in access to inputs, such as seedlings from a nursery to be established in the thirty-fourth plot that was set aside for collective use by members of Hereford Farmers' Association. Other expected improvements were access to markets through improved post-harvest handling of produce, improved farm management skills and access to market information and bulk sales through cooperatives.

4.9.3 REAP PROJECT IMPLEMENTATION: CONTESTATION OVER LOCATION OF PACK HOUSE

4.9.3.1 Overview of the Multi-Stakeholder Decision-Making Process and Contestation

Towards post-pilot implementation of the REAP project in 2000, a major challenge for Africare was that the idea to build a pack house had emerged from within a process of market development for historically disadvantaged farmers in Greater Sekhukhune District, and there was no available funding for construction of the pack house. A second and related challenge for Africare was about 'ownership' of the pack house⁵⁰. In line with requirements of the IDP process, Africare tabled REAP pack house project plans to Greater Groblersdal Local Municipality, with the intention to include the project in municipal Local Economic Development (LED) plans and thereby mobilize funding through ISRD institutional arrangements.

At local municipality level, Greater Groblersdal's LED Committee for Agriculture initiated a consultative process on REAP's envisaged post-pilot project implementation. The LED Committee for Agriculture was considered to be the relevant municipal structure for dealing with farmer support initiatives, such as joint ventures in Hereford and similar smallholder irrigation schemes, within the local municipality. Decision-making by this institutional structure brought together large and small-scale commercial farmers, communal farmers, locally based officials of relevant government departments, NGOs, the agri-business sector and the local and district municipalities. For some among these stakeholders, Hereford Irrigation Scheme seemed to be a natural choice for locating the vegetable pack house, given that the REAP pilot project had been implemented in Hereford. A resolution was therefore taken to proceed with plans to locate the pack house in Hereford Irrigation Scheme. Plans to locate the pack house in Hereford Irrigation Scheme, however, subsequently sparked off contestation among stakeholders.

Some stakeholders argued that the pack house should be located on 'neutral' ground and clearly seen to be a productive resource for all resource-poor farmers in the broader district. The rationale was that REAP plans included at least nine other groups of farmers in smallholder irrigation schemes across the district, apart from smallholders in Hereford

⁵⁰ Interviews with Mrs Pearl Moruasui, former Site Manager for Africare's Nebo Regional office in Groblersdal..

Irrigation Scheme. Despite REAP projections that 50 per cent of all such farmers from various parts of Greater Sekhukhune District would use the pack house, proponents of relocation argued that situation of the pack house in Hereford Irrigation Scheme would give impression that these smallholders enjoyed privileged access to benefits of state funding. Suggestions were therefore made that site selection criteria should critically include 'location from which the pack house could best serve the interests of all farmers in Greater Sekhukhune District and not only smallholders in Hereford Irrigation Scheme and its immediate rural hinterland'.

Contestation was also strongly linked to emergence of the pack house project at a time when the idea of "developmental" local government was beginning to be strongly embraced both nationally and in Greater Sekhukhune. This was also a time when institutional actors were grappling with institutional restructuring following promulgation of the Municipal Systems Act 23 of 2000 and re-demarcation of municipal boundaries, among other reforms. For stakeholders in intermediary institutions, and Greater Sekhukhune District in particular, there were questions regarding appropriateness of the local municipality to assume responsibility for decision-making whose implications traversed the district as a whole. Key stakeholder institutions reached a stalemate and contestations remained unresolved, effectively reiterating the need to clarify the issue of project ownership.

In an attempt to address the ownership issue, the REAP Steering Committee and Africare took a decision in 2001 to form Sekhukhune Farmers Development Trust (SFDT), which would own and manage the pack house. SFDT was registered in 2001 as a trust organization. A board of trustees was democratically constituted, with a female farmer as chairperson of the board. Official documentation⁵¹ stated that establishment of SFDT was a response to needs of emerging farmers in the Greater Sekhukhune District.

From the debate that emerged around the best possible location, the REAP Steering Committee established within itself a Pack House Task Team to address the problem of location. In 2001, the Task Team set in motion a decision-making process, whose participants included representatives of the National Department of Agriculture, DALA, tribal councils and REAP Irrigation Projects. These had previously normally made decisions

⁵¹ SFDT Information Brochure

about the local chapter of the Africare Programme. The REAP Steering Committee decided that for practical purposes the pack house had to be located elsewhere in the district, where it would be accessible to all small-scale irrigation farmers in Greater Sekhukhune, as opposed to Hereford Irrigation Scheme. In 2002 the ultimate decision, by consensus, was that the pack house would be located in the town of Groblersdal. This decision effectively sealed the decision to shift the location of the pack house away from Hereford Irrigation Scheme to a 'neutral' location, but did not resolve dissent.

Consequent to the decision, efforts were made to identify a pack house site that would be politically acceptable to most stakeholders and at the same time logistically practical, in terms of the envisaged model of commercial production. This proved to be a daunting and complex task⁵², which required a series of preparatory decisions, resources and actions. Ultimately, the REAP Steering Committee and SFDT rationalized that the urban centre of Groblersdal possessed requisite infrastructure, services and human resources to support a pack house enterprise.

Preparation began with the REAP Steering Committee undertaking trips to visit similar initiatives elsewhere to observe how such projects were conceptualized. These were followed by the drafting and publication of calls for submissions of proposals for the design and construction of the pack house. The tender selection process was concluded in February 2003. Concurrent with these developments, a new council for Greater Groblersdal Local Municipality took office and the new mayor promised to consider a request for municipal assistance in allocating a site for the pack house. This promise did not materialize, however, and SFDT eventually had to buy land within Greater Groblersdal Local Municipality. Two plots of land were purchased by SFDT, through a tender process, in the industrial section of the town of Groblersdal. Africare provided funding for this. The local municipality responded

⁵² I encountered difficulties with unravelling the complexities of the process of pack house 'capture', with some respondents giving different versions of the process on each occasion they were interviewed and others deliberately withholding information. Consequently, the approach I took was to triangulate all information and to request available documentation relating specifically to the project. Attempts to get information and documentation from the Greater Groblersdal local municipality were unsuccessful. Research revealed that the LED Manager for the local municipality had initially been one of the plot holders on the scheme, and had subsequently left the scheme under circumstances that were clear not very clear to the research. This section of the report therefore relies on information collected from other key stakeholders, including Africare, Sekhukhune Farmers Development Trust (SFDT), Greater Sekhukhune district and the Hereford Farmers Association.

to this acquisition of land by proffering funding for the construction of the pack house, through the municipal Local Economic Development (LED) Fund. A Memorandum of Understanding (MOU) was then drafted between the Greater Groblersdal local municipality and SFDT. Provisions of the MOU were that the local municipality would have ownership of the project for three years, after which the ownership would be transferred to the SFDT.

The foregoing decisions and MOU elicited greater debate, contestation and power dynamics. It was at this point that the Greater Sekhukhune District Council earnestly joined the fray and flexed its muscle, as the structure with ultimate responsibility over local economic development, in terms of legal provisions of the Municipal Systems Act and Municipal Structures Act as well as institutional arrangements for the ISRDP and IDP.

At the district municipality level, there was debate over the choice of the town of Groblersdal, which was located just 1km away from Hereford Irrigation Scheme, as a site for the pack house. Some institutional actors considered the decision to be a façade to ensure that benefits of REAP remained entrenched within the local municipality and, in particular, accessible to Hereford smallholders. Questions were raised therefore about the choice of Greater Groblersdal over four other local municipalities in the Greater Sekhukhune District. To a large extent, such debates were underpinned by competition for access to expected economic benefits from the pack house enterprise. Such benefits included higher incomes for farmers and allied sectors, farm-based and non-farm employment opportunities for local people and prestige associated with what was perceived to be a potentially high profile project. The REAP Steering Committee and SFDT reiterated their rationale that the urban centre possessed requisite infrastructure, services and human resources to support a pack house enterprise.

4.9.3.2 Perspectives of Hereford Smallholders on the Multi-Stakeholder Process: Resource Capture

Despite evidence that the REAP Steering Committee and SFDT had ultimately adopted a compromise position that considered views of diverse stakeholders while simultaneously accommodating Hereford smallholders, the latter rejected this decision and rationale. They argued on the basis of principle and practicality.

Firstly, their principled view was that the decision making process was corrupted by political expedience and self-interest of certain individuals within district and local municipalities, who stood to benefit from the pack house project. Consequently, the final decision reflected such self-interest rather than interests of farmers. Hereford smallholders further argued that the pack house had originally been intended to benefit their group, which had actively participated in the pilot experiment to produce baby vegetables for export. The then-incumbent municipal manager for Greater Sekhukhune District and the site manager for Africare corroborated this view.

Secondly, Hereford smallholders raised questions about the practical logistics of transporting produce over distances ranging from one to over one hundred kilometers, particularly without refrigerated transport. They further pointed out that their own surveys of similar projects and assessment of logistics of transporting produce over the one to two kilometre intervening distance showed that it was not practical to locate the pack house in Groblersdal. They also pointed out that, according to requirements of international standards for perishable export crops, it was not hygienically desirable to locate the pack house in an industrial area, where pollutants could contaminate produce.

The smallholders surmised that the decision-making process had effectively disregarded REAP pilot phase findings regarding specific conditions required for successful entry into commercial export sectors for perishable produce. They perceived their lack of secure land tenure to have been a prime factor in the decision to change the planned location of the pack house to Groblersdal. In spite of the Hereford smallholders' unhappiness with the decision making process and result, implementation of the pack house project went ahead and in 2004 construction of a vegetable pack house began in the industrial area of Groblersdal.

4.9.3.3 Perspectives of other Key Stakeholders on the Multi-Stakeholder Process: Power Dynamics

Interviews with various key respondents, who were involved in the decision making process, revealed that there were power dynamics between the district municipality and the local municipality in the debate surrounding the pack house project. Apparently, officials within the district municipality's ISRDP Nodal Delivery Team had taken the REAP pack house

proposal directly to the provincial Department of Local Government and Housing (DLGH) without consulting Greater Groblersdal Local Municipality. The latter was unhappy that the district municipality had not acted according to proper procedure, and had in fact overlooked the role of the local municipality in making decisions about an issue within its jurisdiction. This information could not be verified with the district municipality's ISRDP Nodal Delivery Team since all officers who had been in that team were no longer employed by the municipality, and the structure had since been quietly abandoned⁵³.

Other identified power dynamics were between the Greater Sekhukhune District Mayor, who is also the political champion of the ISRDP, and the then District Municipal Manager. Views were expressed that the pack house issue was one of the factors that contributed to the escalation of tension between the two individuals and the ultimate departure of the latter. Attempts to gain further insights into this matter were not fruitful. Efforts to interview the mayor were repeatedly unsuccessful throughout the course of field research. However, an interview with the manager of the mayor's office revealed that the District Mayor had become involved in the matter largely because it was realized that the board of the SFDT was not representative enough of the interests of the district as a whole.

A key respondent from the Independent Development Trust (IDT), which played an advisory role to the Greater Sekhukhune nodal delivery team, had a similar but contrasting view. This was that the involvement of the district municipality was justified, not so much by issues of power but by the need for a district level structure to facilitate the filtering of project funding from the National Department of Agriculture, through the Provincial Department of Local Government and Housing, via the district municipality and ultimately to Greater Groblersdal Local Municipality.

4.9.4 AFTERMATH OF MULTI-STAKEHOLDER DECISION MAKING PROCESS

4.9.4.1 Failure and Despondency: 2003 to 2004

The multi-stakeholder process to promote resource-poor irrigation farmers' entry into export market orientated vegetable production ended in 2003 while the private investor-led tobacco joint venture ended in 2004. A longitudinal overview of both initiatives showed that

⁵³ Interview with new Municipal Manager for Greater Sekhukhune District, Mr Tito Nkadimeng, 22 April 2004.

the years 2003 and 2004 were the doldrums for Hereford smallholders. Smallholders lost confidence in the multi-stakeholder ISRDP process, which had ended in their critical loss of an opportunity to gain access to a vegetable pack and thereby the key to success. They became desperate for a semblance of hope that their aspirations and efforts had not been in vain. Consequently, many of the smallholders agreed to become involved in a reconstituted tobacco joint venture, although their recent experience with MKTV had highlighted the risks associated with such a contract farming model. When the tobacco joint venture collapsed in 2004, it seemed as if all hope had been lost.

The sense of hopelessness was reinforced by indications that erstwhile and possible support structures were shutting down. While views continued to differ regarding whether or not problems with the multi-stakeholder decision-making process were due to issues of power, protocol and/or resource capture, the LED Committee for Agriculture for Groblersdal Local Municipality virtually collapsed due to lack of an LED Plan for the municipal IDP and what was broadly perceived to be lack of leadership and support within the municipality. Similarly, the ISRDP Nodal Delivery Team structure for Greater Groblersdal Local Municipality was quietly abandoned and employees redeployed to work in mainstream sectors of the IDP⁵⁴. SFDT quickly lost impetus and relevance, owing to legitimacy questions that the structure was not representative enough of the interests of all emerging farmers the district as a whole. Despite brave attempts to regain legitimacy and relevance, the trust organization was compelled to close office in 2004. Africare gradually wound down the REAP initiative, recalled Nebo Regional office staff and finally closed office in 2004.

As feelings of despondency over the 'lost' pack house and failed tobacco joint venture deepened among Hereford smallholders, questionnaire and interview data showed that vegetable producers had resorted to marketing their produce in roadside stalls and to local informal traders. Smallholders obtained some relief from a farmer support initiative by a private firm, Hereford International, which donated dairy cattle to interested smallholders. Such livestock was intended to alleviate food and livelihood insecurity, which had become rife following the series of shocks from project failures. Beneficiaries of the donation used the milk for own consumption as well as for sale within the irrigation scheme and

⁵⁴ Interview with new Municipal Manager for Greater Sekhukhune District, Mr Tito Nkadimeng, 22 April 2004.

surrounding localities. The leadership of Hereford Farmers Association vowed that they would not utilize the pack house in Groblersdal as a matter of principle and for practical reasons. Their objective was to persist in seeking assistance for the construction of a pack house located within the irrigation scheme. Such effort yielded two related results. The first was a new vegetable joint venture independently initiated by the Hereford Farmers Association. The second was an unexpected crystallization of support from the National Department of Agriculture, Greater Sekhukhune District Municipality and Greater Groblersdal Municipality.

4.9.4.2 Resurgence of Contract Farming: Hereford Packaging House and Farmer-Led Vegetable Joint Venture

An application for financial assistance that Hereford smallholders submitted in December 2003, through Greater Groblersdal Local Municipality, unexpectedly gained support from the district municipality in the latter half of 2004. According to the then-incumbent district Municipal Manager, the district-wide focus of the project had become impracticable due “a number of reasons”. These included the time and effort required to overcome the frictional effect of distance on transportation costs and quality of perishable produce, shortage of irrigation water over much of the district and the huge amounts of funding required to make such a large number of small-scale farmers competitive enough in the horticultural sector.

Following this sudden turn of events, efforts by the leadership of Hereford Farmers Association paid off between September and October 2004, when Hereford smallholders initiated a new joint venture for vegetable production and marketing. The joint venture involved a group of 15 farmers. In anticipation of such a self-driven enterprise, these smallholders had earlier formally constituted and registered a cooperative named Hereford Vegetable Growers' Association (HVGA). A business plan had been drawn up as part of an application by HVGA for government funding of approximately R900 000 towards the construction of a vegetable packaging house.

Simultaneously in the latter half of 2004, the National Department of Agriculture approved a post-settlement grant of approximately R550 000 for the construction of a pack house and tunnels on the communal plot in Hereford irrigation Scheme. The grant was less than the

R900 000 requested by the HVGA but probably more realistic, given that not all the smallholders wanted to be part of this joint venture. Smallholders proceeded to sign a contract with a private firm, Nature's Choice (NFM) Farms (Pty) Ltd. Furthermore, NFM Farms established a new company, NFM Marketing, whose objective was to handle marketing for the joint venture between NFM Farms and HVGA. Smallholders within HVGA had a 25 per cent stake in the Alberton (Johannesburg) based marketing company. The joint venture's first contract involved the production and marketing of sweetcorn to supply warehouses of retailers like Spar, Woolworths and Pick 'n Pay. Other crops that were to be produced included pumpkin, butternut and green beans.

According to the project business plan, objectives of the joint venture were to:

- Produce "quality fresh vegetables" to supply the local, national and international markets;
- Process and package the vegetables;
- Generate income from the project, keep it sustainable and use it as a support base for the emerging Hereford farmers venturing into the fully commercialized sector; and
- Create job opportunities for both the project owners and some of the unemployed people from surrounding communities.

Business plan projections, however, were based upon crop production estimates that included the entire 160ha of irrigated land falling within the Hereford Irrigation Scheme, whereas just under half (45.5 per cent) of all smallholders were members of HVGA, and these with plots of varying sizes. Implicit within projections were assumptions that all the smallholders would pool their individual land rights into the joint enterprise, and that water allocations and availability would remain constant. Consequently, the proposed budget for the pack house was significantly inflated and the award subsequently reduced by nearly half. Similarly inflated were the total projected earnings from this joint venture, which ranged from approximately R4.5million in the 1st year to R13.7 million in the 5th year. These figures were based on tunnel production and conventional irrigation of tomatoes and cabbages, at an annual gross profit margin of approximately R24 500/ha and R26 000/ha respectively.

The resurgence of contract farming and, in particular, the vegetable pack house project, initially gave smallholders renewed hope that their aspirations would be realized. This also contributed to the decision by many of the smallholders to abandon tobacco production following the failure of the 2004 venture. However, the joint venture with NFM Farms and NFM Marketing foundered in 2005. Poor logistical management of crop harvesting and disputes over responsibility for transport costs resulted in delayed harvesting of sweetcorn. With rising concerns over possible losses, inner group power dynamics and conflicts set in as smallholders jostled for pole position in a contested harvest roster. Collective interest gave way to individual self interest, and earlier plans to pool labour resources fell away as each farmer held on to his or her farm workers. Consequently, the most of the sweetcorn crop was either lost or relegated to livestock feed. The pack house, by contrast, was constructed but by 2007 remained incomplete and unused. By then, smallholders had collectively rallied around compelling their leadership to account for expenditure of the R550 000 post-settlement grant funds.

4.10 DISCUSSION OF KEY ISSUES

Findings from Hereford Irrigation Scheme pointed to a number of key issues pertaining to interactions among multiple stakeholder institutions, between the contracting parties and among smallholders who were involved in joint ventures during the pilot phase of the national RESIS Programme. This section presents a concise discussion of key issues.

4.10.1 SMALLHOLDERS AND BIG BUSINESS: A QUESTION OF POWER

Hereford tobacco joint ventures brought together stakeholders with varying degrees of power and influence. Private investors' power derived largely from their substantial financial resources, technology and market linkages. Smallholders' access to government grants and subsidies, farmer credit schemes and networks with influential actors and structures within government and civil society gave them some leverage. Despite this, smallholders viewed their lack of land ownership rights to be a significant setback. Low levels of literacy, commercial farming skills and access to markets also limited the power of small-scale farmers. The manner in which project issues were handled, such as communication, transparency and accountability, gave a good indication of the balance of power between smallholders and private investors.

Issues of transparency and accountability were evident in some of the views expressed by respondents. In the case of Refilwe Monageng, private investors did not demonstrate accountability and neither took responsibility for ensuring fairness and adequate compensation. Consequently, Monageng and most of the other smallholders lost trust in the integrity of the private investors. What compounded Monageng's lack of trust in the dealings of Tobacco RSA was the lack of transparency in the manner in which the crop was harvested in his absence and the failure by Tobacco RSA to communicate the details of the transaction. The significance of discrepancy between expected and actual earnings from Monageng's crop pointed to a dire need for close scrutiny of procedures for interactions and transactions between contracting parties.

While Monageng's absence during the harvesting of crop on his plot was due to the fact that he had not received communication from the Tobacco RSA employees, Tobacco RSA officials interpreted his absence to be indication of "poor management" and lack of commitment. This was despite that these officials gave smallholders inadequate notification of their intention to harvest tobacco, and did not effectively check whether or not all affected smallholders had received notification. This showed that Tobacco RSA staff either misunderstood or misrepresented the communication and accountability problem. The manner in which Tobacco RSA handled the communication of this critical information did not demonstrate sufficient regard for accountability requirements between joint venture partners. Critically, this incident demonstrated the unequal power relations between smallholders and private investors. The relatively weaker bargaining position of Monageng was a factor in the trivialization of his commitment to farming by Tobacco RSA employees.

The communication problem was compounded by events that took place during a Hereford Project Publicity Day, which was held in the irrigation scheme on 24 March 2004 (TISA, 2004). The field day was intended to be an incentive for smallholders to continue to grow tobacco. However, the same event also contributed to raising the farmers' expectations. Granting the possibility that the quality of some of the smallholders' tobacco was indeed sub-standard, views expressed by Monageng and Pinkie Dube illustrate some of the unintended consequences of 'show-casing' a project. Alongside exposition of project achievements, private sponsors of the field day should have had a clear strategy to manage expectations. One way could have been to ensure that the field day did not only highlight

good aspects but also pointed out the down-side of entry by smallholders into mainstream commercial farming and provided them with constructive advice on how to address constraints.

Private investors' field and office employees showed no respect for the farmer's need to know about the outcome of harvest of his prime crop, for which he had laboured hard to produce. Rather, they acted as if the crop belonged to Tobacco RSA and, beyond the labour that the farmer had already tendered and been paid for, the farmer had become expendable. The employees' attitude contrasted with Monageng's reference to the crop as "my prime tobacco" and one of the senior Tobacco RSA managers' allusions to "the tobacco crop". Monageng's case illustrated the need to clarify issues of ownership of a 'jointly' produced crop. Apart from clear definition of roles, resources and responsibilities of contracting parties, what seemed clearly requisite was a contract that spelled out implementation, monitoring and evaluation procedures. Also needed was strong legal basis for compliance by private investors and requirement for them to exercise due diligence and historical awareness in dealing with resource-poor and historically disadvantaged smallholders. Without such a regulatory framework, it did not seem feasible that smallholders could be effectively protected from the negative effects of non-compliance by more powerful private investors.

The Hereford tobacco joint venture also highlighted the need for private investors to adopt appropriate communication mechanisms when dealing with farmers, such as smallholders of Hereford Irrigation Scheme. Many of the smallholders had low levels of literacy and some, like Kabelo Mabalane, were clearly confused about financial accounting systems. In the absence of clear understandings about the source of debts, other smallholders, like Phineas Sithole, rationalized the confusion by reasoning that the debts could have derived from renovations made to the houses. The voiced intention to demand financial statements by the assertive among smallholders, such as Pinkie Dube, indicated a growing lack of trust in Tobacco RSA's accounting. It also pointed to a need for greater transparency in communications between Tobacco RSA and small-scale tobacco producers. The confusion about debts increased smallholders' frustration with the 2003/2004 tobacco joint venture and created a profound sense of uncertainty and vulnerability. This uncertainty, more than

the internal smallholder group politics perceived by some in Tobacco RSA, led to the decision by most of the farmers to abandon tobacco production for vegetable production.

4.10.2 GENDER ISSUES

Studies by van Koppen (2001), Bastidas (1999), Zwarteveen (1997) and Zwarteveen & Neupane (1996) suggest that irrigation farming is not gender neutral, but that gender roles and rights strongly determine crop types and levels of production and food security. However, although women often played more active roles in day-to-day crop production in Hereford Irrigation Scheme, their participation in decision-making tended to be limited. Although Hereford Farmers Association was purportedly predicated upon good governance principles, such as gender equity, democratic accession into office, involvement of the youth, accountability and transparency, such principles appeared to have only been partially pursued. Indications were that there were unaddressed gender power issues among smallholders within the organization.

Female farmers were generally less informed about joint venture decisions than their male counterparts. A case in point was the decision to resolve the debt issue. In one example, smallholder Phineas Sithole knew the fact that the debts had been written off from his attendance of a project meeting, which was held at the premises of Hereford Farmers Association. However, his second wife, Maina, did not attend this meeting and did not have the information. Ironically, Maina (aged 47) was the household member most actively involved in the day-to-day production of crops on the plot. By contrast, Kabelo Mabalane, who was a 63-year old widowed female head of household and registered occupant of land on Plot W, had more access to meetings and therefore decision-making platforms. While such access might be construed to confer a greater degree of power than that of unregistered married women, Kabelo's lack of formal education was a major constraint to her understanding of financial issues. This undermined her capacity to influence decision making processes.

The debt resolution issue therefore highlighted the gender division of labour and power dynamics within the smallholder group, within households and among individuals. These factors were related to variables such as levels of individual and household literacy, social networks and security of access to bases of power and productive wealth. In the case of the

Sithole household, Phineas was the registered occupant of the productive land in Plot L and therefore had access to meetings in which the decisions were taken and information communicated. Conversely, his second wife Maina had access to productive land through marriage to Phineas, and relied on him to pass on information from meetings. Despite her relatively higher contribution to crop production in the irrigation scheme, she was in a weaker position to influence the decisions and access information that affected her livelihood.

Compared to married women like Maina Sithole, elderly and illiterate female smallholders, such as Kabelo Mabalane, were in a more vulnerable position. Such women had to contend with more challenges, such as the dominance of male smallholders on the scheme, advanced age, illiteracy and burdens of taking responsibility for the well-being and food security of their entire households, including grandchildren. Such constraints left these elderly female smallholders feeling more uncertain and vulnerable than most of the other smallholders. Therefore, although all smallholders theoretically had the same degree of access to livelihood assets, such as productive land and water, and opportunities, such as membership of a joint venture, those female smallholders who were most poorly endowed with capacity and capability to effectively utilize endowments and entitlements remained relatively more disadvantaged than the rest.

Amid such gender inequalities, Hereford Women's Project was described as "struggling", due to inconsistency of funding, and was largely invisible. There was also no indication of how such a project would contribute to mainstreaming the strategic interests of women farmers, irrespective of whether or not they were registered smallholders, and women farm workers in the irrigation scheme. In contexts such as Hereford, where men dominated land holding (see Table 9 in Section 4.4) and decision making arenas, it seemed important for the Hereford Women's Project to have clearly articulated and actively pursued objectives to address women's strategic interests. Despite observed weaknesses, women's project provided a possible opportunity for women farmers to mobilize their greater involvement in decision making and access to information.

Observations that gender power dynamics in irrigation schemes are often problematic (van Koppen, 2001; Bastidas, 1999; Zwarteveen, 1997; Zwarteveen & Neupane, 1996) suggested

a need for clearly stated and funded programmes of action around awareness creation, adoption and promotion of gender-sensitive principles. South African financing mechanisms for support to black smallholders, such as those of CASP, AgriBEE and the DWA Policy on the Financial Assistance to Resource Poor Irrigation Farmers, make provisions for gender equity. The DWA policy, in particular, goes a step further by basing levels of financial grants on the proportion of historically disadvantaged females within decision-making structures of farmers' legal entities. However, such frameworks needed to go beyond issues of gender equity by mainstreaming gender and generating gender perspectives not only in rhetoric but also in practice.

4.10.3 RISKS ASSOCIATED WITH CAPITAL-INTENSIVE CROPS

A major source of risk to livelihood security for smallholders related to decisions to promote smallholders' market entry through their involvement in capital intensive production of cash or industrial crops. Such decisions were based on perceived 'niches' within regional and global markets. The decision to involve Hereford smallholders in the tobacco joint venture, despite that production of the crop under contract with MKTV had historically been unsuccessful in Hereford⁵⁵, appeared to have been influenced by the decline of tobacco production in Zimbabwe following orchestrated "fast-track" land reform. Firstly, the decline in imports of Zimbabwean tobacco by BAT-SA to around 10 per cent of levels of previous years reduced competition from Zimbabwe's prime quality tobacco and created a gap in supply. This seemed to provide an opportunity for entry into the tobacco sector by South African smallholders. However, broader market trends also showed that Brazil had increased its output of prime tobacco, thereby claiming a significant share of the market. Secondly, BAT-PLC, a major role-player in world tobacco trade, had recently nominated Brazil, the United States and Zimbabwe as major sources of tobacco for the future⁵⁶. Effectively, the longer term competitiveness of small-scale tobacco producers in Hereford remained as uncertain as it had historically been, when white smallholders occupied the irrigation scheme.

⁵⁵ See Sections 5.8.4.3 and 5.8.4.4 of this thesis.

⁵⁶ Interview with the General Manager of BAT – Zimbabwe Ltd., 06 May 2005.

Channeling significant investments towards capital intensive crops, such as tobacco, and selecting crops on the basis of perceived short-term opportunities seemed to predispose smallholders to the risk of debts and losses. While such risk is typical of most commercial farming activity, Hereford smallholders were particularly vulnerable to possible losses emanating from changing trends, given that their historical background of deprivation and prevailing poverty and inequality posed significant constraints to market entry and survival.

Smallholders' crop production accounts (see Table 15 in Section 4.8.2 and Table 16 in Section 4.8.4.1) showed that tobacco was a capital-intensive crop. Direct production costs accounted for between 89 per cent and over 320 per cent of the farmers' net receipts from tobacco sales in 2004. In 1999, production costs per farmer ranged from 39.2 per cent of the receipts from sales for the more successful farmers to 127.6 per cent for the less successful. The insurance costs, which are shown in Tables 16, were relatively high, accounting for between 30 and 34 per cent of the total production costs. This implied that tobacco was also a risky crop. The high risks involved, requirement for substantial capital outlay and financial losses experienced by successive tobacco joint ventures in Hereford raised questions on the ability of smallholders to sustain tobacco production without long term financial assistance.

Studies by de Klerk (1996) on similar farming schemes in the Western Cape suggest that adequate financial support is central to any programme to establish small-scale farmers. A critical factor determining the viability of farming activity is 'gearing'. This is the degree to which farming activities are funded by a small-scale farmer's own funds relative to finance through creditors' funds. A "rule of thumb" of the South African Agricultural Union considers that farms with a debt of more than 30 per cent in their financial structure are unsound, while those with a debt level above 50 per cent are unlikely to survive (Ibid.). The study qualitatively examined tobacco joint venture debts and their broader institutional context against established 'best practice', such as outlined by De Klerk (Ibid.).

The South African Minister of Finance's announcement in February 2005 of the launch of a government-funded credit scheme to support emerging small-scale farmers (Business Report, 2005) was greeted with optimism within commercial farming circles. This was despite the fact that agricultural credit schemes for small-scale farmers, which have

traditionally been an important component of agricultural development projects, had often failed. In the case of Hereford, tobacco production costs had been often far exceeded 50 per cent of net earnings, with much of the costs financed through a subsidy grant from BAT South Africa as well as subsidies from government. It seemed that, since subsidies were not sustainable in the long term, smallholders – if they survived the initial phases of market entry - might in future resort to credit schemes to finance the production of capital intensive crops. In such event, the high ratio between possible debts and net earnings could render small-scale tobacco producers vulnerable to downturns in tobacco market prices. There seemed to be a need therefore for a cautionary approach to farmer credit schemes as a means of supporting market entry by smallholders.

Following observations of failure by supply-led credit, critics have placed particular emphasis on the need to ensure institutional efficiency, sustainability of the credit programmes measured in terms of few default incidences, viable interest rates and the degree of integration of the credit project with the overall development of a rural financial market. In the wake of new institutional designs, there have been concerns whether or not loans are used efficiently by borrowers, institutions meet farmers' demands for credit, credit programmes enhance farmers' access to market and whether they treat borrowers equitably. While such concerns call for continued studies to evaluate credit delivery initiatives by development projects, there also seems to be a need to examine the potential of credit to significantly raise small-scale farmers' degrees of leverage, rendering their attempts at commercial production highly risky. Such an examination is beyond the scope of this thesis.

4.10.4 JOINT VENTURE RISKS IN THE CONTEXT OF RURAL POVERTY AND INEQUALITY

The Hereford case pointed to the fact that emerging producers within joint ventures, who were often resource poor and vulnerable, carried an inordinately high proportion of risk. They lacked sufficient information on market trends and enjoyed very little power to influence producer prices. By contrast, private investor partners had greater access to information on market trends, a stronger vested interest in the produce and yet carried a

relatively lower risk. This asymmetry reflected the larger structural inequalities that characterize much of South Africa's rural economy.

An example of Hereford smallholders' vulnerability to risks associated with capital intensive farming related to the decision by Hereford farmers to grow tobacco, despite the fact that similar ventures with MKTV had historically been unsuccessful in Hereford. Perceptions were that the decline of Zimbabwe's prime tobacco production and exports to BAT – South Africa, following the orchestrated "fast-track" land reform, constituted opportunities for entry into the tobacco sector by small-scale South African farmers. While joint venture partners differed in their views about emerging farmers' crop production skills and the quality of tobacco produced, prospects for successful market entry were foreclosed by an increase in Brazil's share of prime tobacco output as well as nomination by BAT – PLC of Brazil, the United States and Zimbabwe to be major sources of tobacco for the future⁵⁷. Failure by private investors to factor global tobacco markets trends into formulations of BEE-based corporate social responsibility projects unduly exposed smallholders to risk and raised questions about the sustainability of joint ventures that promote capital intensive crops, such as tobacco, as a means of empowering emerging farmers.

In the aftermath of joint venture failure, smallholders' apprehension about involvement in joint ventures could be understood in light of livelihood insecurity, such as observed in the household of Kereng Maphala (see Section 4.8.3.5). Maphala lost most of his productive assets when the Land Bank repossessed these in lieu of a pre-existing debt owed by the smallholder. This severely curtailed Maphala's capacity to engage in the Hereford Tobacco Project and, alternatively, to grow any other crops in 2004. While the smallholder awaited recovery from asset loss, individual members of his household adopted various coping strategies. They diversified their livelihood strategies away from primary reliance on farming to greater reliance on informal off-farm employment. However, the vulnerability of this household was likely to be of longer term given that the total household income came from Maphala's intermittent self-employment in odd jobs, such as mending fences, daughter Elsie's informal employment in exchange for food and soap, and a child support grant of R340 for two of Elsie's children (see Box 3 in Section 4.5.2.5).

⁵⁷ Interview with the General Manager of BAT – Zimbabwe Ltd., 06 May 2005.

Maphala's case was by no means unique. The widespread failure to repay loans within the scheme was recognised prior to the tobacco joint venture. The Land Bank's involvement in Hereford Irrigation Scheme was linked to the REAP programme, which since 1997 had provided the farmers with inputs on a no-interest credit to the value of R54 052 through the government's erstwhile National Agricultural Sector Investment Programme. A mere R7 332.10 had been repaid by 2000, and an evaluation of REAP recommended that the Land Bank should be involved in designing a scheme in which REAP could provide funds for on-lending by the bank to the farmers, with the bank monitoring repayments. It was not clear whether Maphala's debt was linked to the REAP assistance. However, recurrence within Hereford of joint ventures that provided credit to farmers and exposed them to risks, debts and possible losses of assets and livelihoods seemed to require urgent interventions to break the vicious cycle of vulnerability and livelihood insecurity.

The broader local context in which joint venture projects such as Hereford's were undertaken was one that was not only designated by government to be an ISRDP poverty node, but also one that was renowned as a cradle for rural resistance to apartheid. At the micro-level, Hereford Irrigation Scheme was the site of historical and ongoing contestations over land, water and related resources between emerging black farmers and established white farmers. Multiple stakeholder interests therefore converged upon processes of agricultural 'development' within the irrigation scheme and in the municipal arena. For key stakeholders in the private sector, involvement in economic empowerment of Hereford smallholders provided an opportunity to demonstrate corporate social responsibility by fostering entry by black petty commodity producers into the tobacco sector. A corollary to such involvement was that in partnering with smallholders, private investors not only broadened their access to productive agricultural resources but also spread the risk of capital intensive tobacco farming.

The failure of joint ventures in Hereford Irrigation Scheme suggested a need for measures to reduce exposure of emerging farmers to the high risks associated with capital intensive farming. In contexts where redress of results of past discrimination has been central to debates about impacts of government interventions, it was imperative that joint ventures should not reverse the limited gains made by emerging black farmers since 1994.

4.10.5 COST AND BENEFITS SHARING ISSUES IN JOINT VENTURES

Linked to the issue of risk was the question of mechanisms for sharing costs and benefits by joint venture partners. In the case of Hereford, private investors, farmers and government all variously contributed to the production of tobacco, vegetables and other crops. On the one hand, private investors made significant contribution, with BAT-South Africa providing a grant of R3 million and Tobacco RSA providing technical and managerial services to the tobacco joint venture. While BAT-South Africa's capital input assisted farmers by eliminating debt-related costs and risks, it raised questions around ownership and control of the crop. On the other hand, the government made even greater contribution, paying R7 million for the rehabilitation of the water storage dam on the scheme, R281 165 to settle arrears in the emerging farmers' water account and R550 000 towards the construction of greenhouses, among other expenses (refer to Table 14). Government also funded, through the policy of the Financial Assistance to Resource Poor Irrigation Farmers, a further R2.2 million required by emerging farmers towards lining the Hereford canal. Government also made other non-monetary contributions in the form of extension services, mechanization and, most importantly, land, which was envisaged to be transferred to the emerging farmers in terms of the Hereford LRAD project. Apart from contributing their labour and participating in decision making, the farmers were mostly recipients of assistance from private investors and government. This was expected to change with eventual cessation of government subsidies and introduction of 'efficiency' measures of the IWRM approach.

Despite their seemingly modest contribution, smallholders nonetheless enjoyed relatively high degrees of freedom to make decisions about the private investors they entered into joint ventures with. While this indicated a relatively high degree of devolution of decision making, it also highlighted weaknesses pertaining to the capacity of the farmers' organization to negotiate terms and conditions of joint venture arrangements. Absence of written contracts for tobacco joint ventures from 2002 to 2004 and inflated business plan projections by a vegetable joint venture in 2005 were cases in point. There remained needs to clarify issues around ownership and control of produce and for joint venture partners to agree on principles of communication, transparency and accountability.

Devolution of decision-making power in the case of Hereford did not translate into desired power for smallholders within joint ventures. In light of the significant financial and non-monetary contributions by government, and in view of the core objectives of the Agricultural Sector Strategy, the National Water Act, the Land Reform Policy and the ISRDP, it was imperative that policy practitioners provided structured and coordinated support to farmers entering into joint ventures.

4.10.6 INSTITUTIONAL COORDINATION AND MONITORING

Scholars observe that challenges to achieving integration between local authorities and water-related institutions tend to persist long after sector reforms have been put in place, often with negative impacts on local people's livelihoods and wellbeing (Tapela, 2002b). The Municipal Systems Act 32 of 2000 established municipalities as developmental local authorities and accorded them the legal responsibility to promote, undertake and coordinate all development planning and budgeting, facilitate compliance with the principles of cooperative government and intergovernmental relations and monitor the impact and effectiveness of any services, policies, programmes or plans within their areas of jurisdiction. While the Hereford case showed that there was an attempt to achieve a degree of integration across spheres and sectors of government, and between government, civil society and the private sector, the support provided by the multiplicity of stakeholders to emerging farmers was often fragmented, and coordination and monitoring was generally lacking. The export-orientated pilot vegetable project, which was facilitated by Africare under REAP, showed that the capacity of the Greater Sekhukhune District Municipality to play effective coordination and monitoring roles was limited.

In the case of Greater Groblersdal local municipality, the LED Committee for Agriculture constituted a relevant structure for dealing with cases such as joint ventures in the Hereford Irrigation Scheme. Such structure brought together large and small-scale commercial farmers, communal farmers and relevant locally based government departments, NGOs and the agri-business sector. However, in the aftermath of district-level contestations about location of the Hereford pack house, Greater Groblersdal LED Committee for Agriculture virtually collapsed owing to the lack of an LED Plan for the municipal IDP and a broadly perceived lack of leadership and support within the municipality.

While the link between local municipal LED Committee for Agriculture and Mpumalanga Coordinating Committee for Agricultural Water (CCAW) had lacked coherence, the collapse of the former structure left a gap in institutional arrangements for effective coordination of support to smallholders in irrigation schemes and addressing their requirements within municipal IDPs. Subsequently, there were moves at provincial and regional levels towards improved coordination. Promotion of entry into commercial production by emerging farmers became driven by the CCAW. This structure brought together actors from the environmental cluster, namely, officials of departments for water, agriculture, land and the environment. The Mpumalanga CCAW provided a key link between the national and the local spheres of government and, in particular, with the pilot phase of national RESIS Programme. It was through the CCAW that Hereford Farmers Association and Hereford Irrigation Board submitted applications in August and September 2004 respectively for government subsidies for improved access to water. A common view by some actors within the CCAW was that the smallholders' application would receive approval because of their classification as 'resource poor irrigation farmers' and also because of their association with the LRAD Programme. Consequently, the application by Hereford Farmers Association was lodged in terms of the DWA Policy on Financial Assistance to Resource Poor Irrigation Farmers, whose adoption in September 2004 coincided with and seemed to be informed to an extent by Hereford smallholders' need for support.

4.10.7 MONITORING

In addition to the need for improved coordination, joint venture settings such as those of Greater Sekhukhune District and Hereford Irrigation Scheme, in particular, seemed to require effective monitoring mechanisms. Smallholders were poised to strengthen the security of their land tenure, obtain further substantial assistance from government and enter highly competitive and globalized commodity sectors. They faced significant constraints to their aspirations, while the various support mechanisms by government fell short of meeting farmers' requirements. With the emergence of 'public-private partnerships' and AgriBEE, private investors offered additional options for support to emerging farmers. Such milieu, however, was influenced by a multiplicity of convergent, divergent and overlapping stakeholder interests. Complexities of managing such diversity of interests and associated power dynamics were compounded by autonomous individual and collective decision-

making by smallholders. Within such flux, definition of requirements for accountability and monitoring became blurred. While the Municipal Systems Act vested municipalities with the legal mandate to coordinate development interventions within their areas of jurisdiction, the local authorities lacked capacity to perform coordinating roles, which raised questions about their capacity to assume monitoring roles.

The Hereford case suggested that policy and decision makers needed to find ways of ensuring that joint ventures involving resource poor irrigation farmers were effectively monitored, not only for economic viability, but for compliance with BEE objectives, impacts on livelihood security and downward accountability. Criteria for monitoring performance of RESIS Programme contract farming arrangements and, more broadly, agricultural commercialization interventions necessarily had to accommodate the diversity of smallholder farming objectives and livelihood contexts.

4.11 CONCLUSION

The Hereford case epitomizes South Africa's challenge of addressing rural poverty and inequality through coordinated strategies involving government, civil society and the private sector, in partnership with local people. Whereas governance problems of the Hereford tobacco project were largely contained within the joint venture arrangement, those of the vegetable project were largely driven and politicized by external influences. The pack house project illustrates how involvement of a multiplicity of stakeholders, including municipalities, in the governance of joint venture projects, such as the Hereford vegetable project, can impact upon livelihood strategies and aspirations of black farmers in smallholder irrigation schemes. The vegetable pack house, in particular, assumed an allegorical image through which smallholders' struggles to eke sustainable livelihoods from the gains made through access to productive land were played out.

Following what they perceived to be failure of the initial vegetable pack house project, smallholders decided to enter into partnership with MKTV and later Tobacco RSA, regardless of advice to the contrary. This indicated the level of the smallholders' mistrust in the broader stakeholder participation process. By closing their ranks and engaging in an independent joint venture with MKTV and Tobacco RSA, the farmers effectively tried to reclaim their freedom to determine their livelihoods. However, they lacked capacity to

discern flaws in the bases and structure of institutional arrangements for tobacco production. The unintended failure of the tobacco project in 2004 indicated the need to build trust, confidence and cooperation in relationships between smallholders and other stakeholders, as a means to enhancing decision making capacity of the latter and thereby reducing undue exposure to risk. Smallholders' interests, rather than the diffuse interests of an ill-defined constituency at large, necessarily have to be at the centre of such relationships.

The role of municipalities in the multi-stakeholder decision making process, in particular, should be seen in light of the decentralization ethos of developmental local government. The Municipal Systems Act 23 of 2000 gave municipalities the legal responsibility to coordinate development planning, implementation and budgeting within their areas of jurisdiction. Assumptions of the logic of such decentralization are that local institutions can better discern and are more likely to respond to local needs and aspirations; and that when downwardly accountable local authorities possess discretionary powers over significant issues within their local jurisdictions, there is good reason to believe that greater equity and efficiency will follow (Ribot, 2002: 5). Contrary to such assumptions, devolution of decision-making, in the case of Hereford's vegetable project, attempted a democratic and equitable resource allocation process but in the process failed to achieve fairness and effectiveness. Allegations of power dynamics, resource capture and procedural flaws all point to perceptions that the decision making process became perverted by individual self-interest, political clout and preoccupation with interests of an ill-defined farming constituency at large, at the expense of practical realism about the specific problem at hand.

Part of the dilemma can be traced back to institutional arrangements for constituency-based decision making. Under such conditions, governance practices tend to predispose elected councillors' accountability towards pursuing the interests of their constituencies. Differences in degrees of power, influence and vested interests among elected councillors often result in decisions that favour the interests of the more powerful among stakeholders and actors. Although the negative effects of power dynamics on the Hereford vegetable project were eventually resolved, smallholders were cast for a while into positions of deep vulnerability. During this time, they lived precariously, constantly devised coping strategies, such as livelihood diversification, straddling and, for most farmers, greater reliance on off-

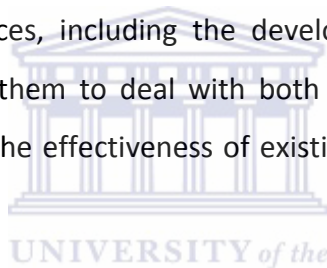
farm employment than farm-based productivity. The legacy of the difficult time became evident in the increase of subsistence livestock farming alongside crop production within the irrigation scheme.

It might be tempting to surmise, in the final analysis, that despite flaws in decision making processes, such as described above, municipalities can play useful roles in pursuing the interests of local people and coordinating the facilitative and monitoring roles by other stakeholder institutions. It might also be tempting to assume therefore that the degree to which municipalities can fulfill these roles depends on the extent to which they are downwardly accountable. It might indeed seem worth commending the district and local municipalities for eventually exercising leadership and magnanimity in resolving the effects of a flawed multi-stakeholder decision making process for the Hereford vegetable project. However, shifts in the behaviour of municipal actors towards institutional cooperation and support to Hereford smallholders were more likely due to pressure from above.

Such reasoning draws on the fact that the Hereford Irrigation Scheme was the focus of attention by a wide range of stakeholders and observers ranging from local to international levels. The designation of Greater Sekhukhune District as an ISRDP node placed an additional imperative on government interventions to be seen to be effective in addressing issues of poverty and inequality and, in particular, redressing historical injustices and empowering black farmers. International events, such as the 2002 World Summit on Sustainable Development, also contributed to increasing focus on the manner in which municipalities exercised governance within the ISRDP poverty node (Tapela, 2002a). Given this background, it would seem that municipal actors were under constant scrutiny and influence from an undefined power source above. While such power evidently had strong links to or indeed was part of government, the invisible power source also seemed to have similar links to and/or be part of the tripartite alliance, or at least the ANC. Government, ANC and the Tripartite Alliance as a whole are the key powerful actors that were commonly shared by smallholders and municipalities. Government, ANC and the Tripartite Alliance were also the key actors driving land and agrarian reform as well as rural development. The district mayor, who was the ISRDP political champion, was an ANC deployee. The majority of councillors in both the local and district municipality were members of the ANC (Ibid.). All the smallholders were members of the ANC and had networks with affiliated organizations.

In the absence of tangible evidence about the exact identity of the force behind decision making concerning the Hereford vegetable project and interventions in the irrigation scheme in general, the study could only allude, with confidence, to the existence of a hidden source or sources of influence.

Given significant government expenditure on promoting farmers' livelihoods, the need for effective coordination and monitoring of joint ventures cannot be overstated. However, what seems more critical is the need to examine the basis of government intervention on a hybrid of neo-liberal development approaches and social welfare or anti-poverty approaches. In the context of the prevailing commoditization of productive water and land resources, and the recurrent failure of joint ventures, government subsidies might not be sufficient to secure the livelihoods of emerging farmers. Although the government has made moves to address the financial requirements of emerging farmers, there is still need for a broader range of support services, including the development of skills that strengthen farmer organizations to enable them to deal with both the internal and external power issues. Such skills contribute to the effectiveness of existing efforts to develop production, processing and marketing skills.



Hereford joint venture projects have been located within a designated ISRDP poverty node that is renowned as a cradle for rural resistance to apartheid as well as a site for on-going contestations over access to bases of productive wealth and social, economic and political power. This context places a strong imperative on policy makers to ensure that government interventions comprehensively and effectively address macro-economic policy objectives.

CHAPTER 5

PHETWANE IRRIGATION SCHEME



5.1 INTRODUCTION

Phetwane Irrigation Scheme is a government-owned scheme located within Hindustan farm in Ward 9 of Greater Marble Hall Local Municipality in the Greater Sekhukhune District (Figure 18). The scheme is located in a communal area under the leadership of Kgoshi Matlala of the baKone people. In terms of the RESIS programme design, Phetwane is part of the Upper Arabie Balemi Irrigation Scheme Trust⁵⁸, which comprises a group of four irrigation schemes within Cluster 11 of the programme. This cluster consists of a total of nineteen (19) irrigation schemes located along the eastern banks of the Olifants River immediately downstream of the Flag Boshielo Dam (previously known as Arabie Dam) (Figure 18). Phetwane Irrigation Scheme occupies 52.77 ha⁵⁹ out of 426 ha of irrigated land within the Upper Arabie irrigation area (Table 17).

There are forty nine (49) smallholders in the scheme. Forty seven (47) of these farmers took part in a RESIS joint venture to produce cotton in 2004⁶⁰ and a RESIS-Recharge strategic partnership in 2008. These institutional arrangements were part of the LDA-driven RESIS Programme. Key stated objectives of the programme were to promote entry by black

⁵⁸ Upper Arabie is registered with the Department of Justice as a trust organization (Certificate J246 of 2004, Trust Number 3011/040 under the Trust Property Control Act (57) of 1988.

⁵⁹ Constitution of the Phetwane Farmers Association

⁶⁰ Focus group discussion with irrigation farmers at a meeting held in Phetwane village on 11 December 2003.

farmers into commercial agriculture and to ensure food security in communities living in and around irrigation schemes. Revitalization of crop production in Phetwane began in 2003 during the earlier stage of Phase 2 of the RESIS Programme. Revitalization was preceded by rehabilitation of infrastructure from 2001 to 2003 under the Community Production Centres (CPCs) Programme led by the Limpopo provincial Department of Public Works. Following rehabilitation and revitalization of the irrigation scheme, smallholders received support from various government, non-governmental and private sector agencies. Phetwane smallholders complemented this support by investing, to varying degrees, their time, labour and other resources towards utilizing opportunities presented by available arable land, water, sound irrigation infrastructure, training courses, joint ventures and strategic partnerships within the irrigation scheme.

This chapter outlines Phetwane people's experiences of shifts towards agricultural commercialization. Particular attention is given to the contract farming arrangements and their interactions with the livelihoods of smallholders and other members of Phetwane community. Initially, the location of Phetwane is described, followed by presentations of the historical background, land allocation, socio-economic profile, overview of livelihood aspects of water and land use, and farmer organization. The chapter proceeds to present findings on the RESIS joint venture and RESIS-Recharge strategic partnership. Attention is given to interactions between agricultural commercialization interventions and contract farming arrangements, on the one hand, and livelihoods of smallholders as well as other members of Phetwane rural community. Finally, the chapter concludes with a summary of findings.

5.2 LOCATION

5.2.1 SITUATION

Phetwane Irrigation Scheme is situated in Hindustan farm, which is approximately 30 km to the north-east of the small town of Marble Hall. The irrigation scheme is in Ward 9 of Ephraim Mogale (formerly Greater Marble Hall) Local Municipality, within Greater Sekhukhune District. The scheme is located in a communal area under the leadership of Kgoshi Matlala of the baKone people.

In terms of the RESIS programme design, Phetwane is a constituent of Cluster 11, which consists of a total of nineteen (19) irrigation schemes located along the banks of the Olifants/Lepelle River downstream of Flag Boshielo Dam. Within Cluster 11, Phetwane is a constituent of Upper Arabie sub-cluster, which comprises a group of five irrigation schemes. These include Mogalatsana on Coetzedraai farm, Krokodilheuvell or “Crocodile”, Setlaboswane on Vogelstruiskopje farm and Elandsdraai (Figure 18). The first four schemes comprise a trust organization named Upper Arabie Balemi Irrigation Scheme Trust⁶¹. Phetwane Irrigation Scheme occupies 52.77 ha⁶² out of 545 ha of land within the Balemi Irrigation Scheme Trust area (Table 17). Located immediately downstream of Flag Boshielo Dam (formerly Arabie Dam), Phetwane is lies upstream of all RESIS Cluster 11 irrigation schemes in the Olifants/Lepelle River basin.

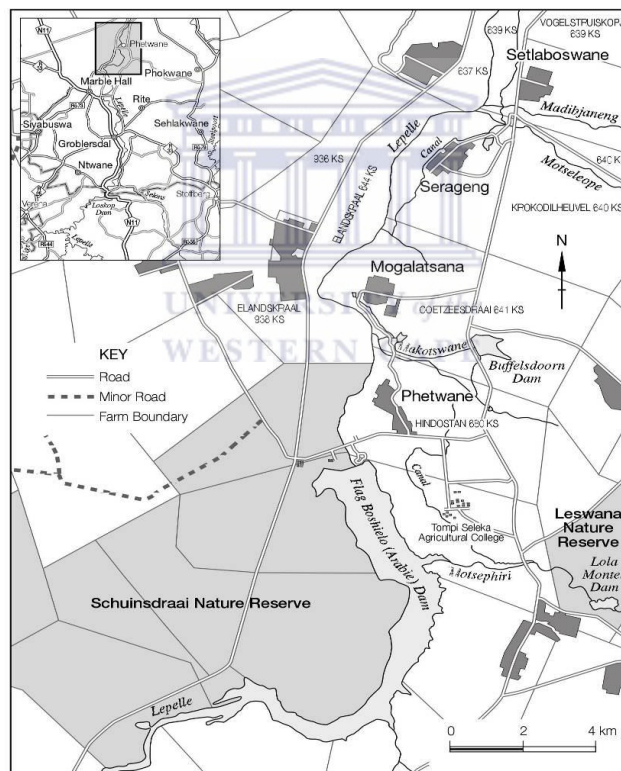


FIGURE 18 LOCATION OF PHETWANE IN THE CONTEXT OF UPPER ARABIE BALEMI IRRIGATION SCHEME TRUST AREA, 2009

⁶¹ Upper Arabie is registered with the Department of Justice as a trust organization (Certificate J246 of 2004, Trust Number 3011/040 under the Trust Property Control Act (57) of 1988.

⁶² Constitution of the Phetwane Farmers Association

TABLE 17 PHETWANE IN THE CONTEXT OF UPPER ARABIE BALEMI IRRIGATION SCHEME TRUST AREA, 2009

Name of Scheme	Total Area (in hectares)	Number of Farmers
Phetwane (Hindustan)	52.77	49 ⁶³
Mogalatsane (Coetzeesdraai)	131	98
Krokodilheuwel	243	202
Setlaboswane (Vogelstruiskoppie)	119	99
Total for Upper Arabie Balemi Trust Area	545 (396 irrigated)	445

Source: Limpopo Department of Agriculture, 2002:46

5.2.2 SITE AND BIOPHYSICAL CHARACTERISTICS

Phetwane Irrigation Scheme is sited on very gently sloping terrain within the valley of the Olifants/Lepelle River, at approximately 800m altitude. The communal area is bordered by the Lepelle River to the west and Makotswane River to the north, while the Flag Boshielo Dam lies directly to the south and the smaller Makotswane (Buffelsdoorn) Dam is to the north-east.

In the broader Greater Sekhukhune area, the undulating grassy plains of the Highveld give way to the lower-lying Bushveld areas and the mountainous terrain dissected by the Oliphants/Lepelle River system (Tapela, 2002). Rainfall is seasonal and is distributed mostly in the summer months from November to April, while the winters are generally cool and dry (ibid.). The ecological diversity of the area has encouraged the establishment of a number of tourist resorts and nature reserves, such as Schuinsdraai and Leswana Nature Reserves, which are respectively located to the west and south-east of Phetwane.

5.2.3 POPULATION

In 2004, there were 195 households in Phetwane⁶⁴. At an estimated average of 5.5 persons per household⁶⁵, the total population of Phetwane in 2004 was approximately 1073 people. The study surveyed 72 per cent (140) of all Phetwane households and 98 per cent (47) of irrigation ploholders' households. The questionnaire survey gathered data on

⁶³ Focus group discussion with irrigation farmers held in Phetwane village on 11 December 2003.

⁶⁴ Discussion with chairperson of the Community Development Committee, Mr Petros Magane, on 19 April 2004. This figure differs from the Phetwane village population data in the Greater Marble Hall IDP of 2008-9.

⁶⁵ Socio-Demographic Data in the Final Report of the Greater Marble Hall Municipality IDP, Volume 1: Analysis.

characteristics of a total of 413 adults aged eighteen (18) years. Of these, 47 (or 11.4 per cent) were pensioners aged 65 years and above. A few households from among irrigation plottolders and the rest of the village population were selected for in-depth follow-up interviews and informal discussions. While some of these households were interviewed once, others were interviewed several times at interval over a two-and-a-half year period. During the course of the study, several focus group discussions were held with smallholders and interested members of Phetwane community.

5.2.4 WATER SOURCES AND USES

Phetwane was dissected by a number of rivers and streams, principal of which were the Olifants/Lepelle and Makotswane Rivers. While the Makotswane River and smaller streams were seasonal, the Olifants/Lepelle River flowed throughout the year. A significant proportion of the flow was impounded by the Flag Boshielo Dam and smaller proportions of water collected in numerous, deep, crocodile-infested pools within the river, thus ensuring water availability during the drier months. Such water pools were used primarily for fishing.

Water sources for Phetwane community included both natural drainage and man-made hydraulic features, such as irrigation schemes and domestic water supply infrastructure. Natural sources included the Olifants/Lepelle and Makotswane Rivers, wetlands, rainfall and groundwater. Man-made water infrastructure included the Flag Boshielo Dam, which was situated upstream of the community, the Makotswane Dam and canal, homestead taps within private dwelling units, infrastructure for livestock water supply and irrigation infrastructure, which included a floppy irrigation system and canals. There were, however, no dip tanks for the livestock.

Fifty-two (52) hectares of agricultural land were set aside for the smallholder irrigation scheme. The rest of the agricultural land was allocated to pasture. No land was set aside for dryland or rain-fed crop farming. Hence, rainfall was the main source of water for pasture and a wet season supplementary source for the irrigation scheme. Since 2005, rainfall had also been used to supplement irrigation of homestead gardens, which relied mainly on potable water from domestic water supplies. The number of homestead gardens increased significantly following interruption crop production in the irrigation scheme in 2003. This phenomenon was reinforced by rising food prices. However, there were no investments in

rainwater harvesting technologies, other than the breaking up of soil to enhance percolation.

The Flag Boshielo and Makotswane Dams were replenished by rain water mainly during rainy seasons. The catchment area of the Flag Boshielo Dam was much larger and the dam, whose wall was raised by five metres in 2005, provided most of the water for domestic, irrigation and livestock uses in Phetwane as well as in a number of other smallholder irrigation schemes downstream. By contrast, the Makotswane Dam had a small catchment area and a lower storage capacity. Although the dam wall was recently raised, assurance of supply remained low due to the frequency of droughts in the local catchment area. The Makotswane Dam appeared to have been decommissioned as the main source of water for Phetwane and the neighbouring Mogalatsana Irrigation Scheme due to opportunities presented by the greater availability of water from Flag Boshielo Dam and rehabilitation of irrigation infrastructure under RESIS and RESIS-Recharge.

Direct rainwater users were primarily livestock owners and, to a lesser extent, households with homestead gardens. In principle, access to communal pasture was open to all recognized members of the community and was subject to locally defined rules regarding management of animal populations, grazing regimes and maintenance of pastures. In practice, however, pastoral land was mainly used by livestock owning households. A relatively small proportion (24 per cent) of households owned cattle, while the majority (87 per cent) owned goats. Beyond grazing requirements, the rangelands provided sources of firewood, construction and fencing poles and raw material for traditional fishing rods and fish traps, among other resources.

The study identified one wetland in the largely dry area. The wetland was in the lower reaches of a tributary of Makotswane River to the north of the village. An elderly male landless farmer, who lived next to the wetland, had established several food gardens on land adjacent to the seasonally waterlogged core of the wetland area. The farmer grew crops such as maize, beans and pumpkins in the rainy season and sweet potatoes in the dry season. The farmer relied on soil moisture rather than direct abstraction of water from the stream.

5.3 HISTORICAL BACKGROUND

Phetwane Irrigation Scheme was established in 1957 in a small village on Hindustan Farm in the Rakgwadi area of Lebowa homeland. The farm is located in a communal area under *Kgoshi* Matlala of baKone-ba-Matlala people. According to Claassens (2001: 9), baKone-ba-Matlala arrived in Rakgwadi in 1957 following their move from Madibong in Sekhukhuneland. Claassens (ibid.) links the background to this move to Pedi people's resistance to *bantu* authorities' 'betterment' policy and to the policy of 'tribal self-rule' in Sekhukhuneland and the apartheid authorities' efforts to undermine this resistance. In documenting the history of the Sekhukhuneland Revolt of 1958, Peter Delius (1996: Chapter 4) alludes to apartheid authorities' manipulation of the paramountcy of traditional leadership, headmen and some black civil servants as a means towards breaking Pedi people's resistance to Bantu Education and to the Bantu Authorities Act of 1951. The latter combined with the Promotion of Bantu Self-government Act of 1959 to strengthen the political power of government-appointed traditional leaders. *Kgoshi* Frank Shikoane Matlala Maseremule, father of the current *Kgoshi* Mokgome M. Matlala, was among the first headmen (*dikgoshana*) to break resistance and accept from the apartheid government chieftainship of a separately recognised baKone-ba-Matlala tribe (Claassens, ibid; Delius, ibid:118). He was offered twenty-two farms near Marble Hall, including Hindustan, to accommodate his people. This land was purchased after 1936 by the state from white owners and allocated in trust to various communities living under the authority of their respective chiefs and village heads, including Chief Matlala (Claassens, 2001; Lahiff, 1999: vii).

While the land purchase was linked to the promulgation of the Native Trust and Land Act 18 of 1936 and resettlement of baKone-ba-Matlala to events preceding the passing of the Bantu Promotion of Self-government Act of 1959 (Lahiff, 1999:19, Claassens, 2001), the establishment of Phetwane Irrigation Scheme in 1957 also followed publication in 1955 of the Tomlinson Report⁶⁶ (Perret, 2001; Vink & Kirsten, 2000).

Following the establishment of the irrigation scheme at Phetwane, *Kgoshi* Matlala allocated irrigated plots to a number of original and latter settlers on Hindustan Farm. Lahiff (1999:22)

⁶⁶ See Section 1.1, pages 23 – 24.

observes that while plots allocated from 1969 onwards were based on ‘permission to occupy’ certificates (PTOs) issued in terms of the Bantu Areas Land Regulations (Proclamation R188 of 1969), it is not clear what form the original registration of plots took. What is clear is that from 1957 onwards newly-settled Phetwane farmers began producing maize and other grain crops using flood (canal) irrigation⁶⁷. Water was obtained from the Arabie Dam, and the crops produced were stored in a warehouse in the neighbouring village of Mogalatsane in Coetzeesdraai Farm, also under Kgoshi Matlala. Production was subsidized by the apartheid government until the 1970s when Lebowa homeland authorities gained political and administrative authority over labour reserves.

During the 1970s, the central apartheid government withdrew subsidies and Lebowa authorities assumed the responsibility of subsidizing production and operational costs of the irrigation scheme. Field owners formed cooperatives and provided labour during planting, cultivation, irrigation and weeding⁶⁸. Ploughing and harvesting were done by “white people” (according to Phetwane farmers), who paid smallholders two to three bags of grain from each season’s harvest, after deductions for technical assistance, use of tractors and bank loans. The farmers’ reference to white people attests to the lived experience and memory of apartheid era racial cleavages in the local area as well as the low level of participation by black farmers in agricultural production in the scheme during that time. These farmers mainly provided cheap labour while public institutional actors and ‘expatriates’, who were mainly of European descent, exercised prerogative over production-related decisions and activities.

After 1994, the post-apartheid government abruptly withdrew state subsidies that had propped up the scheme since 1957 (Bembridge, 2000; Perret, 2001). The withdrawal of subsidies appears to have been influenced, to some extent, by intensification since the 1980s of an international drive towards irrigation management reforms aimed at enhancing “efficiency” in the use of land, water and infrastructure as well as states’ financial and human resources. The “centerpiece” of these reforms has been Irrigation Management Transfer (IMT), which has invariably involved the partial or entire transfer of management of irrigation systems to Water User Associations (WUAs) or other non-government agencies,

⁶⁷ Focus group discussion with irrigation farmers at a meeting held in Phetwane village on 11 December 2003.

⁶⁸ Focus group discussion with irrigation farmers at a meeting held in Phetwane village on 11 December 2003.

and the downsizing or withdrawal of government's role in operation and maintenance, fee collection, water management and conflict resolution (Shah *et al*, 2002). In the South African case, Perret (2001) ascribes the withdrawal of state subsidies also to the government's macro-economic policy shift from the RDP to GEAR around 1999, with the subsequent adoption of neo-liberal approaches and notions of efficiency. From this perspective, the withdrawal of subsidies to schemes such as Phetwane was partly informed by perceptions that these schemes were under-productive and inefficiently run. Notwithstanding the foregoing rationales, withdrawal of subsidies also seems to have been influenced by the post-apartheid government's objective to dismantle apartheid machinery in Bantustans and former homelands. Sekhukhuneland's history of resistance to colonial and apartheid repression (Delius, 1996) appears to provide a key imperative for this objective.

5.4 LAND ALLOCATION AND TENURE RIGHTS

Forty nine (49) smallholders occupied 52.77 ha of land in Phetwane irrigation scheme. Most of the smallholders were among original inhabitants of Hindustan Farm, who settled in Phetwane around 1957. While the legal basis for plot allocations prior to 1969 is not clear (Lahiff, 2001), all smallholders in Phetwane stated that they had 'permission to occupy' certificates (PTOs). These were issued to them or their deceased spouses and/or parents by Kgoshi Matlala, who also allocated plots of land within the irrigation scheme. A number of plots seem to have been inherited by PTO holders' male and female children aged below sixty years (Figure 19; Table 18). Plot sizes ranged from 0.52 to 1.86 ha (Table 28 in Section 5.8.3).

In 2004, the majority (82.6 per cent) of irrigation plot holders were women and men aged 60 years and above. At least 15.2 per cent of all plottolders were over eighty years old, and two of these were aged 102 years. A number of elderly smallholders died between the time fieldwork commenced in 2004 to its completion in 2008. These were replaced by their adult children. Despite this, names of the deceased tended to remain listed for a while among registered smallholders. Respondents were unable to explain the procedure used to replace names of deceased smallholders.

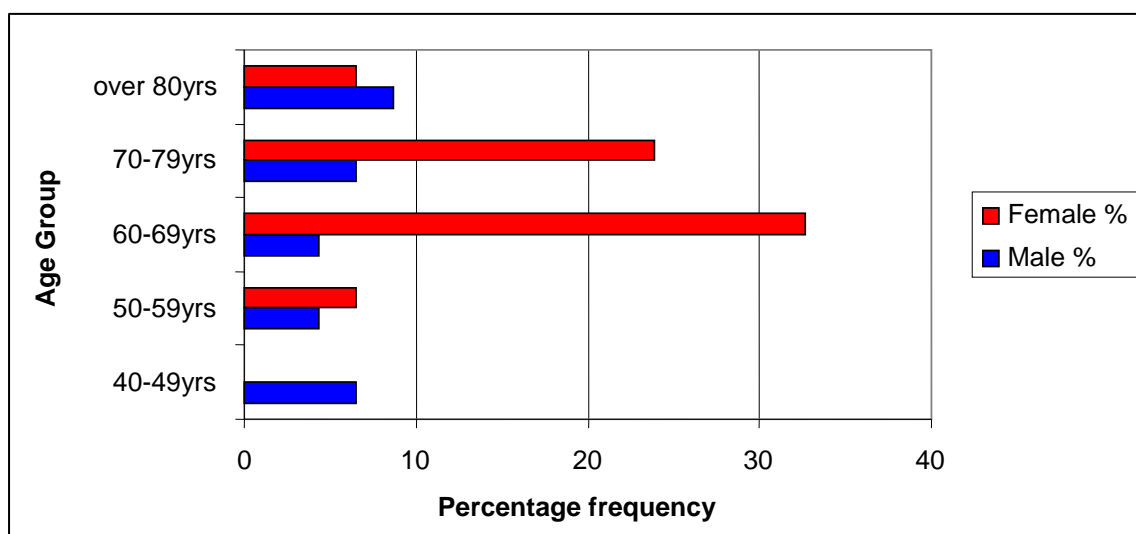


FIGURE 19 PHETWANE: ALLOCATION OF PLOTS THROUGH PTOs BY GENDER AND AGE, 2004

TABLE 18 PHETWANE: ALLOCATION OF PLOTS THROUGH PTOs BY GENDER AND AGE, 2004⁶⁹

	Male	%	Female	%	TOTAL	%
40-49yrs	3	6.52	0	0	3	6.4
50-59yrs	2	4.34	3	6.52	5	10.6
60-69yrs	2	4.34	16	34.04	18	38.3
70-79yrs	3	6.52	11	23.91	14	29.8
over 80yrs	4	8.7	3	6.52	7	14.9
Total	14	30.42	33	70.99	47	100

Source: Fieldwork, 2004

Contrary to the tendency for men to hold land rights, which is observed in many communal areas of South Africa (Lahiff, 1999; Platzky & Walker, 1985), most of the PTO-holding irrigators (71.7 per cent) were elderly women aged fifty (50) years and above (Figure 19; Table 18). Phetwane farmers explained this anomaly as having resulted from colonial and apartheid practices of sourcing predominantly male labour from the Sekhukhuneland reserve through a Native Employment Bureau Office (NEBO) located in the present-day rural settlement of Nebo. This practice left a larger working population of women to carry out farming activities in communal lands. In the case of Phetwane, although Chief Matlala allocated a significant number of PTOs to male members of the community, some PTOs

⁶⁹ Data is based on interviews with 47 out of 49 Phetwane farmers.

were issued to single or widowed female heads of households (e.g. Respondent A⁷⁰ in Box 5). This resonates with observed customary law in which the right to land usually applies to male heads of households but in practice is sometimes extended to women (Bennet, 1995:170 in Lahiff, 1999:13). Many of the Phetwane men who obtained PTOs in the 1950s had since died and their land rights had since been inherited by their living spouses or, in some cases, their off-spring (Respondent B⁷¹ in Box 5). This ran counter to PTO regulations that granted exclusive life-time usufruct rights.

Due to the fact that PTOs had been retained within the same households and extended families over a long time, irrespective of old age or death, many of the elderly Phetwane farmers perceived their PTOs to be a secure form of land tenure, and the usufruct rights accorded by PTOs to be inalienable. Such perceptions persisted despite that the repeal of the 1936 Native Trust and Land Act in 1991 through the Abolition of Racially Based Land Measures Act had rendered PTOs obsolete until the Communal Land Rights Act (CLRA) of 2004 formally recognized PTOs as 'old order rights'. Perceptions of security of land tenure were evidently conflated with traditional practices in which land allocated to a household by a Chief effectively remained at the disposal of that household for as long as it remained part of the community. With agricultural commercialization and the resurgence of contract farming in 2003, there emerged inter-generational contestations over land rights between elderly Phetwane smallholders and younger landless and jobless members of the community.

Box 5 Examples of the pattern of PTO allocations in Phetwane

Respondent A - Isabel Matsatsi, a woman farmer aged 69 years old in 2004:

I was born in a siSwati speaking family in Bushbuckridge. I was never married but had children. I arrived in the Rakgwadi area in 1962 and settled in Mogalatsane [a neighbouring village]. In 1974 I got permission from the Phetwane headman to build a homestead and settle in this village... The "community society" facilitated my entry into the scheme. As a destitute and unmarried woman, I worked on the irrigation scheme for five years, providing labour together with another woman. This labour served as payment for the irrigated plot (Plot 5) that was allocated to me... I personally hold the PTO to this plot.

Respondent B - Modireng Modipelo, a woman farmer aged 65 years old in 2004:

I arrived in Phetwane with my husband in 1963. We came from Jane Furse. I only had one child, my first born child who was born in 1963. Chief Matlala allocated us a [rain-fed] field and a plot on the irrigation scheme, and also a PTO certificate. The PTO was under my husband's name. It changed to my name after he passed away. From 1963 to 1984, we grew maize and wheat for sale in Marble Hall...

⁷⁰ Psuedonym used.

⁷¹ Psuedonym used.

While smallholders strongly believed that their rights to irrigated land were secure, a number of landless and unemployed younger people of working age argued that irrigated plots should be redistributed in their favour. They premised their argument upon a principle in the ANC's Freedom Charter that "The Land Shall be Shared Among Those Who Work It!" Beyond invocation of the ANC's Freedom Charter, a central issue underpinning arguments for redistribution was that the landless and unemployed youth provided much of the labour in the irrigation scheme, under the employ of elderly smallholders. They therefore considered themselves better placed than the latter to play active roles in commercial farming. Contestation by the youth was also linked to high unemployment levels in Phetwane village (see Section 5.5.2.3) and to initial expectations that agricultural commercialization would generate entrepreneurial and employment opportunities. Given that 82.6 per cent of plots on the irrigation scheme were formally held by twenty percent (20 per cent) of the adult population aged 60 years and above, intergenerational contestations over irrigated land were perhaps not surprising.

The study could not establish whether or not arguments for land redistribution were linked to the Communal Land Rights Bill consultation process of 2003, which coincided with the beginning of a RESIS joint venture in Phetwane. Such process actively involved the then-councillor for Ward 6, who represented the local ANC constituency in parliamentary hearings on the bill. It seemed possible that local dynamics around the consultation process filtered from elected leadership to the youth. What was evident was that elderly smallholders appealed to traditional leadership for support. Since the traditional leadership institution had strong control over communal land rights allocation, such strategy enabled smallholders to protect their land rights.

While CLRA recognized PTOs to be old order rights, which strengthened smallholder's security of tenure, the legal instrument also potentially provided a basis for redistribution of access through leasing of land. Provisions for this mode of redistribution, however, had yet to be tested against obligations of traditional leadership to ensure livelihood security for all households within the community. Manona et al (2010) observes that the institutions and tools to handle efficient land transactions, particularly in the form of leases, are not

available in many smallholder irrigation schemes. The scholar recommends that quitrent tenure be transformed to a perpetual or long term conditional state lease system and the PTO system to be transformed to usufruct or statutory rights, which should both be underpinned by different levels of local level land administration system. This is expected to remove systemic obstacles to land exchange, thereby enabling improved land utilisation and productivity on smallholder irrigation schemes. However, the argument for a redistribution of irrigated plots was complicated by informal arrangements for shared access to land plots between smallholders and landless people, which pre-dated RESIS and were based on kinship relations and other social networks (Box 6).

Although irrigated plots in Phetwane were formally allocated to 49 farmers, in practice at least fifty-six households were identified by this study as having direct shared access to the land (Figure 20; Table 19). Sharing arrangements were often cast within extended family contexts and linked to cultural notions of 'responsibility' and 'reciprocation'. Such arrangements broadened the social base for livelihood security for elderly smallholders and landless and indigent people in the community. Effects of informal sharing arrangements included a reduction of exclusive access to plots by people aged over 70 years old and an increase in access by people mainly in the 40 – 49 year age group and, to a lesser extent, the 60 – 69 year age group (Figure 20; Table 19).

Box 6 Example of shared access to an irrigated plot of land: Excerpt from a discussion with members of an extended family, 2004

Respondents - Mosate extended family, including widow Mmabatho Mosate (PTO-holder), Modire Mosate (brother of Mmabatho's deceased husband) and Segametse Mosate (his wife)

Modire: My wife and I arrived in Phetwane in 1976 from Masanteng, near Buffelsdoorn Dam [a few kilometers east of Phetwane]. We were allocated a food garden close to the river. We later got a plot (Plot 1) in the irrigation scheme from my late brother's wife, Mmabatho, who still has the PTO. We currently have two food gardens, one of which belongs to Mmabatho... Our dilemma is that we are struggling to look after our youngest daughter and five orphaned grandchildren, children of our son who died. These children are all still at school. What should we do in this case, where the orphans need to be cared for but are above the age limit for child care grants?

Mmabatho: It is for this reason that I gave them (Modire and Segametse) my plot and garden....

Segametse: I need my own field. Space is there further downstream of the irrigation scheme...

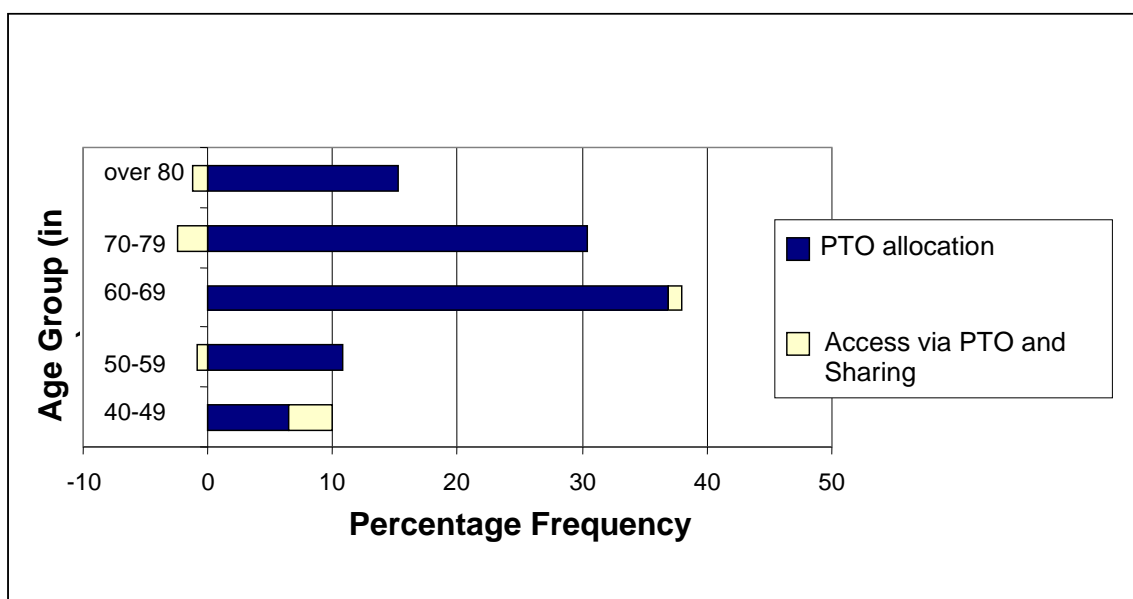


FIGURE 20 EFFECT OF SHARING ARRANGEMENTS ON ACCESS TO PLOTS ALLOCATED THROUGH PTOs, BY AGE, 2004

TABLE 19 EFFECT OF SHARING ARRANGEMENTS ON ACCESS TO PLOTS ALLOCATED THROUGH PTOs, BY AGE, 2004

Age Group	PTO allocation	Access via PTO and Sharing	Percentage change
40-49yrs	6.52	10	3.48
50-59yrs	10.86	10	-0.86
60-69yrs	36.95	38	1.05
70-79yrs	30.43	28	-2.43
over 80yrs	15.22	14	-1.22

The foregoing discussion shows that it was not easy to argue for land redistribution on the basis of simplistic notions of a need to redress skewed land allocations to the elderly. Inter-generational tensions over land rights required responsible authorities to engage with problematic issues around a historical practice of granting exclusive and indefinite usufruct rights to irrigated land in Phetwane. Provisions for leasing of such land, for example, seemed to be potentially useful in addressing smallholders' need for land tenure security and young people's interests in access to land.

5.5 SOCIO-ECONOMIC PROFILE OF PHETWANE COMMUNITY

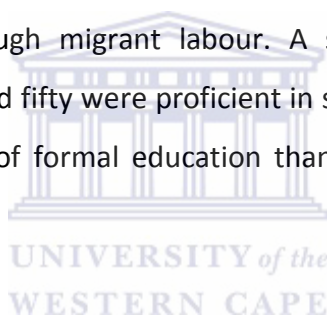
5.5.1 INTRODUCTION

Phetwane Irrigation Scheme is located on land occupied by Phetwane community. Livelihoods of irrigation farmers were therefore intertwined with those of the rest of members of the community. This section presents findings on socio-economic profiles of smallholder and non-smallholder households.

5.5.2 CHARACTERIZATION OF HOUSEHOLDS

5.5.2.1 Language Composition

The predominant language spoken in virtually all Phetwane households was Pedi. A number of the elderly also spoke other languages, such as Ndebele, Swati, Afrikaans, English and Zulu. This was mainly due to their origins outside the Rakgwadi area and/or interactions with other ethnic groups through migrant labour. A significant proportion of people between the ages of eighteen and fifty were proficient in spoken and written English, owing to their relatively higher levels of formal education than those of older members of the community.



5.5.2.2 Gender Composition

The questionnaire survey showed that there were more adult women than men in Phetwane (Figure 21; Table 20). Women constituted 56.7 per cent while men made up 43.3 per cent of the adult population aged eighteen (18) years and above. The village had a predominantly young adult population. Young adults in the age group of eighteen to twenty-nine (18 – 29) years constituted 38.5 per cent of the total adult population. Most (80 per cent) of the adult population was aged below sixty.

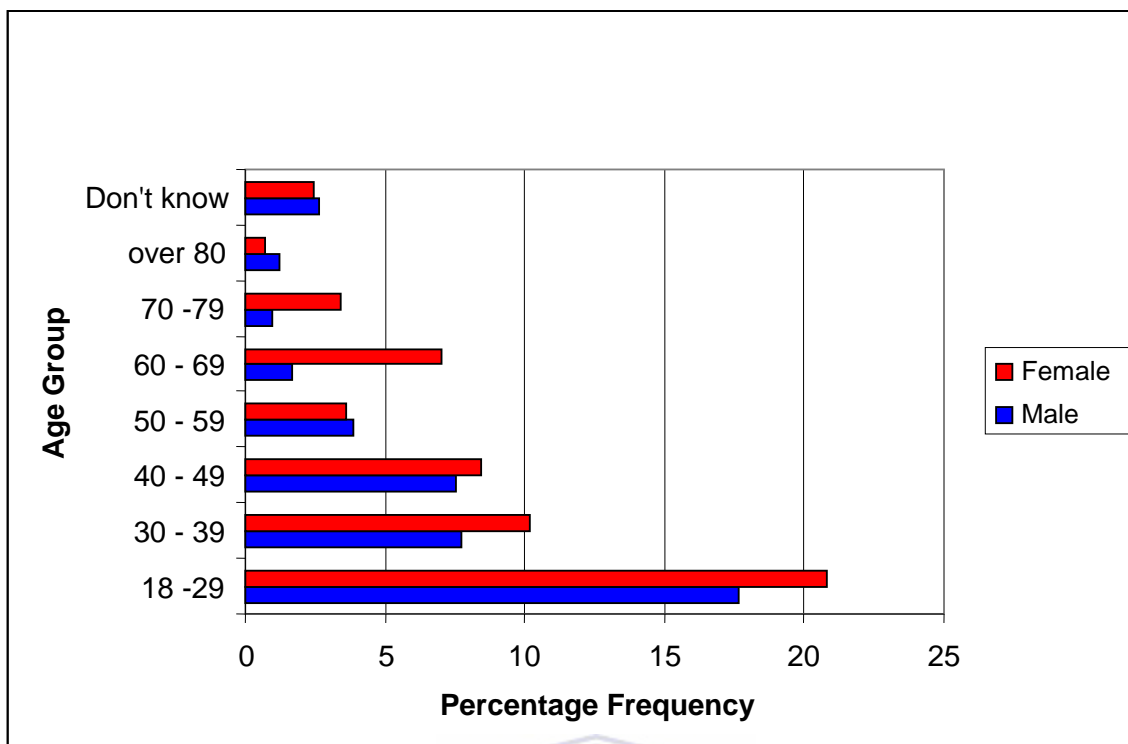


FIGURE 21 PHETWANE COMMUNITY: ADULT POPULATION DISTRIBUTION BY GENDER AND AGE, 2004

Table 20 PHETWANE COMMUNITY: ADULT POPULATION DISTRIBUTION BY GENDER AND AGE, 2004

Age Group	Male		Female		Total	
	n	%	n	%	n	%
18 - 29	73	17.68	86	20.82	159	38.5
30 - 39	32	7.75	42	10.17	74	17.92
40 - 49	31	7.51	35	8.47	66	15.98
50 - 59	16	3.87	15	3.63	31	7.5
60 - 69	7	1.69	29	7.02	36	8.71
70 - 79	4	0.97	14	3.39	18	4.36
over 80	5	1.21	3	0.73	8	1.94
Don't know	11	2.66	10	2.42	21	5.08
TOTAL	179	43.34	234	56.65	413	99.99

5.5.2.3 Employment

Phetwane had a relatively high rate of unemployment. Unemployed persons of working age constituted more than three-quarters (75.3 per cent) of Phetwane's adult population (Figure 22; Table 21). This figure was significantly higher than the unemployment rate of Greater Sekhukhune District, which was 64.8 per cent (see Table 6 in Section 2.6.2.5). By contrast, self-employed, full-time employed, seasonally employed and occasionally employed persons

of working age constituted thirteen percent (13.3 per cent) of the village adult population, while pensioners constituted eleven percent (11.4 per cent).

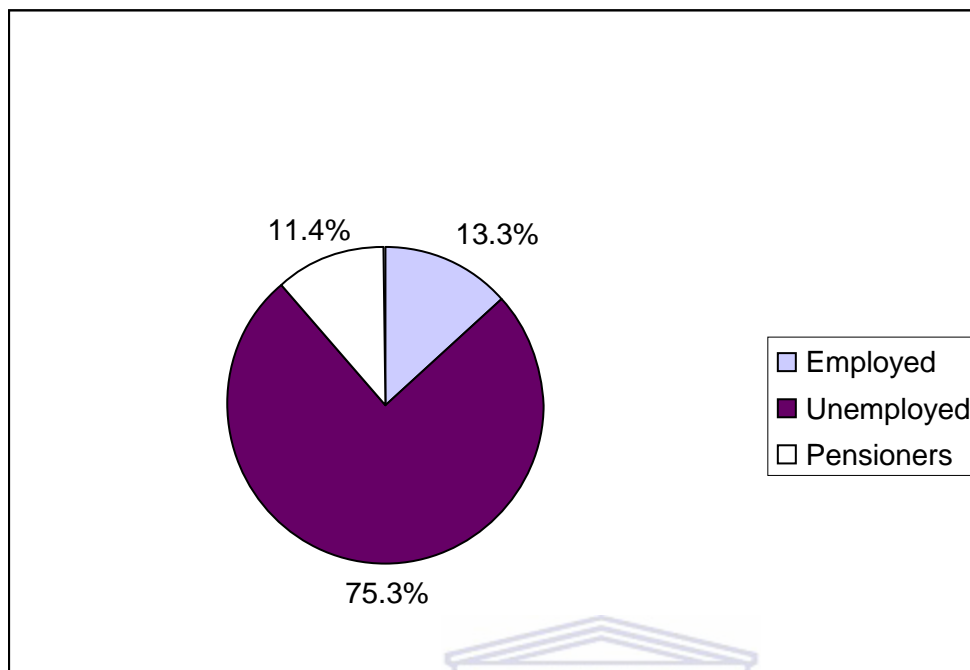


FIGURE 22 PHETWANE: EMPLOYMENT STATUS OF ADULT POPULATION, 2004

TABLE 21 PHETWANE: EMPLOYMENT STATUS OF ADULT POPULATION, 2004

	Number of people	Percentage
Employed	55	13.32
Unemployed	311	75.3
Pensioners	47	11.38
Total	413	100

Figure 23 and Table 22 show the extent to which the bulk of Phetwane's working age population was not gainfully employed in 2004. Young people aged between 20 and 29 years constituted the largest proportion (31.8 per cent) of the unemployed (Figure 23; Table 22).

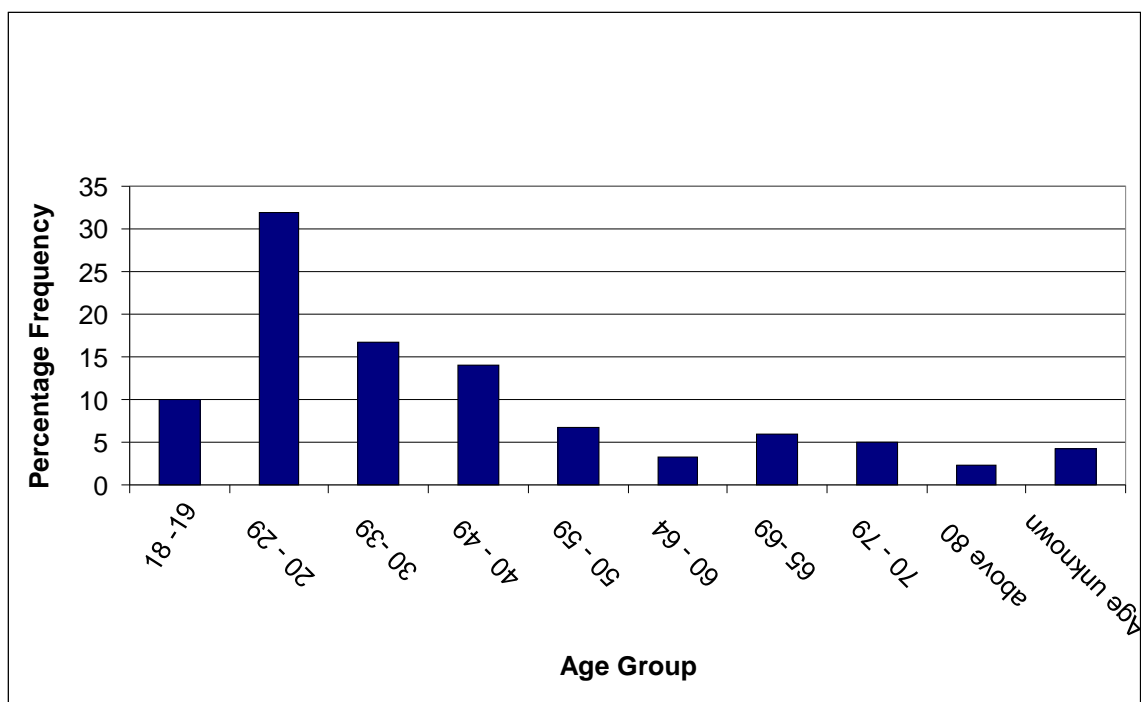


FIGURE 23 UNEMPLOYMENT BY AGE GROUP, 2004

TABLE 22 UNEMPLOYMENT BY AGE GROUP, 2004

Age Group	Rate of Unemployment	
	Number of people	Percentage Frequency
18 -19	36	10.06
20 - 29	114	31.84
30 -39	60	16.76
40 - 49	50	13.97
50 - 59	24	6.7
60 - 64	12	3.35
65 -69	21	5.87
70 - 79	18	5.03
above 80	8	2.23
Age unknown	15	4.19
Total	358	100

There did not seem to be any positive correlation between the level of formal education and rate of employment in Phetwane. Indeed, the highest proportion of the unemployed was found among the more educated (Figure 24; Table 23). Of the 11 people identified by the questionnaire survey as holding diplomas, degrees or other tertiary qualifications, 10 (or 91 per cent) were unemployed. At the same time, while migration to other places for

employment purposes is very low, most migrations are related to purposes of getting tertiary education.

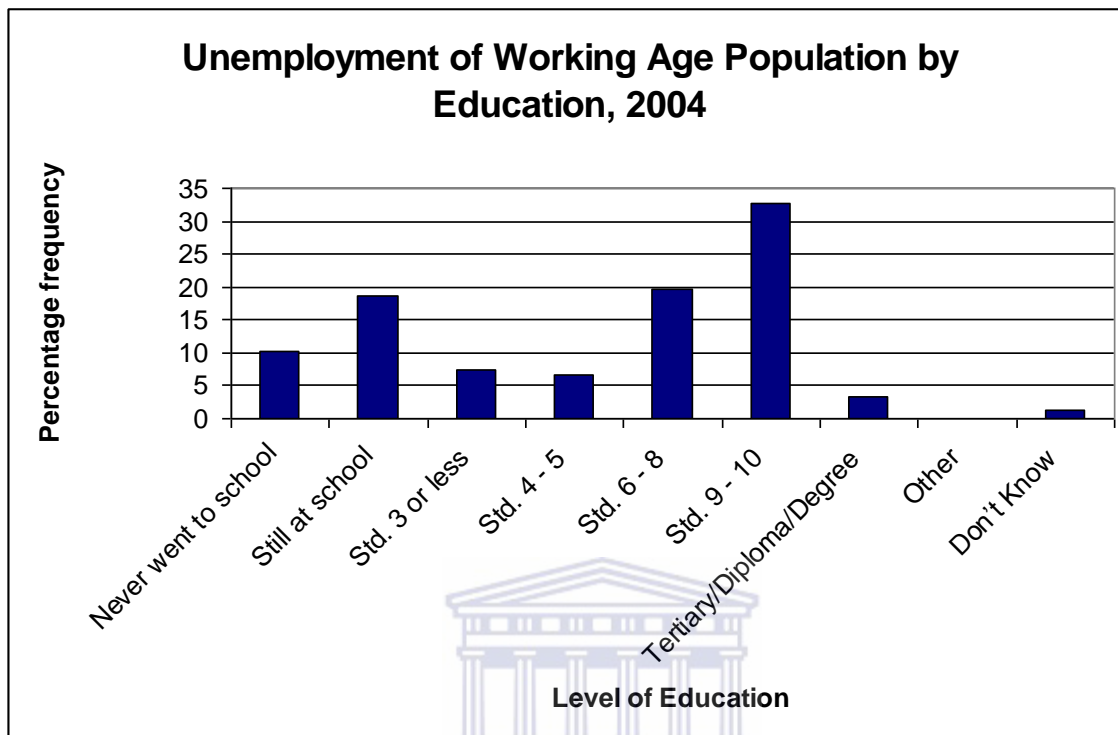


FIGURE 24 UNEMPLOYMENT OF WORKING-AGE POPULATION EDUCATION, 2004

TABLE 23 UNEMPLOYMENT OF WORKING-AGE POPULATION EDUCATION, 2004

Education Level	No of unemployed	% of unemployed
Never went to school	32	10.28
Still at school	58	18.65
Std. 3 or less	23	7.40
Std. 4 - 5	21	6.75
Std. 6 - 8	61	19.61
Std. 9 - 10	102	32.80
Tertiary/Diploma/Degree	10	3.22
Other	0	0
Don't Know	4	1.29
Total	311	

Source: Fieldwork, 2004

Figure 25 and Table 24 show the employment status of Phetwane's adult population by gender in 2004. Men constituted the greater proportion (61.8 per cent) of the full-time, seasonally, occasionally and self-employed in the village (Figure 25; Table 24). Of these, more men (73 per cent) than women (27 per cent) had full-time paid work. Women made up the bulk of the unemployed adult population in the village. The unemployment rate for women was approximately 51.6 per cent, while that of men is 35.1 per cent. Women, however, were observed to assume a greater share of unpaid household labour and responsibilities for caring for young children and the old. Women were also more visible in providing labour on the irrigation scheme, mostly weeding and picking cotton. Such employment generated very low wages (40c per kilogram of cotton picked or R20 per day for a few days labour) and was generally not declared in women's responses to questionnaire interviews.

Besides shared access to irrigated land (see Section 5.4), a number of households in the village derived part of their livelihoods from casual or seasonal employment on the irrigation scheme. The extent of such employment, however, was not easy to determine. While primary observations and interviews with key respondents showed that a number of unemployed, landless and indigent people were occasionally and seasonally employed on the irrigation scheme up to August 2004, the questionnaire survey identified a relatively small number of such people. Following the failure of a cotton joint venture in 2004 and the subsequent suspension of production activities on the scheme, there was an increase in the transient nature of employment on the scheme and a reduction in levels of such employment. However, since the questionnaire survey was carried out at the height of cotton production, more plausible reasons for the low employment rates identified might be the very low wages deriving from labour on the scheme, which made minimal contributions to the basket of household financial resources. Possible negative social connotations associated such labour might have contributed to reluctance by many of the unemployed, who were seasonally or occasionally employed on the scheme, to disclose such employment.

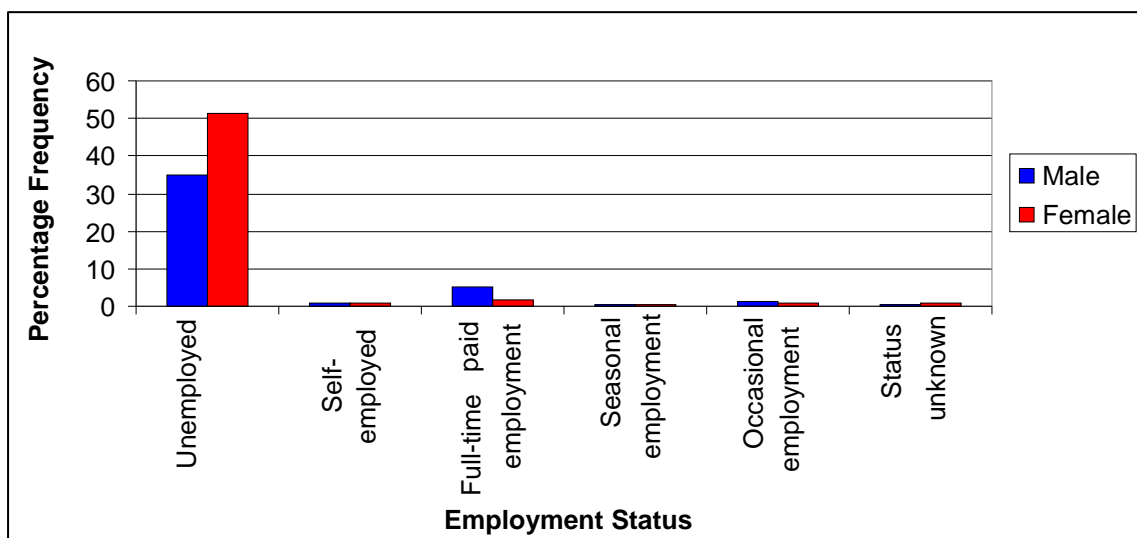


FIGURE 25 PHETWANE: EMPLOYMENT STATUS OF ADULT POPULATION BY GENDER, 2004

TABLE 24 PHETWANE: EMPLOYMENT STATUS OF ADULT POPULATION BY GENDER, 2004

Employment Status	Percentage Frequency				Total
	Male		Female		
Unemployed	145	35.12	213	51.57	86.69
Self-employed	4	0.97	3	0.73	1.7
Full-time paid employment	22	5.33	8	1.94	7.27
Seasonal employment	1	0.24	2	0.48	0.72
Occasional employment	6	1.45	4	0.97	2.42
Status unknown	1	0.24	4	0.97	1.21
Total	179	43.35	234	56.66	100.01

A number of landless and unemployed Phetwane men also engaged in informal fishing along the Olifants-Lepelle River below Flag Boshielo Dam. Such informal livelihood activity was largely criminalized by past and prevailing environmental legislation. From 2003 to 2007, members of Phetwane community tended to keep informal fishing hidden from outsiders. With increasing trust between these and the researcher, in 2008 fishers organized themselves and approached the researcher for assistance regarding their aspirations to generate livelihoods, employment, income and local economic development from riverine inland fisheries associated with Flag Boshielo Dam. Such request was communicated to relevant institutional actors in LDA and Greater Marble Hall Local Municipality.

5.5.2.4 Income

Questionnaire data showed that a total of about eighty-seven percent (86.69 per cent) of the adult population in the village does not derive income from paid employment. The questionnaire survey revealed, however, that more Phetwane women (56.4 per cent) than men (43.6 per cent) relied on social grants for income. Such grants included old age pensions, disability grants, child support grants and care dependency grants. A significant proportion (31 per cent) of the adult population received social grants. This represented 64 per cent of households with access to social grants. Among such households, a number had access to more than one social grant. Some (16 per cent) had access to two grants while others (4 per cent) had access to three grants. Most (83 per cent) of the grants received by the latter consisted entirely of child support grants. One-fifth (20.4 per cent) of the Phetwane adult population received child grants. Women commanded a greater share (97 percent) of the child grants disbursed in the village than men (3 per cent).

However, income data was not entirely accurate as respondents were generally reluctant to disclose other sources of household incomes than social grants. For example, there was no disclosure of income from informal fishing activities, which were a criminalized source of livelihood and food security for most of the unemployed and landless households. Apart from fears of possible prosecution, a significant number (68 per cent) of respondents expressed concerns over crime. Many respondents therefore either deliberately under-declared incomes or inadvertently excluded proxy incomes, such as food from natural ecosystem sources like rivers and from self-started home gardens. For ethical reasons and out of respect for people's need for privacy, the researcher did not insist on getting respondents to give more income-related information than they were comfortable with. Instead, proxy measures were used to cross-reference responses to the more direct questions on income.

Proxy indicators included data on household expenditure and, less directly, the status of household nutrition. Questionnaire data showed that monthly expenditure tended to be higher than declared incomes in some households. Such expenditure related to items such as food, energy, education, medication, transport, entertainment, furniture, debt repayment, rates, insurance policies, funeral expenses and other items. An example was

that of a household in which, reportedly, none were employed, none received social grants and yet, although the household received no income and had relatively very little debt (R100 – R499), the average monthly expenditure for the household was R6200.

5.5.2.5 Household Material Resources

The rate of ownership of household material resources was relatively low. Household asset ownership varied among different households in the village and between smallholder and non-smallholder households (Figure 26). The former were generally headed by older and less formally educated members of the Phetwane community, while the latter households were headed by younger people.

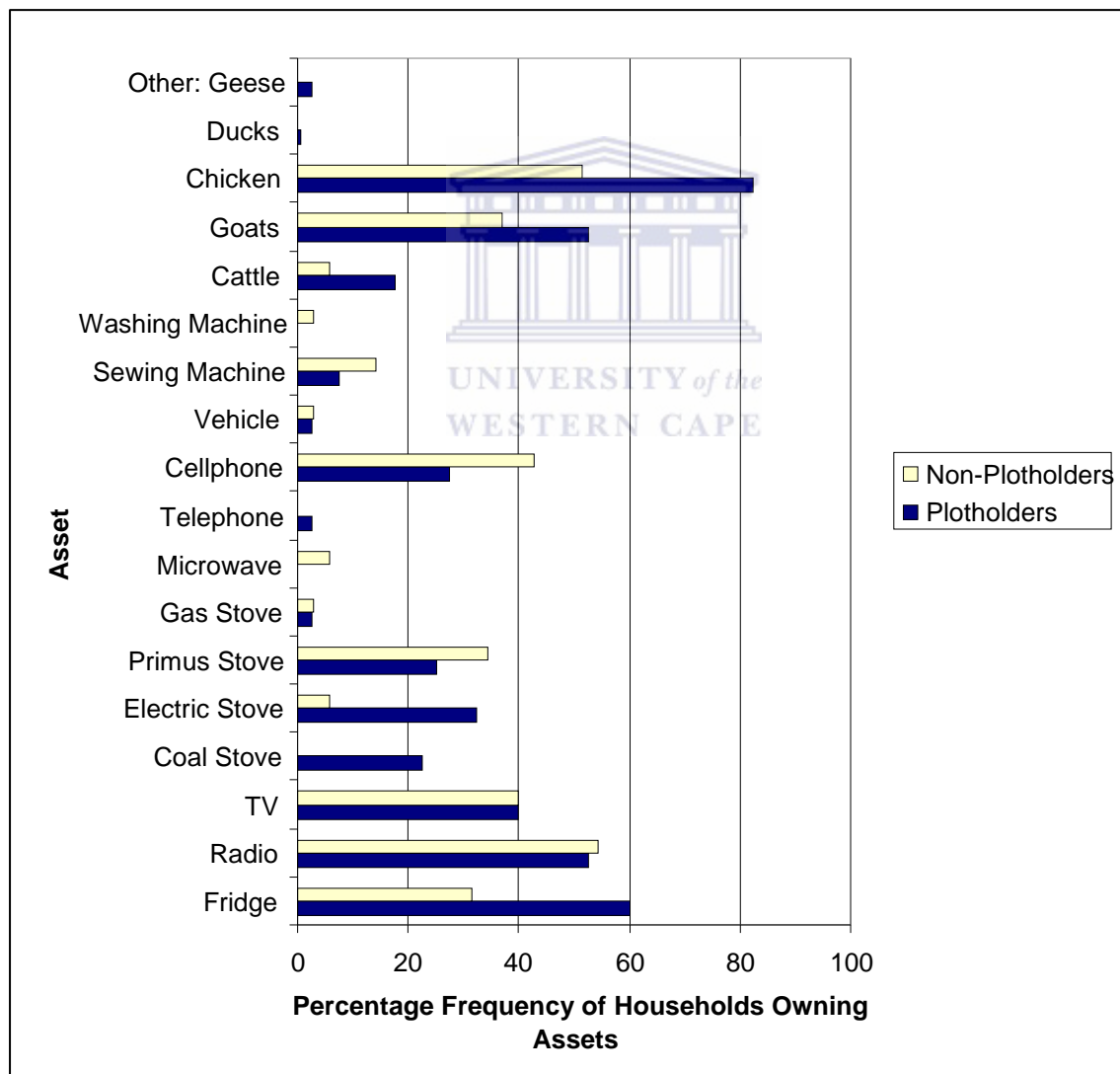


FIGURE 26 PHETWANE: MATERIAL ASSET OWNERSHIP BY HOUSEHOLD, 2004

Non-smallholder households generally owned more electrical appliances, such as cellphones, radios and micro-wave ovens than smallholder households. By contrast, smallholder households owned a significantly higher proportion of fridges, electric stoves and livestock than non-smallholders. Asset ownership did not necessarily point to greater or lesser affluence, however, as many households with the more expensive types of assets also had debts and relatively low incomes.

5.5.2.6 Crop production

Three types of arable land were allocated to crop production. These were, firstly, plots of land within the irrigation scheme, secondly, micro-scale (less than 0.1 ha) food gardens adjacent to the scheme and along the irrigation canal and, thirdly, home gardens. No land was set aside for rain-fed crop farming in Phetwane. According to key respondents, the reason was that there was a shortage of rangeland for livestock. Traditional leaders reportedly took exception to encroachment by crop farming into rangeland.

Cotton was produced in the irrigated plots in 2004 and, after a four-year lull in production, potato and maize crops were grown in 2008. Home gardening became prolific after RESIS joint venture implementation prohibited gardening along the irrigation canal. Home gardening grew exponentially as South African food prices increased in 2005 while crop production in the irrigation scheme ground to a halt. Many households grew vegetables and maize in home gardens, using purified domestic water supplies to irrigate crops particularly in the dry season. A few households also seasonally grew wheat in the home gardens.

Not all households had access to arable land, however. The landless included the more recently established households of newcomers to the community and married children and grandchildren of original settlers. It was common to find elderly parents holding land rights while their adult children did not. Prior to RESIS agricultural commercialization, villagers had devised strategies to ensure broader food security within the community. Through kinship relations and other social networks, the practice of share-cropping, in particular, broadened access to available arable land. Smallholders also provided a safety net through informal employment of the landless in crop production, harvesting and processing. Although financial incomes from such work were very low, labourers often were paid proxy incomes

in the form of portions of the harvest, which enhanced food security for these vulnerable households.

5.5.2.7 Food Consumption

Expenditure on food was relatively low, with average monthly income spent on food being R300 per household. A narrow range of food items was consumed per household per week, and emphasis was on staple foods, such as mealie meal, and cheaper foods, such as cooking oil, bread and vegetables (Figure 27; Table 25). Almost all Phetwane households consumed mealie meal and cooking oil throughout the week, and over 60 per cent ate vegetables and bread at least once a week. The rate of bread and vegetable consumption varied among households. While 64.2 per cent of Phetwane households ate bread, 22.4 per cent consumed it everyday and 29.9 per cent ate bread once a week. Without reliable data on household incomes, it was difficult to determine the relationship between income and expenditure of food items.

Most households (over 70 per cent) stated that they hardly ever or never consumed protein-rich foods, such as milk, meat, fish, chicken, pigs legs (trotters), peanut butter and margarine. Protein-rich food, particularly meat, was relatively more expensive and therefore beyond the reach of many households in the village. However, tripe was a particularly cheap source of protein, and 43 per cent of Phetwane households consumed it at least once a week. A greater proportion (86 per cent) of smallholder households ate the tripe non-smallholder households. The former households were mostly headed by pensioners, who probably consumed tripe due to both their low household incomes and personal preferences. By contrast, the relatively low rates of tripe consumption by non-smallholder households seemed to be more closely linked to younger people's preferences than to income or employment.

Although field observations in 2004 and 2005 showed that increasing numbers of informal male fishers were actively exploiting inland fisheries resources below Flag Boshielo Dam wall, questionnaires findings were that the majority (84 per cent) of households did not eat fresh fish or "did not know" how many times per week they ate fish. The rest of households ate fish every day (2.9 per cent), four to five times per week (5.7 per cent) and at least once

a week (7 per cent) ate fish at least four to five times a week. Follow-up in-depth interviews revealed that household fish consumption was much higher than was declared, and that questionnaire respondents had been reluctant to disclose their consumption of fresh fish because informal fishing was criminalized by past environmental laws.

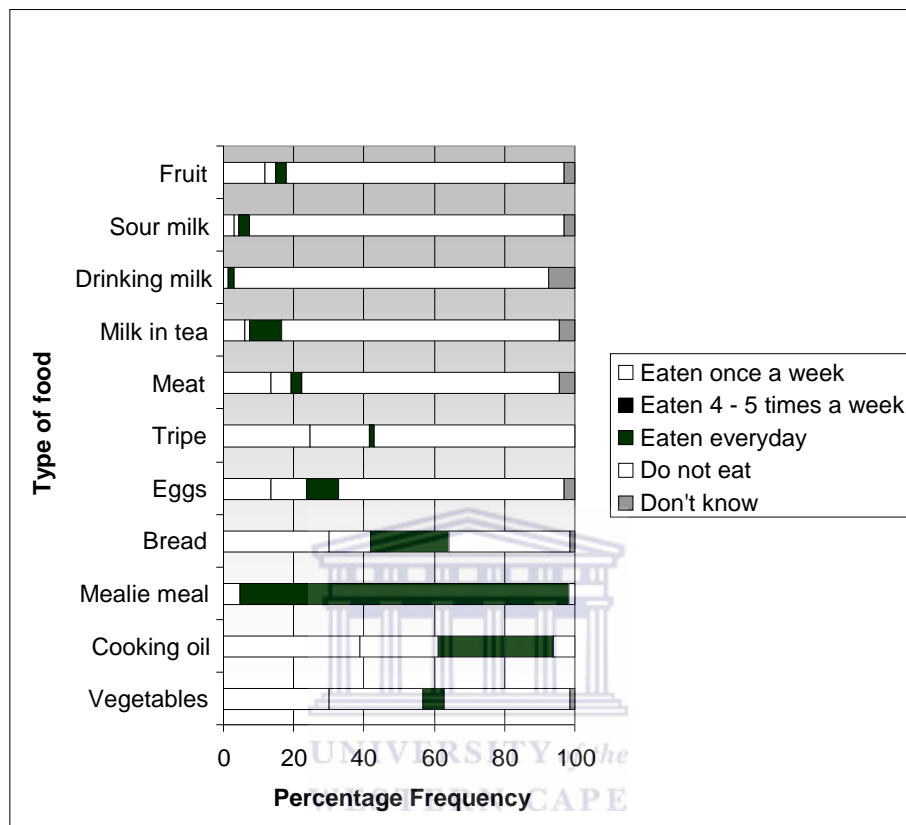


FIGURE 27 PHETWANE COMMUNITY: CONSUMPTION OF SELECTED FOOD, 2004

TABLE 25 PHETWANE: PERCENTAGE FREQUENCY OF CONSUMPTION OF SELECTED FOOD, 2004

	Eaten once a week	Eaten 4 - 5 times a week	Eaten everyday	Do not eat	Don't know
Vegetables	29.9	26.9	6	35.8	1.5
Cooking oil	38.8	22.4	32.8	6	0
Mealie meal	0	4.6	93.8	1.5	0
Bread	29.9	11.9	22.4	34.3	1.5
Eggs	13.4	10.4	9	64.2	3
Tripe	24.6	16.9	1.5	56.9	0
Meat	13.4	6	3	73.1	4.5
Milk in tea	6	1.5	9	79.1	4.5
Drinking milk	0	1.5	1.5	89.6	7.5
Sour milk	3	1.5	3	89.6	3
Fruit	11.9	3	3	79.1	3

5.5.3 SELECTED LIVELIHOOD STRATEGIES AND CHALLENGES

5.5.3.1 Informal Fishing by the Unemployed and Landless

In 2008, fieldwork by the study found that most of the landless and unemployed men of Phetwane actively engaged in informal fishing along the Olifants-Lepelle River below the Flag Boshielo Dam. Among such fishers were young people who had prior to the failure of a RESIS joint venture been employed by smallholders in the irrigation scheme.

The study identified six distinct categories of fishers, as well as distinct gender biases in the different categories. These categories were: survivalist subsistence fishers, livelihoods-orientated subsistence fishers, informal recreational anglers, locally-based resource-poor commercially-orientated fishers, externally-based large-scale commercial fishers and externally-based formal recreational anglers. Most of the fishers were of male gender, but subsistence fishers included a few women, who were very poor, fished for food security and either headed their households or were reportedly neglected or under-supported by spouses working in urban centres further afield, such as in Gauteng Province and Polokwane.

Subsistence fishers were mostly poorly-resourced men and women members of the Phetwane community, who practiced hand lining using basic tackle, such as twine and hooks, to catch mostly small fish for their own consumption. Small-scale resource-poor commercially-orientated fishers were mostly the better resourced Phetwane men, who practiced fishing as a livelihood, owned fishing tackle (rods, hand lines and hooks) purchased from retail outlets in the small town of Marble Hall, and sold most of their catch to local communities and to travelers using the main tarred roads passing by the village. Larger scale commercial fishers were mostly outsiders, who were more affluent, mostly male, used highly specialized hand lines and drag nets, boats and rafts, camped by the river for between one and several days, rented space and electricity for their chest freezers from Phetwane residents, and transported their catch in four-wheel drive vehicles to distant markets in urban centres such as Tzaneen, Polokwane and Groblersdal. While fishers from Phetwane invariably did not have licenses and therefore fished informally and often illegally, the better resourced outsiders often had fishing licenses.

The main types of fish caught by Phetwane fishers were silver fish or carpenter and bream. Small-scale commercial fishermen sold the larger fish, which weighed up to 3kg for carpenter or silver fish (*Argyrozona argyrozona*) and between 450g and 2kg for bream. Local fishers expressed concerns that while about possible over-fishing, difficulties they encountered in obtaining fishing licenses and the lack of effective regulatory mechanisms governing access to the fishing spots, sizes of fish catches, types and uses of fishing tackle, and management of the ecosystem. The smaller net users sold their fish along the roadside and at road intersections. The price of a big tilapia fish (about 20 centimetres long) was around R20. Prices for large silverfish or carp (between 40 and 60cm or more) varied according to the time of day, often ranging from R40 to R60 for a big fish in the morning and early afternoon but reducing to between R20 and R40 towards the evening. On average, local subsistence fishers could earn a gross profit of between R100 and R250 per day. Gross earnings for resource-poor commercially-orientated fishers could theoretically go up to around per R500 per day, depending on fishing effort.

Such informal livelihood generation activities were largely criminalized by past and prevailing environmental legislation. The Limpopo Environmental Management Act (Act 7) of 2003, in particular, prohibited the conduct of fishing activities without a permit but allowed owners of land surrounding an artificially created aquatic system to fish without permits. Effectively, this implied that Phetwane's informal fishers technically could fish without a permit, since their communal land partially surrounded the artificial fishery around Flag Boshielo Dam. Members of Phetwane community, and fishers in particular, were not aware of such a loophole and so conspired to keep informal fishing hidden until they found out from other fishers, who came from other areas in the province, about a suspension of requirements for fishing permits by the Limpopo Environmental Management Act.

Informal fishing ultimately came to the fore as a major and openly-conducted source of livelihood when a locally-based monitoring and enforcement team of officials and rangers from the Limpopo Department of Economic Development, Environment and Tourism (LEDET) formally recognized the legitimacy of local informal fishers. In 2008 the LEDET team initiated a Community Outreach programme, whereby environmental officers explained to members of local communities, such as Phetwane, the importance for them to jealously

guard the fishery and thereby contribute to ensuring the sustainability of the ecosystem and their livelihoods.

5.5.3.2 Debts

Most Phetwane households had debts, but these were very small. The largest proportion of debts ranged from less than R100 to R500. About a third of all debts were between R500 and R1000. The smaller debts were often incurred for purposes of buying food and paying for school attendance, health care and medical services. Other debts related to ceremonial feasts, funerals and burials, farming, furniture, clothing, building materials, catering utensils, contributions to burial societies and faith-based organizations, and repayment of existing debts. Indebted households owed money mainly to community members, burial societies, micro-lenders and merchandise shops. There was no significant difference in the incidence of debt between smallholder and non-smallholder households.

5.5.3.3 Livelihood Shocks

Livelihood shocks in Phetwane were mainly associated with general joblessness in households, witchcraft issues, death of many livestock, loss of possessions through theft and perceived risk crime in the community. A significant number (68 per cent) of respondents stated that they often or sometimes felt unsafe from crime. Such crime was often linked to theft of household possessions, such as shown in an excerpt from an informal discussion in Box 7).

Box 7 Example of vulnerability to crime in Phetwane, 2004

Mildred 'Lulu' Morupisi is a 40-year old unmarried daughter of a woman smallholder. She works 65km away from Phetwane as a nurse in a large hospital in the Greater Groblersdal Local Municipality. She is unable to commute daily due to the long distance to her workplace and the varied shifts that her job entails. Consequently, she leaves her children in the care of her mother and her home unattended for almost a week at a time.

I have suffered three break-ins over the past ten to fifteen years, in which all my household possessions were stolen. Each time I lost my furniture, electrical appliances, clothes and kitchen utensils. I recovered most of the items stolen in the second theft. These had been taken to Mogalatsane [a village neighbouring Phetwane] to be sold. In the third theft, the thieves were caught red-handed when they came to collect the final load...I feel that thieves within Phetwane target working people. They know that after a while your house will be full of goods. They then collude with thieves in neighbouring villages to steal your possessions. While the local thieves observe your movements for an opportunity to break in, they do not take an active part on the day of theft. This way, they avoid being linked to the crime...

Throughout the duration of the study, there was a perpetual atmosphere of uncertainty in Phetwane community and allegations of witchcraft were rife. A significant number of respondents (25 per cent) cited witchcraft as a source of vulnerability for their households. The study interviewed respondents who claimed to have been subjected to witchcraft, others who complained of having been accused of witchcraft and yet others who believed that witchcraft existed in the village, even though they personally had not been affected by it. Although it was beyond the scope of this study to delve deeper into the witchcraft issue, it was worth noting that allegations of witchcraft were often linked to personal or household crises, such as death of a person, death of livestock, serious illness and loss of a job by the main breadwinner. Such allegations were sometimes linked to persons perceived as holding alternative viewpoints to the majority or who managed to cope against the odds that many could not overcome.

Vulnerability to witchcraft accusation, in particular, was best understood in the context of Sekhukhuneland's historical reputation as the 1980s epicentre of witch burnings in South Africa, which Delius (1996) documents. Historical burnings of persons accused of witchcraft in Sekhukhuneland were ascribed to a combination of poverty and rural resistance to colonial and apartheid repression, among other factors. However, the contemporary wave of witchcraft allegations in Phetwane seemed to be driven by a different set of factors, including poverty, livelihood shocks and effectiveness of coping strategies. A number of such factors were directly linked to agricultural commercialization and, in particular, failure of contract farming arrangements in the irrigation scheme.

5.5.3.4 Coping Strategies

Individuals and households used a range of strategies to cope with problems relating to poverty, unemployment, shocks and vulnerability. Social grants and social networks (Box 8) were critical to the survival of many households in Phetwane. Coping strategies included a reliance on relatives and neighbours for moral and material support. Many households depended on loans from community members, micro-lenders and burial societies. Others constantly obtained credit from formal retailers and informal traders, such as vendors and 'spaza' owners. A number of households had personal savings accounts and insurance,

particularly through membership of burial societies and church organizations. Prior to agricultural commercialization, other households had shared access to arable land.

In such cases, landless people temporarily used land that landholders did not cultivate. In other cases, landholding and landless households, often members of the same extended family, collectively produced and shared food crops. There were also cases whereby indigent households provided labour in exchange for a portion of the harvest. Due to the relatively low levels of livestock ownership in Phetwane, no similar arrangements were observed with regard to cattle farming. The exact details of land sharing varied according to specific circumstances, and those involved were often reticent to give details about their arrangements. Reasons for reticence were deeply embedded in cultural notions of 'responsibility' and 'respect' for each other and for valued personal relationships. There was also pride associated with avoiding disclosure of personal information to 'outsiders', particularly with respect to possible risks of stigmatization of poor relatives, friends and neighbours.

Some forms of insurance were less tangible. Examples included the purchase of various items, such as catering utensils, for use in funerals, weddings and similar events. These events were an important part of social life in the village and in extended families. Contributions in cash, kind and labour towards such events strengthened social relations and, through reciprocation, strengthened relations ensured a broader array of future support from all involved. A number of respondents indicated that their debts emanated from purchases of catering utensils and from obligations to contribute to events such as funerals.

Box 8 Example of the importance of Social Grants and Social Networks

Mavis Mokwena is a 42-year old unmarried mother of five. She was born in Bushbuckridge in Mpumalanga and came to live in the village upon marriage to a Phetwane man. Her husband has since deserted her, leaving her to single-handedly fend for their children and grandchild. She has few relatives in Phetwane, no burial insurance and no bank account. However, she has strong links with Phetwane community members and is very active in day-to-day activities in the village. Mavis is unemployed most of the time, and her household heavily relies on a child grant of R170 for her grand-daughter. Mavis often obtains loans from community members in order to buy food for her family. She also relies on her links with community members to gain access to occasional short-term employment opportunities in the irrigation scheme, within the village and in surrounding rural areas.

When her eldest daughter died in 2005, she had no money, no burial insurance and no close relatives in the village to support her, apart from her own unemployed and dependent children. Her amicable relations with community members ensured that she got a lot of emotional support. However, this was not enough to help her meet the costs of the funeral and burial. The loans that she obtained from a few community members and the food that she got on credit from a local retailer were also not adequate. Effectively, what she faced was the prospect of giving her daughter a pauper's funeral. Mavis's woes ended precisely because her social networks extend beyond Phetwane and as far as Bushbuckridge, some 260km away. Her relatives traveled all the way to Phetwane, bringing with them money, a cow, food and transport to help with the burial. In her time of crisis she realized that while social networks in general are important, kinship relations, specifically, may be more critical for major life events such as death, irrespective of distance.

5.5.3.5 Health Issues

The most frequently disclosed illnesses included cold and influenza, bone disease, bad coughs, acute respiratory disease (ARD), asthma, hypertension (BP) and diarrhoea (Figure 28). The frequency of disclosure of chronic diseases, such as heart disease, stroke, tuberculosis and epilepsy, was relatively low, while there was no disclosure of HIV and AIDS, sexually transmitted diseases (STDs) and measles. Other diseases included failing eyesight and painful limbs. While disabilities such as deafness, physical disability and mental illness were readily disclosed, there was a general reluctance to disclose socially problematic issues, such as drunkenness, smoking and use of drugs. People's needs for and rights to privacy probably influenced the degree to which health issues were disclosed. For ethical reasons, the study captured only the data that respondents were willing to disclose.

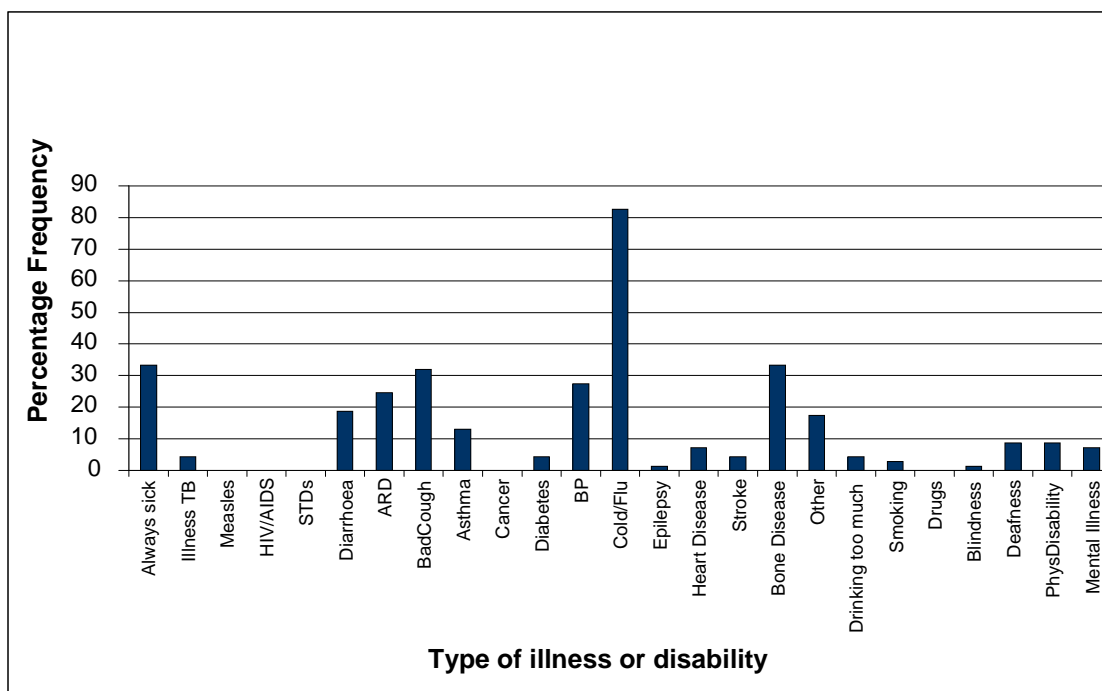


FIGURE 28 PHETWANE: PERCENTAGE FREQUENCY OF DISCLOSED ILLNESSES AND DISABILITY, 2004

5.5.4 CONCLUSION

Within government and non-governmental interventions, black small-scale farmers, such as those of Phetwane, are considered to be ‘resource poor’. In the case of Phetwane, there was no significant socio-economic differentiation between households that had direct access to irrigated plots and those without. There was also no significant difference between households with direct access to irrigated plots and those without. For these reasons, it was reasonable to deduct that Phetwane households were resource-poor, irrespective of whether or not they had access to irrigated plots.

Although opportunities for paid employment within the village were scanty, relatively few individuals of working age seemed to migrate to other places in search of work. Reasons for this were not clear. What emerged from the study, however, was that levels of despondency and strife were high, with many households citing lack of food security or hunger as a major source of difficulty.

5.6 PRELIMINARY PHASE OF AGRICULTURAL COMMERCIALIZATION IN PHETWANE: 2001 TO 2004

Implementation of the RESIS programme from 2001 to 2004 in Phetwane was characterized by two distinct phases. The preliminary phase consisted of engineering-centred reconstruction or 'rehabilitation' of dilapidated irrigation infrastructure. The second and core component of Phase 2 of the RESIS Programme involved constitution of contract farming arrangements, specifically joint production ventures, between registered smallholders and private investors. A substantive objective of involving smallholders in both the preliminary and core implementation phases was to enable farmers to effectively manage operational functions of the irrigation scheme.

5.6.1 INFRASTRUCTURE REHABILITATION

Rehabilitation of the Phetwane Irrigation Scheme began in 2001 under the CPC Programme driven by the Limpopo Department of Public Works. The Public Works department appointed Independent Development Trust (IDT) as implementing agent. Initially, a Concept Business Plan was approved in December 2000, following which actual reconstruction of infrastructure commenced (Limpopo (Northern Province) Department of Agriculture, 2001). Approximately R14 million was set aside for rehabilitation of schemes in the Arabie/Olifants irrigation area, which comprise Cluster 11 of RESIS. Of this amount, Upper Arabie was allocated a total of approximately R6.3 million. Table 26 shows that over R4 million was disbursed from 2000/2001 to 2002/2003 and a further R1.4 million allocated from 2001/2002 to 2002/2003 primarily for rehabilitation of the 19,5km long main irrigation furrow or canal from Coetzeesdraai to a balancing dam at De Paarl farm, construction of a new main canal from Flag Boshielo Dam to link up with the existing main canal at Coetzeesdraai and to repair pumps sumps at Phetwane, Coetzeesdraai, Krokodilheuwel,

Vogelstruiskopjes and Gataan⁷² (Figure 29). The provincial Department of Public Works contributed funding towards the rehabilitation of water pumps and other infrastructure⁷³. There was also a shift from flood to sprinkler irrigation, as part of the drive towards improving efficiency in water use. Additional funding was allocated towards farmer training, development of small and medium enterprises (SMMEs), a 'Start-up Fund' and professional fees and overhead costs of implementing agencies (Table 26).

TABLE 26 CONSOLIDATED FUNDING FOR INFRASTRUCTURE REHABILITATION AND OVERHEAD COSTS ON THE UPPER ARABIE IRRIGATION SCHEME

Budget Item		February 2001 Business Plan	Additional Funding
		Financial Years 2000/2001 - 2001/2002	Financial Years 2001/2002 - 2002/2003
A. INFRASTRUCTURE REHABILITATION			
1	New canal construction	3 070 000	
2	Rehabilitation of existing canal system		561 200
3	Rehabilitation of existing flood irrigation systems (100m/ha) and sprinkler system	175 000	(123 500)
4	Cleaning of balancing dams		60 000
5	Land planning for irrigation systems		292 500
6	Rehabilitation of scheme roads	26 000	45 000
7	Fencing	140 000	50 000
8	Rehabilitation of existing pump stations and electricity connections	53 000	260 000
9	Rehabilitaion of buildings	18 000	60 000
10	Conservation works	18 000	
	Total	3 500 000	1 205 140
	VAT (14%)	490 000	168 720
	TOTAL (including VAT)	3 990 000	1 373 860
B. SMME AND PROFESSIONAL COSTS			
11	SMME capital	100 000	51 000
12	Farmer training	48 838	65 813
13	Start-up fund	97 676	131 626
14	Professional fees and overhead costs	180 700	242 509
	Total	427 214	490 948
	TOTAL	4 417 214	1 864 808
OVERALL CONSOLIDATED FUNDING: R6 282 022			

Source: Limpopo (Northern Province) Department of Agriculture (2001)

⁷² Interviews with various RESIS practitioners, including IDT regional manager Mr Simon Malepeng, IDT official Ms Shalati Makubele and LDOA Senior Manager: Infrastructure Mr Rex Mtileni, held at Phetwane Irrigation Scheme on 27 July 2004.

⁷³ Interview with Limpopo Provincial Department of Public Works official, Mr Tirelo Makgethi on 10 May 2004.

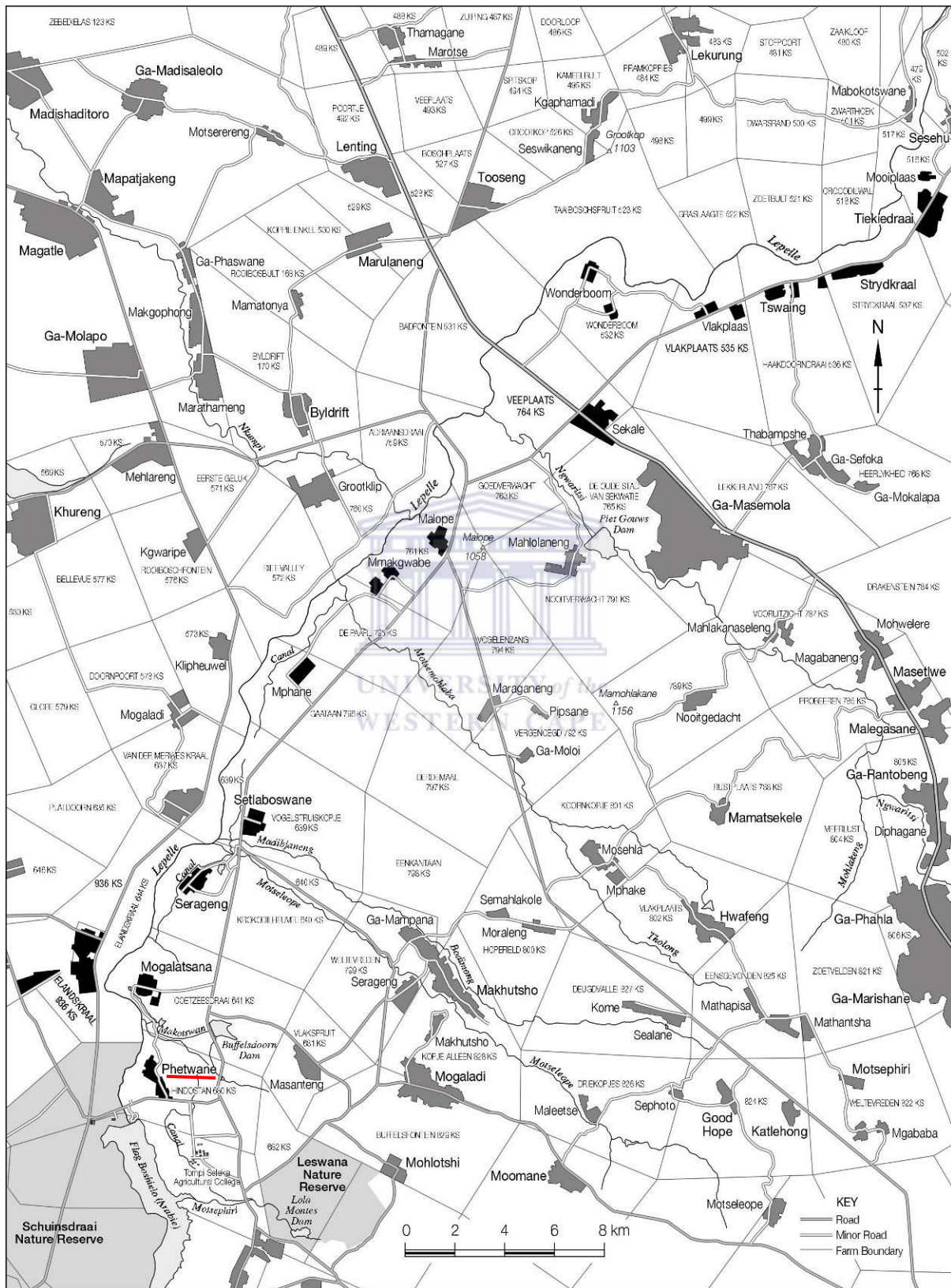


FIGURE 29 GEOGRAPHICAL LOCATION OF PHETWANE IRRIGATION SCHEME RELATIVE TO SIMILAR SCHEMES IN RESIS CLUSTER 11, 2009

Phetwane farmers report that the rehabilitated furrow never became operational and pumps were unable to supply adequate water. The delay in the use of the furrow was related to a major capital project to raise the Flag Boshielo Dam wall by five metres to augment storage capacity⁷⁴. This project took place concomitant to rehabilitation of schemes in Upper Arabie and was accompanied by a temporary five-year transfer of the water away from irrigation schemes to various mines.

The decision to reallocate water was partly based on a need by government to raise capital to fund the revitalization of smallholder schemes in the Arabie Olifants area. The agreement between mining houses and government included an undertaking by the former to pay R700 million during the 2001 to 2002 financial year towards development of Cluster 11 irrigation schemes and rural communities in the Arabie Olifants area. By 2004, the money had not been transferred to Sekhukhune District Council for allocation towards these purposes. The money remained in the coffers of both the provincial departments of Agriculture and Public Works. The retention of the money was due to a perception by Department of Public Works officials that the district council lacked accountability, which was informed by a previous instance of misuse of the balance of funds left over from a Department of Public Works-led project to rehabilitate pumps in Olifants/Lepelle irrigation schemes. In the said instance, decision makers in the district council went against advice by Public Works officials to allocate such funds towards construction of new higher capacity pumps to enhance dry season water supply to Upper Arabie. In the financial year from 2003 to 2004, the district council instead allocated the money towards construction of additional buildings in a school elsewhere in the district under circumstances that were widely regarded as lacking transparency.

The decision to transfer smallholder irrigation scheme water allocations to mines was also based on a view by government authorities that irrigation schemes had not used their water allocation in the five years prior to the Flag Boshielo dam wall project. The rationale was therefore that a temporary reallocation of water would contribute towards more efficient use of resources during the duration of the project. Phetwane farmers argued that while

⁷⁴ Interview with IDT regional manager Mr Simon Malepeng, at Phetwane Irrigation Scheme on 27 July 2004.

production levels in Upper Arabie schemes were greatly reduced due to post-1994 cessation of government subsidies, a few farmers had continued to produce vegetables and maize primarily for subsistence. Water shortage due to breakdown of water pumps and sedimentation and vegetal growth in a canal linking Phetwane to the Lola Montes Dam to the south-east of Phetwane (Figure 29) confined such production mostly to high rainfall years. These remnants of crop production were halted when government-driven rehabilitation and revitalization activities commenced, leading to food insecurity and nutritional constraints in a number of households.

5.7 OVERVIEW OF RESIS IMPLEMENTATION PROCESS: 2003 TO 2004

The revitalization of agricultural production began in Phetwane in 2003 with the growing of cotton in a joint venture between farmers and Noordelike Sentrale Katoen (NSK), a private investor based in Makopane (erstwhile Potgietersrus) within the Limpopo Province. A key defining feature of the onset of revitalization in Phetwane was the shift in institutional arrangements for project implementation.

5.7.1 INSTITUTIONAL ROLES AND RESPONSIBILITIES

Whereas the provincial Department of Public Works had been responsible for implementing rehabilitation of the scheme, the provincial Department of Agriculture (LDA) assumed responsibility for implementing the revitalization project in Phetwane. The role of IDT as implementing agent for the Department of Public Works, however, spilled over into implementation of RESIS by the Department of Agriculture. This was due to the overlaps whereby Public Works responsibilities ended in December 2003 and those of LDA began in January 2004, while the contract between IDT and the Public Works department ran up to March 2004. To avoid duplication in the use of public finance, the LDA could only appoint a new implementing agent, Ndzalo, as from April 2004. Given the ultimate objective of RESIS to transfer irrigation management to farmers, the new institutional arrangement also brought a significant shift in approach to IMT project design.

In contrast to salient features of international experience with IMT, revitalization project design in Phetwane emphasized the enhancement of the wealth-creating potential of smallholder irrigated agriculture through promoting high value crops, strengthening access

to markets and improving extension and technical support systems. The joint venture was therefore an initial step towards commercialization of production in Phetwane.

The rationale for involving a private investor in the joint venture partnership was that this actor would enable farmers to gain access to finance capital, technology, production skills and markets. Farmers would contribute their labour and access to irrigated land to which they held PTOs. The provincial Department of Agriculture had overall responsibility for the implementation of RESIS and facilitated the joint venture through funding, appointment of implementation agencies and approval of the private investor partner. IDT initially acted as implementing agent for the RESIS project from late in 2003 to March 2004, during which time the agent brokered a joint venture between Phetwane farmers and a private investor. As from April 2004, the Department of Agriculture appointed Ndzalo as a replacement for IDT.

5.7.2 INSTITUTIONAL COORDINATION AND INTEGRATION

The Phetwane RESIS project converged with a number of government programmes within the ISRD node of Greater Sekhukhune. These included the Water Allocation Reform Programme led by the Department of Water Affairs and Forestry (DWAF) and the Provincial Support Programme driven by the national Department of Public Service and Administration (DPSA). RESIS also converged with black economic empowerment (BEE) initiatives by private investors such as NSK. Consequently, various public and private institutions were involved in the revitalization of Phetwane, as in other smallholder schemes located in former homeland areas in Limpopo, Eastern Cape and KwaZulu Natal.

There was a general consensus among institutional actors that coordination and integration of RESIS activities in the Arabie Olifants area were weak, owing largely to low levels of capacity and accountability within the district municipality. Mpumalanga and Limpopo provincial Departments of Local Government and Housing (DLGH) and the national Department of Provincial and Local Government (DPLG) had made efforts to enhance municipal capacity through the Municipal Support Programme (MSP) and the Municipal

System Improvement Grant (MSIP), respectively. The departments used funding from donors, such as the European Union (EU), but such efforts had yet to yield tangible results⁷⁵.

Interviews with various institutional actors involved in the implementation of rehabilitation and revitalization of smallholder irrigation schemes revealed that apart from weaknesses in municipal capacity and accountability, there was also competition for control over resources and action space among institutions, such as the departments of Agriculture and Public Works and implementing agencies such as IDT. Such competition was heightened by the shift from rehabilitation to revitalization, with the attendant shift of primary responsibility from Public Works to LDA, as responsible authority, and from IDT to Ndzalo, as implementing agent for RESIS in Upper Arabie. Tensions were related to a lack of “proper” handover of responsibility from one institution to the next⁷⁶.

5.7.3 ENGAGEMENT WITH SMALLHOLDERS

A result of problems of institutional coordination was that Phetwane smallholders often got by-passed by communications among the various institutions. This left farmers with a general mistrust of government interventions in the scheme. Owing to negative perceptions about their earlier exclusion from much of critical communications and decisions relating to rehabilitation of the scheme, Phetwane smallholders were initially reluctant to participate in joint venture activities associated with RESIS. Their reluctance was also due to fears about risks associated with the envisaged framework of commercial production.

Smallholders argued that engagement in commercial production would land them in a vicious cycle of debt and lead to losses of existing household assets. After a series of consultations involving farmers, IDT and government officials, forty-seven (47) of the forty-nine (49) farmers were persuaded to take part in a cotton joint venture, while the remaining two preferred to be excluded. When Ndzalo took over from IDT as implementing agent, its practitioners insisted on a modified RESIS programme that emphasized revitalization rather

⁷⁵ Interview with Limpopo DLGH official, Mr Sam Bambo, held on 01 December 2003.

⁷⁶ Interviews with various officials of departments of Public Works, Agriculture and IDT, and with private sector officials of Ndzalo and NSK, held during research in 2003 and 2004.

than rehabilitation, and on a redressing of the manner in which practitioners of government interventions engaged with small-scale irrigation farmers⁷⁷.

5.7.4 PRE-DEVELOPMENT SURVEY

Towards redressing engagement smallholder and community practices by institutional actors, Ndzalo conducted a 'pre-development survey' prior to the inception of a cotton joint venture in 2003. The objectives of the survey were to elicit views of smallholders and other interested members of Phetwane community regarding the envisaged framework of irrigation scheme development and to facilitate consensus on a shared vision for such development⁷⁸. The pre-development survey specifically sought to identify needs, aspirations, fears and concerns of the Phetwane community, including farmers, non-farmers, women and the youth. Table 27 shows some of the problems, needs and aspirations identified by members of Phetwane community during the survey.

A broad range of problems and needs were identified. Although these were not prioritized, they gave a clearer perspective on the multiplicity of livelihood issues facing smallholders and the broader impoverished rural community. Results of the pre-development survey also gave project implementers a glimpse into the social challenges that RESIS and contract farming arrangements would have to interact and grapple with.

⁷⁷ Interviews with Dr Marna de Lange and Mr Laduma Tembe of Ndzalo, held respectively on 10 and 11 May 2004 in Polokwane.

⁷⁸ Interview with Messrs Johan Aderndoff, Evans Kgasago and Kenny Moabelo, held at Tompi Seleka College of Agriculture, Greater Marble Hall Local Municipality, on 27 July 2004

TABLE 27 PHETWANE COMMUNITY: PERCEPTIONS ON SOCIO-ECONOMIC PROBLEMS, NEEDS AND ASPIRATIONS, 2003

Problems	Needs
Unemployment	Employment opportunities e.g. through poultry, sewing, bakery and brick making projects
Lack of irrigation water in the [irrigation scheme] fields and for home gardens	Additional infrastructure for direct abstractions from Olifants/Lepelle River; improvement of existing irrigation infrastructure (each farmer needs individual set of pipes and sprinklers; Water management structure to manage sharing and use of water.
Lack of water within homesteads; Lack of money (tokens) to pay for water	Household water supply in yards for both domestic uses and gardens.
Shortage of arable land	Involvement of non-farmers in RESIS projects
Lack of money for production inputs	Assistance with inputs
Lack of markets for produce and lack of transport to available markets	Storage place for produce, grading of roads,
No agricultural extension officer	Training in farming skills, e.g. livestock, vegetable and poultry.
Theft of crops and irrigation pipes	Improved security, e.g. through installation of flood lights; policing forum.
Poor fences, stray livestock and loss of crops	Fence around irrigation scheme and livestock camps (paddocks)
No sustainability planning for projects	Training of irrigation management structures.
Hunger and poverty	Production of food crops, e.g. maize, wheat, potatoes and groundnuts.
For women: Challenges of balancing child care and housework with farming	Creches (child care facilities)
Absence of men, making women <i>de facto</i> heads of households	-
Teenage pregnancy	Youth involvement in agriculture; bursaries for studies in agriculture.
Crime	Police station and policing forum
Drug and alcohol abuse	Recreational facilities, e.g. soccer field, social worker services
Lack of projects and recreational facilities for the youth	Projects e.g. poultry, sewing, bakery and brick making; and electricity for agricultural projects
High number of funerals, which take up money and time	-
Dysfunctional community structures, nepotism and lack of transparency	Support and training for structures; empowerment of youth structures
Conflict within the community	-
	Post office, health clinic, better education for children, community halls.

5.7.5 ORGANIZATION OF INSTITUTIONS

The pre-development survey was complemented by a participatory process to develop a complex institutional framework for project management that would engage with the agricultural commercialization process and joint venture projects. Firstly, Ndzalo's project implementation team facilitated a process to delineate a multi-stakeholder project management structure and clear institutional procedures for the RESIS project in Phetwane

and the broader Upper Arabie Balemi Trust area. Secondly, project implementers facilitated the formation of institutions required to enable smallholders to legally contract with private investors.

5.7.5.1 Project Management Structure and Organization

In 2003, Ndzalo actively engaged with Upper Arabie Balemi Trust communities, including Phetwane, and other key stakeholder institutions regarding the design of an appropriate project management structure. Upper Arabie Trust administered four community based irrigation schemes located along the eastern banks of the Olifants River within Greater Sekhukhune District (Table 17 in Section 5.2.1). These schemes included Phetwane (Hindustan), Mogalatsane (Coetzedraai), Setlaboswane (Vogelstruiskoppie) and Krokodilheuwel (“Crocodile”). Phetwane and Mogalatsane were located in Ward 9 of Greater Marble Hall Local Municipality, while Setlaboswane and Krokodilheuwel were located in the Makhudu-Thamaga Local Municipality.

Figure 30 depicts the institutional structure that was proposed. Ndzalo considered that, since smallholder irrigation schemes were integral parts of rural communities, such as Phetwane, it was important to ensure a degree of intergration between existing local community structures, which local people lived with and understood, and the envisaged project management structure, which was a novel and unfamiliar construct. Ndzalo’s rationale was that it would be futile to overlay a completely new and disconnected structure, which might not be appropriate or relevant to the prevailing local context and, in particular, the community development framework.

To facilitate Upper Arabie Balemi Trust’s engagement with all the four Community Development Forums (CDFs) at the broader irrigation area level, Ndzalo facilitated the formation of a collective Development Forum. Membership of this forum included tribal authorities, councillors and officials of Marble Hall Local Municipality, LDA, DWAF and LEDET⁷⁹. Such a management structure was needed to optimize linkages between the RESIS project and the broader IDP process driven by Greater Marble Hall Local Municipality and, by extension, the ISRDP in Greater Sekhukhune District. The project management structure

⁷⁹ Interview with Messrs Johan Adendorff, Evans Kgasago and Kenny Moabelo of Ndzalo at Tompi Seleka College of Agriculture, 27 July, 2004.

was also intended to enable effective engagement with relevant external organizations, such as the Development Bank of Southern Africa (DBSA), the Land Bank, established commercial farmers, South Africa Cotton, Noordelike Katoen Sentrale (NSK) and various other private companies.

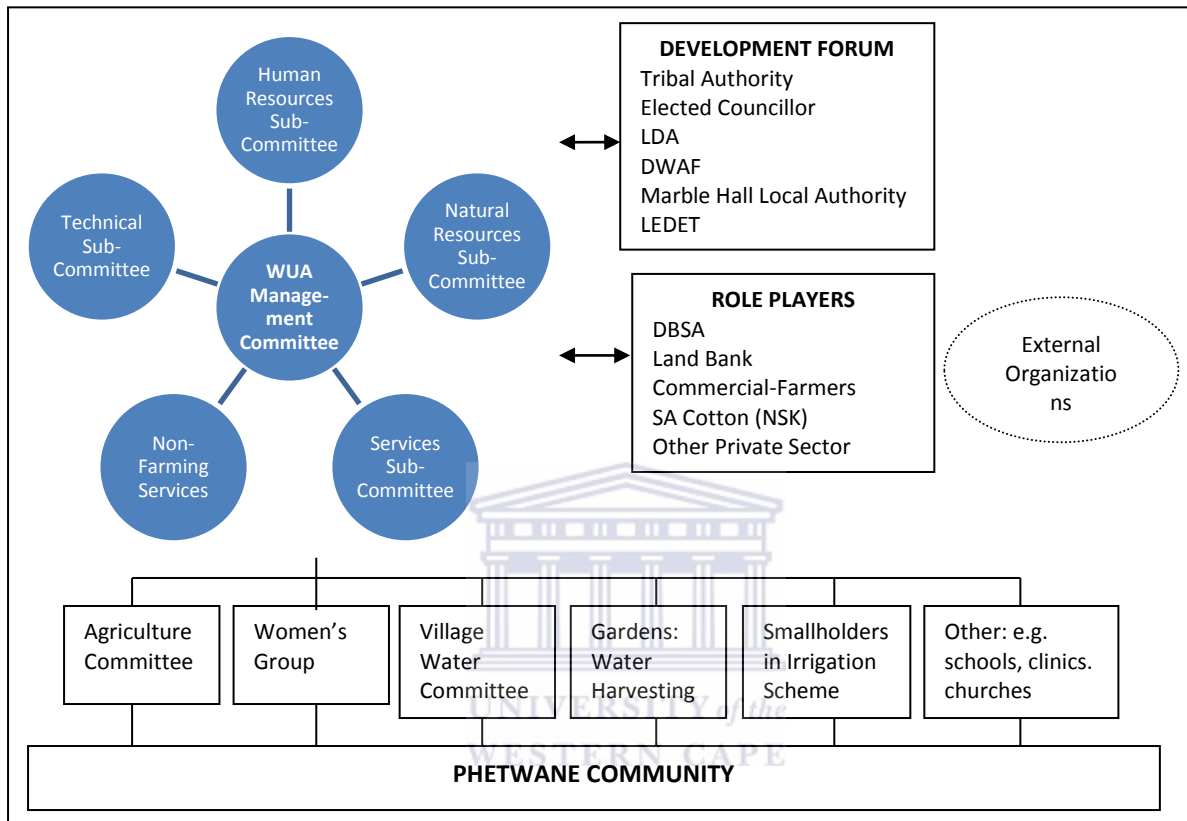


FIGURE 30 PHETWANE IRRIGATION SCHEME: PROPOSED MANAGEMENT STRUCTURE, 2004

Towards developing the RESIS project management framework, a number of consultations were held with various institutions represented in CDFs of the four villages in the Upper Arabie Balemi Trust area. These included tribal authorities, community development committees, village water committees and organizations for women, farmers and the youth. Within each village, members of these community-based structures were nominated into five sub-committees, which respectively attended to human resources, natural resources, services, technical aspects and non-farming issues relating to water use. One member of each of the five sub-committees was nominated into a village-level water management committee. All four such committees collectively comprised the WUA Management Committee for Upper Arabie Trust area. The WUA was central to the proposed project

management structure in that it was the link between local communities, RESIS Development Forum and external role-player organizations (Figure 30).

The RESIS project management structure was abandoned in 2004 because it was unwieldy in conceptualization and cumbersome in articulation⁸⁰. In Phetwane, difficulties related to weaknesses in community leadership, organizational capacity and social cohesion, and interaction of these with issues of poverty and insecurity. The proposed project management structure had been premised upon assumption that pre-existing community structures would be functioning well enough to accommodate RESIS-related modifications. However, the antecedent institutional framework at community level was severely weakened by a largely invisible and ineffective CDF as well as power dynamics between elected and traditional leadership. These challenges were exacerbated by, among other factors, a relatively low level of social cohesion, pervasive poverty, high unemployment rate, landlessness, substance abuse and a general lack of ease due to perceived vulnerability to risks from witchcraft and crime. These multiple challenges undermined trust in institutional processes and, consequently, the proposed RESIS project management structure had to be discontinued.



5.7.5.2 Phetwane Farmers' Organization

Concomitant to consultations regarding the aforementioned RESIS project management structure, smallholders in Phetwane, Mogalatsane, Krokodilheuwel and Setlaboswane were organized into formal institutional structures, which were to function primarily at the operational level. Operational responsibilities for these structures related to the day-to-day management of crop irrigation, including the operation and maintenance of pumps, collection of fees, monitoring of water and land use and resolving of conflicts among irrigation farmers.

In 2003, a group of 47 interested Phetwane smallholders was formally constituted as 'Phetwane Farmers Association' (PFA)⁸¹. This association was a constituent of the larger 'Upper Arabie Balemi Irrigation Scheme Trust', which was formally constituted and

⁸⁰ Interview with Mr Lazarus Mosena (name withheld) of Temong cc.

⁸¹ Section 5.1.2 of the Constitution of Phetwane Farmers Association.

registered as a trust organization in 2004⁸². A management committee for PFA was put in place, which consisted of a Chairperson, Secretary, Treasurer and committee members representing five sub-committees. Portfolios of the sub-committees reflected those of the larger trust organization and included: Human Resources; Technical Issues; Services (e.g. water and electricity); Non-Farming Issues; and Natural resources (Figure 30). The same structure was replicated in farmers' associations in all other villages within Upper Arabie. Since such associations were constituents of the Upper Arabie irrigation area, there was a need to form a central structure that would assume regulatory, coordination and integration functions. Upper Arabie Balemi Irrigation Scheme Trust was established specifically to meet this need.

According to the draft constitution of the Trust, membership was limited to a maximum of twenty-three people representing farmers, government, the local municipality and the implementing agency. The Trust consisted of twelve (12) elected representatives of the four village-based irrigation farmers' associations, a representative seconded from the local municipality, delegations from relevant government departments and one representative of the implementing agency, whose membership was limited to the duration of contract. Specific responsibilities of the Upper Arabie Trust included securing and managing a regular water supply from the Olifants ("Lepelle") River, ensuring optimal land use and promoting sustainable agriculture within the Upper Arabie area, securing agricultural production services markets for farmers on schemes in the area, maintaining irrigation infrastructure and good financial management⁸³. The Trust also undertook to protect the interests of its members with respect to agricultural production and water use, improve rural livelihoods in and around the scheme and to take "a political stance" in all its activities⁸⁴.

Further to the above undertakings, implementing agent Ndzalo suggested: that Executive and Management Committees should:

- Make policies and decisions for the benefit of the project and the farmers;

⁸² Upper Arabie is registered with the Department of Justice as a trust organization (Certificate J246 of 2004, Trust Number 3011/040 under the Trust Property Control Act (57) of 1988.

⁸³ Draft Constitution of Upper Arabie Balemi Irrigation Scheme Trust, Section 3.1.

⁸⁴ Ibid.

- Allow for emergency decisions to be taken at short notice when the management committee is unavailable;
- Negotiate with joint venture partners and others; and
- Manage legal as well as traditional tenure arrangements for land and other resources⁸⁵.

This suggestion was not captured in the draft constitution. The legal basis for Upper Arabie Trust's responsibility over land tenure arrangements was not clear. Ndzalo's recommendation appears to have overlooked the role of traditional leadership structures, which was particularly pertinent to smallholder irrigation schemes located in rural communities. Given that CLRA accorded traditional leadership a prominent role in land administration within communal areas, where such leadership was recognised, traditional leaders were likely to emerge as key actors in contestations over irrigated land in schemes such as Phetwane. An example of this oversight was Section 7.3 of the draft constitution of Upper Arabie Trust, which stated:

Where a person does not wish to farm or is no longer capable of farming on the scheme, that person shall be encouraged to make their land available to more capable farmers through the established Lease Agreement. The Management Committee should develop criteria for determining who is/is not capable of farming. If a person does not wish to lease his/her land to someone willing to farm it, then such a person shall be referred by the Management Committee to the Extension Officer who will consider taking away that piece of land and allocating it to a suitable applicant.

Although expropriation measures were not implemented during the course of the study, they were likely to prove problematic, as demonstrated by the case of Thabina Irrigation Scheme (Veldswich, 2004), which was also a RESIS pilot project. Reallocation of plots away from PTO holders in Thabina resulted in contestation of beneficiaries' rights to the land and impacted negatively on the pilot project.

⁸⁵ Ndzalo's Training Manual for the development of RESIS Project Structures.

5.7.6 CHALLENGES TO DEVOLUTION: WUA REGISTRATION FAILURE

Notwithstanding the aforementioned land rights issues, Upper Arabie Trust was effectively the heart of the complex institutional framework that emerged with the onset of the RESIS project in Phetwane and, more broadly, the Upper Arabie area. While irrigation farmers' associations, such as PFA, interacted directly with village level structures, the trust organization was the link between farmers, on the one hand, and the Upper Arabie Development Forum and external organizations and institutions, on the other. A key principle that Ndzalo, as facilitator, insisted upon was that the new structure should be established as part of the existing institutional framework within the locality. By embedding the new structure in this manner, the facilitator largely avoided competition for political action space between the new and existing structures in Phetwane.

Since water use was a key unifying factor for the various locally-based structures and their constituencies, including PFA and Phetwane irrigation farmers, Upper Arabie Trust was intended to evolve into a Water User Association (WUA). An application in 2001 by Upper Arabie Trust for the draft constitution to be approved to enable water users to be registered as a WUA never received a response from DWAF. The study's enquiry showed that the application had been forwarded by the DWAF office in Groblersdal to the Limpopo regional DWAF office in Polokwane, where it was to have been sent to the DWAF head office in Pretoria for approval. Despite a protracted follow-up effort, the study could neither establish reasons for the delay nor trace what happened to the application.

DWAF regional office in Polokwane had no record of the application. Rather, officials surmised that, due to a separation of functions in which Limpopo regional office in Polokwane became responsible for Water Services while Mpumalanga became responsible for Water Resources Management, the Upper Arabie application might have been forwarded to the latter office. However, the study was not able to find any record of the WUA application in Mpumalanga or in the DWAF head office in Pretoria. Efforts to interview the local Groblersdal-based DWAF official responsible for water allocation were unsuccessful as the official remained consistently "unavailable" throughout the entire duration of the study⁸⁶. The study found, however, that by 2006 only one WUA had been

⁸⁶ Responses concerning Mr Kobus Pretorius, DWAF Groblersdal local office.

established in the whole of Greater Sekhukhune. DWAF officials ascribed delays in the registration of WUAs for black irrigation farmers, such as those of Upper Arabie, to a lack of capacity to process applications for registration of WUAs and water allocations. Black farmers appeared to be more adversely affected by this lack of capacity than white farmers, who had largely been able to register their water use through irrigation boards within the Olifants/Lepelle River Basin and, in some cases, had registered access to several water sources⁸⁷.

Despite the delayed WUA registration, Upper Arabie Trust and its constituent farmers associations became involved in the first commercialization initiative by RESIS in the area. With specific regard to Phetwane, Upper Arabie Trust entered into a joint venture contract to produce cotton with NSK. The joint venture was initiated through facilitation by IDT and later handed over to Ndzalo. The latter became the implementing agent for a newly-emerged programme that shifted away from engineering-centred scheme rehabilitation towards a comprehensive initiative to enable farmers to effectively manage operational functions of the irrigation scheme and to enter into commercial agriculture.

5.7.2 CONCLUSION

The development of a complex structure for management of revitalization of agricultural production in Upper Arabie was necessitated by the fact that critical issues underlying the RESIS Programme design were points of convergence for the various local and external institutions and organizations. These included water use, socio-economic development, food security, environmental conservation and black economic empowerment. There was a need therefore to integrate interventions by RESIS with the interests of other institutions. Such an approach resonated with principles of IWRM, which the Global Water Partnership (GWP, 2000) defines to be *“a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.”*

⁸⁷ Interviews with Mr Jaco Burger, Farm Manager of Schoeman Broedary (EDMS) BPK, Mr John Barnadie, Water Control Officer of Hereford irrigation Board, and farmers Ms Sunette Klaasens and Mr Herman Boete, held on 13 October 2010.

The IWRM approach provided overarching guidance to policies, strategies, decisions and activities relating to water use, development, management and conservation. A core principle of the IWRM approach was devolution of water management responsibility to the lowest appropriate level. Attempts to register the WUA failed, thereby leading to devolution failure. Consequently, LDA continued to represent smallholders in decision making about RESIS contract farming arrangements.

The IWRM approach was also considered a key approach towards achievement of Millennium Development Goals (MDGs). While the Municipal Systems Act of South Africa vested municipalities with the responsibility to coordinate development within their areas of jurisdiction, a key challenge for the RESIS project in Phetwane was the lack of effective coordination, owing largely to the lack of adequate managerial and skills capacity within the local and district municipalities.

Poor coordination also characterized communications between the Development Forum and external organizations, on the one hand, and smallholders, on the other hand. Since much of the communication between the Management Committee of Upper Arabie Trust and PFA was verbal, it was not easy for the study to determine the exact source of the problem. However, findings showed that some of the information communicated by Upper Arabie Trust to PFA was not adequately relayed to smallholders. At the same time, the PFA management committee ascribed the communication problem to farmers' forgetfulness or tendency to misinterpret relayed information, and alluded to the advanced age and lack of formal education of most smallholders.

Problems of poor coordination ultimately negatively affected Ndzalo's project implementation in Phetwane. Ndzalo tried to instil a sense of project ownership in Phetwane by embedding the RESIS project within a pre-existing community level institutional framework, which local people understood. However, this well-intentioned strategy was undermined a number of factors, including poor communication, lack of effective coordination and weaknesses in community leadership and social cohesion, among others. These problems proved to be major setbacks when the cotton joint venture was implemented in Phetwane.

5.8 RESIS: COTTON JOINT VENTURE, 2003 TO 2004

This section explores the implementation of a cotton joint venture between Phetwane farmers and a private investor. Different phases of the joint venture are examined, starting from inception, through cotton growing and harvesting, to the post-harvest phase.

5.8.1 INCEPTION PHASE: SEPTEMBER TO DECEMBER 2003

Commercialization of agricultural production began in Phetwane late in 2003 with preparations for the growing of cotton in a joint venture between farmers and Noordelike Sentrale Katoen (NSK), a private investor based in Makopane (erstwhile Potgietersrus) within the Limpopo Province. The selection of cotton was largely determined by opportunities presented by an increase in the capacity of existing ginneries and a concomitant increase in the demand for raw cotton. According to NSK management, the company's decision to enter into joint ventures with small-scale irrigation farmers was influenced mainly by the Limpopo provincial government's policy statement that joint ventures were an important part of agricultural reform⁸⁸. By entering into partnerships with the farmers, NSK considered that the company could increase acreage from which it sources cotton, while at the same time addressing corporate social responsibility issues through black economic empowerment. There was therefore a perceived convergence of interests of both government and private investor.

The selection by the Limpopo Department of Agriculture and IDT of cotton, which is a relatively low value but high cost crop was questioned by actors in various circles, including research institutions, government, NGOs and the private sector. There were questions about the rationale behind opting for small-scale irrigation farmers to grow cotton, which at the time commanded a market price of R4000 per ton (R4 per kilogram), as opposed to opting for lower cost-higher value crops, such as wheat. Phetwane farmers also expressed their apprehensions about the riskiness of growing cotton, which they were not familiar with and which, in the case of crop failure, would pose problems of food security for their households. However, their need for money influenced their decision to enter into the joint venture. In spite of questions over the riskiness of the venture, a contract was signed by

⁸⁸ Meeting with NSK Director, Dr Graham Gerber, and his team of employees responsible for implementing cotton joint ventures in Limpopo, held in Mokopane (formerly Potgietersrus) on 15 October, 2004.

members of the Upper Arabie Trust executive committee, on behalf of Phetwane farmers, and senior managers of NSK. IDT facilitated the partnership arrangement.

NSK committed to supplying production inputs, financial capital, infrastructure, personnel and markets. The financial capital contributed by NSK was R500 000, which matched the contribution by Limpopo Department of Agriculture. The money was spent on planting seed, fertilizers, herbicides, insecticides, irrigation labour costs, hiring of additional personnel, irrigation transport costs, land preparation costs, maintenance costs for irrigation equipment and fences, water pumping costs, electricity, diesel, aerial spraying, insurance and a ten-year loan for infrastructure such as pipes. NSK undertook to impart production skills to farmers through formal training and practical demonstration in the field. Farmers, on the other hand, committed to availing their land to the joint venture, growing cotton under the guidance of NSK and selling the harvested cotton and cottonseed to NSK. Farmers also undertook to accept NSK's instructions relating to choice of seed varieties, applications of fertilizers, herbicides and pesticides and any other production-related responsibilities as directed. Conditions of the contract clearly stated that the cotton produced belonged to the farmers and guaranteed that NSK would buy the crop at market value. The contract made allowance for the joint venture to continue for three years, on condition that the partnership ran according to plan. Although the private investor could exit after fulfilling obligations to enhance farmers' sustainability in commercial production, there was a possibility to extend the partnership if farmers deemed it necessary.

One *proviso* was that NSK would enter into the joint venture contract with Upper Arabie legally constituted as a WUA. Contracts were therefore not entered into with individual farmers or individual farmers' associations, such as PFA, but collectively with all registered ploholders in Phetwane through Upper Arabie Balemi Trust, which was an umbrella organisation. Other *provisos* were that the provincial Department of Agriculture would assume responsibility for rehabilitating pumps stations, while implementing agents would facilitate communication with farmers and training of farmer in various aspects of commercial production management.

Although the conditions of the contract stipulated that profits and debts would be shared equally, perceptions between farmers and the private investor differed. NSK senior

management concurred that profits and debts were to be shared equally. In addition to that, the private investor also undertook to reinvest 50 per cent of their profit towards cotton production in the following season⁸⁹. According to Phetwane farmers, however, they were entitled to 50 per cent of the profits, while NSK would get 12 per cent and earmark the remaining 37 per cent for reinvestment into joint cotton production in the following season. The reason for discrepancy of understanding was not entirely clear but seemed to be linked to a change-over of implementing agencies from IDT to Ndzalo.

The view held by a number of institutional actors was that when IDT brokered the joint venture deal, the implementing agent did not facilitate organizational development of the PFA Management Committee. Consequently, all communication between NSK and farmers was through the Phetwane farm manager. This accounted for the farmers' constant refrain that NSK did not consult them about decisions but simply instructed the farm manager to tell them what was to be done. Farmers became concerned about the inappropriateness of communication and lack of participatory decision-making, and they began to question the purported 'partnership' in the joint venture. They could not call upon IDT to assist since the implementing agent was winding down operations in anticipation of the end of contract in March 2004. At the same time, the replacement of IDT by Ndzalo was not yet complete. The communication and participation problem became partly resolved following Ndzalo's facilitation of a project management framework that placed Upper Arabie Trust at the centre of RESIS project administration and PFA within the existing community level institutional set-up. By that time, however, the contract was already in place, together with the variance in perceptions.

Although the communication and participation problem was often ascribed to IDT's oversight of the need to develop the organizational capacity of PFA, the problem seemed more to the point an issue of power relations between joint venture partners. The financial clout commanded by NSK was pitted against the poverty and lack of commercial production skills of smallholders. It was perhaps not surprising therefore that, in the absence of a conscious effort by IDT to ensure equitable stakeholder participation, power dynamics emerged.

⁸⁹ Meeting with NSK Director, Dr Graham Gerber, and his team of employees responsible for implementing cotton joint ventures in Limpopo, Meeting held at Mokopane 15 October 2004.

5.8.2 COTTON GROWING PHASE: JANUARY TO MAY

In spite of differences over the content and implementation of the joint venture contract, preparations for cotton production began in November 2003. A major setback was soon encountered. This was with regard to a delay in the supply of fertilizer, which was a critical input factor at planting stage. NSK alleges that during discussions on the joint venture contract, IDT had declined to assume responsibility for sourcing inputs, citing a lack of capacity to do. At the time of planting, after NSK had obtained quotes for fertilizer, IDT halted the imminent purchase and instead came up with a different supplier, whose quote was much higher. NSK management alleges that there was a personal connection between the supplier and the IDT officer responsible. This resulted in a delay in the supply of fertilizer, and consequently delays in planting. Planting and irrigation began in January 2004.

A high degree of enthusiasm was observed among smallholders, who were mostly pensioners⁹⁰. This was due to anticipation of high income from cotton. The smallholders' view was that the joint venture would be a success if the income justified expenditure, in terms of capital, labour and other costs. Each day, many went to their irrigated plots very early in the morning and carefully tended the cotton plants until late in the afternoon. A few smallholders hired workers to assist with day-to-day tasks on the plots. It was as if the elderly among farmers had been given a new lease of life. Most of these recalled with fond memories the esteem they acquired from their "successful" involvement in a past commercial farming venture with "AMS" in the 1970s. Success, in that instance, was measured by the number of 90 kilogram bags of grain that farmers got from each harvest after production costs had been deducted. Success was also measured in terms of the food security enjoyed by plotters' households. Alongside maize and wheat, farmers had been able to grow vegetables for sale and for household consumption. Amid all the optimism and positive recollections of the past, however, there were a few voices of dissent by elderly women farmers. One stated:

In the past we used to eat well from this land. We used to grow beans, spinach, pumpkins and mealies in our plots. Now we stand on the outside and look over the

⁹⁰ Fieldwork between April and July 2004.

fence, watching the big tractors growling away, “grrrr...grrrr.....grrrr”, as they prepare the land for cotton. We cannot eat cotton...

At the beginning of planting in January, 46 of the 47 farmers registered with the joint venture were each paid R200 for availing their land to the joint venture. There were no records of payment to the 47th farmer, who was a woman aged 65 years and who the PFA management committee confirmed was actively involved in the joint venture. The treasurer of the PFA acknowledged that official records of the joint venture were inaccurate. The treasurer alluded, for example, to the fact that plot numbers assigned to plottolders were mismatched. There was also mention of about twenty other farmers who actively participated in the joint venture, using plots located downstream of the original boundaries of the irrigation scheme, whose names did not appear on the list. This raised questions on the effectiveness of the implementing agent’s role, and indeed about who exactly benefited from the joint venture. The study was not able to obtain the view of the excluded woman farmer.

Records showed that during the five-month cotton growing phase from January to May, the same 46 farmers were paid money for labour relating to irrigation. Payments were at the rate of R180 per ha for four out of five months and R360 per ha in February (Table 28). The double rate for February was due to a need to rectify expenditure on production labour costs, which had been budgeted for duration of six months but shortened by late season planting to five months. Given the range of plot sizes from 0.5 to 1.86 ha, total earnings per farmer ranged from R561.60 to R2008.80 (Table 28). The lowest paid farmer earned an average of R112.32 per month while the highest paid earned R401.76.

TABLE 28 PHETWANE: EARNINGS PER FARMER FOR IRRIGATION-RELATED LABOUR, 2004

Plot number	Plot size (ha)	Name of farmer (Pseudonym)	Gender	Age	Earnings in Rands (R)*					
					Jan	Feb	Mar	Apr	May	TOTAL
1	1.51	Mosate Mmabatho	F	74	271.80	543.60	271.80	271.80	271.80	1630.8
2	1.17	Shatile Mmaletsatsi	F	56	210.60	421.20	210.60	210.60	210.60	1263.6
3	1.13	Sekgoma Karabo	F	84	203.40	406.80	203.40	203.40	203.40	1220.4
4	0.77	Mosate Morago	F	61	138.60	277.20	138.60	138.60	138.60	831.6
5	0.77	Matsatsi Isabel	F	69	138.60	277.20	138.60	138.60	138.60	831.6
6	1.27	Dlamini Mokgadi	F	74	228.60	457.20	228.60	228.60	228.60	1371.6
7	0.96	Masinini Mago	F	59	172.80	345.60	172.80	172.80	172.80	1036.8
8	1.14	Maloba Mopelo	F	62	205.20	410.40	205.20	205.20	205.20	1231.2
9	1.07	Makuku Magdalena	F	61	192.60	385.20	192.60	192.60	192.60	1155.6
10	0.91	Malapane Maseta	F	76	163.80	327.60	163.80	163.80	163.80	982.8
11	0.95	Malapane Norby	M	46	171.00	342.00	171.00	171.00	171.00	1026
12	0.97	Makuku Raishaka	F	86	174.60	349.20	174.60	174.60	174.60	1047.6
13	0.92	Sekgoma Mathakge	F	69	165.60	331.20	165.60	165.60	165.60	993.6
14	1.02	Maganedisa Madila	F	75	183.60	367.20	183.60	183.60	183.60	1101.6
15	1.06	Modipelo Modireng	F	65	190.80	381.60	190.80	190.80	190.80	1144.8
16	0.94	Sekgoma Ntoane	F	76	169.20	338.40	169.20	169.20	169.20	1015.2
17	0.84	Mahlomongwe Ramofe	M	70	151.20	302.40	151.20	151.20	151.20	907.2
18	0.94	Mamasela Setlhare	M	86	169.20	338.40	169.20	169.20	169.20	1015.2
19	1.06	Matema Ramaina	F	71	190.80	381.60	190.80	190.80	190.80	1144.8
20	1.1	Lekotse Baruti	M	40	198.00	396.00	198.00	198.00	198.00	1188
21	0.99	Mmamadi Kagiso	F	61	178.20	356.40	178.20	178.20	178.20	1069.2
22	1.86	Bosepele Aganang	M	74	334.80	669.60	334.80	334.80	334.80	2008.8
23	1.2	Maina Maria	F	66	216.00	432.00	216.00	216.00	216.00	1296
24	1.17	Kodumela Selina	F	66	210.60	421.20	210.60	210.60	210.60	1263.6
25	1.19	Naledi Ramathosa	F	75	214.20	428.40	214.20	214.20	214.20	1285.2
26	1.21	Dlamini Louis	M	93	217.80	435.60	217.80	217.80	217.80	1306.8
27	1.23	Lekotse Masetlha	F	67	221.40	442.80	221.40	221.40	221.40	1328.4
28	1.21	Mashinini Lekgotlha	M	59	217.80	435.60	217.80	217.80	217.80	1306.8
29	1.25	Motsephiri Ramakhene	M	102	225.00	450.00	225.00	225.00	225.00	1350

30	1.23	Nkgadime Mopelong	F	74	221.40	442.80	221.40	221.40	221.40	1328.4
31	1.2	Magannedisa Makgatho	F	60	216.00	432.00	216.00	216.00	216.00	1296
32	1.22	Lekotse Lethaba	M	44	219.60	439.20	219.60	219.60	219.60	1317.6
33	1.17	Mashinini Willard	M	71	210.60	421.20	210.60	210.60	210.60	1263.6
34	1.19	Mmogopolong Kgari	M	58	214.20	428.40	214.20	214.20	214.20	1285.2
35	1.26	Mmogopolong Modikeng	F	53	226.80	453.60	226.80	226.80	226.80	1360.8
36	1.14	Makomoto Modire	F	60	205.20	410.40	205.20	205.20	205.20	1231.2
37	1.18	Balope Martha	F	65	212.40	424.80	212.40	212.40	212.40	1274.4
38	?	-	-	-	-	-	-	-	-	-
39	1.23	Leshalaba Kgaityadi	F	81	221.40	442.80	221.40	221.40	221.40	1328.4
40	1.25	Magannedisa Witbooi	M	86	225.00	450.00	225.00	225.00	225.00	1350
41	1.19	Sodindwa Sarah	F	60	214.20	428.40	214.20	214.20	214.20	1285.2
42	1.24	Mankgopotse Mmamaina	F	78	223.20	446.40	223.20	223.20	223.20	1339.2
43	1.26	Magannedisa Malefatshe	F	73	226.80	453.60	226.80	226.80	226.80	1360.8
44	1.29	Maina Katlhego	M	69	232.20	464.40	232.20	232.20	232.20	1393.2
45	1.23	Segasese MATHema	F	76	221.40	442.80	221.40	221.40	221.40	1328.4
46	0.52	Magannedisa Maria	F	70	93.60	187.20	93.60	93.60	93.60	561.6
47	1.00	Maimane Mooketse	M	64	180.00	360.00	180.00	180.00	180.00	1080
48	?	Shatile Modike	F	65	ND	ND	ND	ND	ND	0
49	?	-	-	-	-	-	-	-	-	-
TOTAL PAID					9289.80	18579.60	9289.80	9289.80	9289.80	55738.80

There were differing perceptions at village level on the exact purpose of the payments made from January to May. Members of the PFA management committee, the Phetwane farm manager and the agricultural extension officer, on the one hand, asserted that the payments were 'allowances' to enable farmers to subsist until they received payment after the harvesting and sales of cotton. Phetwane farmers, on the other hand, considered that the payments were 'remuneration' for their labour. While such divergence might have been due to differences in interpretation, equally, the difference might have been due to a distortion of terminology during translation from Afrikaans into sePedi when information was imparted to farmers. Nevertheless, production account records specifically stated that these payments were 'labour costs'. Production accounts also showed that labour costs were paid out as loans to farmers. The loans were to be deducted from the farmers' income after cotton sales. By the end of the cotton growing season towards the end of May, the total collective loan to farmers was R55 738.80, minus interest charges.

5.8.3 COTTON PICKING PHASE: JUNE TO AUGUST 2004

Cotton picking began at the end of May 2004 and continued until the beginning of September. Farmers were still enthusiastic and optimistic about the expected income. As they picked cotton, they wore no protective clothing and their hands and fingers got lacerated. The hard work resulted in many aching backs, hands and legs among the largely elderly group of farmers. Many hired paid labour to assist with cotton picking tasks.

Early in the cotton picking season, farmers expressed two concerns⁹¹. The first was that the scheme was experiencing water shortage due to drought and the subsequent drying up of the small Lola Montes Dam from which Phetwane Irrigation Scheme obtained water. Since the scheme did not have alternative sources of water, such as abstractions from the Olifants River or Flag Boshielo Dam, water shortage caused a degree of apprehension about the sustainability of the joint venture and future commercial farming in Phetwane. The second concern was about high costs of hired labour.

⁹¹ Fieldwork between April and July 2004.

Although the joint venture budget allowed for cotton picking costs at a rate of R0.40 per kilogram, in many cases farmers were compelled to pay workers R20 per day. No mechanisms were put in place to ensure that the workers' rate of pay did not exceed budgeted labour costs. The PFA management committee, Ndzalo and the farm manager anticipated problems with the labour arrangements that farmers were individually entering into, but could not intervene effectively. Many farmers were not fully aware of the risks involved. Even if they were, they had no choice but to accept the price determined by workers or face the prospect of losing much of their cotton crop. Many farmers therefore rejected advice by the PFA management committee, Ndzalo and the farm manager and adopted various strategies to cover costs of hired labour. Some attempted to manage risk by working together with their workers on the plots and paying them amounts lower than the average daily charge of R20. That way, they managed to reduce their labour costs. Others used their entire remuneration for cotton picking labour to pay hired workers R20 per day, but still owed workers by the end of the cotton picking season. These farmers, who were mostly pensioners, were then forced to use their pensions to pay off labour-related debts.

Joint venture records showed that, for the three months of cotton picking, 46 of the 47 registered farmers were paid a total of R35 595.88 for their labour (Table 29). The rate of remuneration was R0.40 (40c) per kilogram (kg) of cotton. The highest paid farmer, a woman aged 61 years, got R1808.40 while the lowest paid received R211.60. The study examined remuneration for cotton picking in relation to cotton yields.

Collectively, farmers harvested a total of 61 200kg. The productivity rate was 1 224kg per ha, which was lower than the projected 2200 to 2500kg per ha (i.e. 49 – 56 per cent of projection). The yield achieved by the highest paid farmer was 4521.2kg per ha, which was roughly twice the value of the projected yield. The lowest paid farmer achieved a yield of 410kg per ha, which is less than 25 per cent of the projected yield. Although the farmer holding the largest plot (1.86ha) received a total payment of R2008.80 for irrigation labour and R1319.68 for cotton picking labour (Table 29), the farmer achieved a yield of 1773.8kg per ha, which was below the projected yield. By contrast, the farmer holding the smallest plot (0.52ha) received R561.60 for irrigation labour but did not harvest any cotton, thereby getting no pay.

TABLE 29 PHETWANE: EARNINGS FROM COTTON PICKING AT R0.40 PER KILOGRAM, 2004

Plot Number	Plot size (ha)	Name of farmer*	Gender	Age (in years)	June	July	August	TOTAL	Average earnings per month
1	1.51	Mosate Mmabatho	F	74	285.2	285.2	100.8	671.2	223.73
2	1.17	Shatile Mmaletsatsi	F	56	557.6	557.6	165.2	1280.4	426.8
3	1.13	Sekgoma Karabo	F	84	222	222	210.8	654.8	218.27
4	0.77	Mosate Morago	F	61	296.8	296.8	60.4	654	218
5	0.77	Matsatsi Isabel	F	69	317.8	349.2	141.2	808.2	269.4
6	1.27	Dlamini Mokgadi	F	74	590.4	317.8	183.6	1091.8	363.93
7	0.96	Masinini Mago	F	59	280.4	590.4	110.8	981.6	327.2
8	1.14	Maloba Mopelo	F	62	510	280.4	244	1034.4	344.8
9	1.07	Makuku Magdalena	F	61	860.4	510	438	1808.4	
10	0.91	Malapane Maseta	F	76	389.6	860.4	310.8	1560.8	520.27
11	0.95	Malapane Norby	M	46	948.8	389.6	372.4	1710.8	570.27
12	0.97	Makuku Raishaka	F	86	562	948.8	124	1634.8	544.93
13	0.92	Sekgoma Mathakge	F	69	335.32	562	179.2	1076.52	358.84
14	1.02	Maganedisa Madila	F	75	753.2	335.32	325.2	1413.72	471.24
15	1.06	Modipelo Modireng	F	65	633.76	753.2	225.6	1612.56	537.52
16	0.94	Sekgoma Ntoane	F	76	0	633.76	146.4	780.16	260.05
17	0.84	Mahlomongwe Ramofe	M	70	409.6	409.6	62	881.2	293.73
18	0.94	Mamasela Setlhare	M	86	576.8	576.8	259.6	1413.2	471.7
19	1.06	Matema Ramaina	F	71	390.12	390.12	206.8	987.04	329.01
20	1.1	Lekotse Baruti	M	40	419.6	419.6	293.2	1132.4	377.47
21	0.99	Mmamadi Kagiso	F	61	595.2	595.2	292.8	1483.2	494.40
22	1.86	Bosepele Aganang	M	74	532.04	532.04	255.6	1319.68	489.39
23	1.2	Maina Maria	F	66	366.4	366.4	267.6	1000.4	333.47
24	1.17	Kodumela Selina	F	66	348.4	348.4	142.4	839.2	279.73
25	1.19	Naledi Ramathosa	F	75	481.2	481.2	125.2	1087.6	362.53
26	1.21	Dlamini Louis	M	93	321.6	321.6	446	1089.2	363.07
27	1.23	Lekotse Masetlha	F	67	363.2	363.2	270.4	996.8	332.27
28	1.21	Mashinini Lekgotlha	M	59	0	0	0	0	0
29	1.25	Motsephiri Ramakhene	M	102	0	0	0	0	0
30	1.23	Nkgadime Mopelong	F	74	0	0	0	0	0

31	1.2	Magandedisa Makgatho	F	60	0	0	0	0	0
32	1.22	Lekotse Lethaba	M	44	0	0	0	0	0
33	1.17	Mashinini Willard	M	71	0	0	0	0	0
34	1.19	Mmogopolong Kgari	M	58	95.2	95.2	128	318.4	106.13
35	1.26	Mmogopolong Modikeng	F	53	182.8	182.2	65.6	430.6	143.53
36	1.14	Makomoto Modire	F	60	175.2	175.2	151.6	502	167.33
37	1.18	Balope Martha	F	65	70.4	70.4	86.8	227.6	92.53
38	?	-	-	-	-	-	-	-	-
39	1.23	Leshalaba Kgaitzadi	F	81	179.6	179.6	114.8	474	158
40	1.25	Magandedisa Witbooi	M	86	238	238	136	612	204
41	1.19	Sodindwa Sarah	F	60	69.6	69.6	187.6	326.8	108.93
42	1.24	Mankgopotse Mmamaina	F	78	90.4	90.4	200.8	381.6	127.20
43	1.26	Magandedisa Malefatshe	F	73	190.4	190.4	148	528.8	176.27
44	1.29	Maina Kathego	M	69	0	0	211.6	211.6	70.53
45	1.23	Segasese MATHema	F	76	194	194	190.4	578.4	192.80
46	0.52	Magandedisa Maria	F	70	0	0	0	0	0
47	1.00	Maimane Mooketse	M	64	0	0	0	0	0
48	?	Shatile Modike	F	65	ND	ND	ND	ND	ND
49		-	-	-	-	-	-	-	-
TOTAL EARNINGS BY 46 FARMERS					13833.04	14181.64	7581.2	35595.88	

[* Psuedonyms used]

Such data showed that there were wide variations in achievements by different farmers, despite that all farmers had been given the same allowances and proportional payments for labour. The total yield collectively achieved by Phetwane farmers was significantly lower than projected.

Projections of income had been premised on farmers' achieving high grade (HA/A1) cotton. While the early harvest in June achieved this grade, subsequent harvests were of lower grade (HB/A1 and (HBSG/BSG), owing to water shortage on the scheme. NSK records show that, after deductions of the ginning fee, transport, Nakpo levy and cotton levy, Phetwane farmers' income from cotton fell from the projected R4000 per kg to R3500 per kg. The implication of this, and the lower than projected quantity and quality of yield, was that the joint venture as a whole made a loss. The nature of gearing (according to De Klerk, 1996) in the Phetwane case could not be accurately determined, owing to the fact that many of the elderly and illiterate farmers did not keep records of the actual labour costs they incurred outside of the joint venture framework. However, it is reasonable to surmise that, since the actual labour costs evidently exceeded the budget⁹² and the projected income from cotton fell by 12.5 per cent, the debt component for the smallholders' share of production costs was much higher than anticipated.

5.8.4 POST-PRODUCTION PHASE: SEPTEMBER 2004 TO JULY 2006

Within the study, joint venture success or failure was measured by the extent to which the venture met its objectives. At the same time, the importance of Phetwane people's perceptions could not be overlooked. This section gives a post-mortem examination of the cotton joint venture, paying particular attention to people's perceptions but not losing sight of the RESIS project objectives.

Following failure of the joint venture to meet income objectives, LDA, NSK and Ndzalo were faced with the difficult task of deciding how to deal with the problem. LDA was concerned

⁹²The joint venture budget covered a fraction of the farmers' actual labour costs, for example, 23% and 47% of those for Mmabatho Mosate of Isabel Matsatsi (see Box 10 and Table 29).

about implications of the setback on future plans to promote agricultural commercialization in smallholder irrigation schemes and to build the capacity of farmers to manage such schemes. NSK was concerned about cutting losses of the 2004 season and going ahead with other future plans. Actors from key stakeholder institutions reassured the management of NSK that the losses incurred by smallholders did not constitute debts since the R500 000 subsidy from government was a grant and not a loan to farmers. As a result NSK became willing to continue with the joint venture in 2005 and to rectify mistakes of the previous season. Farmers, however, were deeply disappointed (Box 9) and for many months after losses were announced, they were vehemently against having anything to do with NSK or any other externally-based institutional actors.

Box 9 Example of Phetwane farmers' disappointment with the joint venture

Witbooi Maganedisa, elderly male pensioner aged 86 years old bitterly stated:

"The crooks came and made us grow cotton, making us believe it was ours, and yet they knew we were harvesting it for them... My heart is aching (*Mosadi oa batho, pelo ibotlhoko*). If I stop and talk to you about issues of the scheme, I will collapse and die..."

A major source of discontent was the debts that farmers incurred through hiring labour at R20 per day. By the end of the cotton picking season, many still owed workers. Pensioners among the farmers were forced to use their pensions to pay off labour-related debts, resulting in food insecurity within their households (Box 10). Debts snowballed as these households were compelled to obtain loans from other community members to buy food or to obtain food on credit from local retailers (Box 10). Such households were caught in the debt trap for many months after the cotton picking season.

Box 10 Examples of experiences with food insecurity and debts after the joint venture

Isabel Matsatsi, female pensioner, 69 years old:

“Hiring labour [for cotton picking] cost me R900. I used all the money I got from the joint venture, roughly R200 per month, to pay workers and also paid them partly from my pension, at R20 per day...I now owe the shop money for food and my debts are increasing with interest. I do not know how I will survive... I live with two sons who are unemployed. One of them is divorced and his two children also live with me. The mother of the children works for government and is therefore not eligible for child support. However, she gives us mealie meal [25kg], sugar [2.5kg], cooking oil [2.5l], tea leaves [250g], laundry soap [1kg], bath soap, *vaseline* [skin emollient] and a few small items every month. This is what has been keeping us going since our problems started [following the joint venture]”. [The researcher calculated the value of this support with Isabel, and came to a figure of about R170 of support per month.]”

Mmabatho Mosate (aged 74) and extended family, who share use of her plot:

“We hired five people to pick cotton. We still owe them after paying them part of their money. We paid them R20 per day, and paid out a total of R400. We still owe them R1780. These people want their money...”

“Our hope was that we would pay them from earnings after cotton sales....”

“It is difficult...In this home we get money from two pensions. This amounts to R1480. It is not easy to see how we will manage to pay the workers.”

“We have two food gardens and we did grow some vegetables – spinach, beetroot, onion and cabbage – despite that most of our time was taken up by the joint venture. The gardens have not done very well though.”

“Although we want to grow more crops, we do not have money to buy seeds and manure [fertilizer]. Water is also a problem.”

UNIVERSITY of the

In their analyses of the cotton joint venture, farmers compared the venture with a previous, apartheid era joint venture and surmised that the previous venture was better (Box 11). Farmers were unhappy that the joint venture contract treated them collectively, were particularly dissatisfied with their collective assumption of losses irrespective of levels of productivity.

Box 11 Smallholders' perspectives on performance of RESIS joint venture and ensuing hardship

Isabel Matsatsi, female pensioner, 69 years old:

"Before the joint venture with NSK, I made R3000 from wheat per year. Our decision to grow cotton was influenced by the theft of cables and pipes [towards the end of 2003]. There was therefore no water. Expected earnings from cotton were also higher than for wheat. I picked over 1 ton of cotton [she actually picked over 2 tons!] but got absolutely nothing..."

Mmabatho Mosate (aged 74) and extended family, who share use of her plot:

"Before the joint venture with NSK, we grew maize and wheat on the scheme. We used to get around 60 bags of maize, which was mostly for our own consumption. The maize would last the whole year. With wheat, we would get 84 bags, which we would sell at R90 per bag..."

Ntoane Sekgoma, woman pensioner aged 76:

"I have grown cotton before. I grew cotton after 1994 and sold it to OTK in Marble Hall. White people there could not believe an old woman like me could grow such high grade cotton, and one accused me of having stolen the cotton from white farms...I also grew wheat before the joint venture with NSK. I have continued to grow wheat since the 1970s, selling it in Marble Hall and getting good money. With that money, I managed to buy sufficient food for my family for the year. I also managed to send all my children to school. I know therefore that it is possible for black people to succeed in commercial farming.... Yes, I am disappointed by the cotton joint venture, but am determined to succeed... Since we have been told not to use our plots on the scheme, I will grow wheat in the space around my house [about 1.2ha]. I have already bought seed and fertilizer, as you can see the stock... [in the garage]. I have also hired a tractor and ploughed the land all around. All I am waiting for is the rain... There are some, however, who do not understand my attitude in this village. They have recently been accusing me of witchcraft because I seem to be progressing, whereas they are still struggling after the joint venture failure." [Ntoane died in her sleep in September 2005, a month after this conversation. Her plot was inherited by her eldest son, who subsequently became the chairman of the PFA management committee and reported being compelled to sign the strategic partnership with Temong cc "under the barrel of a gun" (see Section 5.9.1)].

In light of the farmers' unyielding reluctance to work with NSK, owing to failure by the joint venture to generate the envisaged incomes, the private investor accepted that the venture had to be discontinued. Officials of LDA were disappointed with this outcome and decided to review the Phetwane case. For about four years following the end of the cotton joint venture, production in the irrigation scheme came to a standstill. Although farmers were keen to grow food crops, such as maize, wheat, sunflower and vegetables, they were instructed to desist from using land on the scheme. One reason was that farmers owed a huge electricity bill for water supply costs related to cotton production. Another reason was that LDA planned to develop new high-technology 'floppy sprinkler' irrigation infrastructure in Phetwane and other irrigation schemes in the Upper Arabie Balemi Trust area. Prior to and during infrastructure development, farmers were not allowed to use the land. Local views were that exclusion of

smallholders from access to land in the scheme, particularly during rainy seasons, contributed to deepening food insecurity especially for households that had hitherto had singular or shared access to irrigated plots.

5.9 RESIS-RECHARGE: STRATEGIC PARTNERSHIP, 2008

5.9.1 INCEPTION OF STRATEGIC PARTNERSHIP

In November 2008 Phetwane smallholders, formally constituted as 'Phetoane Irrigation Farmers Cooperative', entered into a three-year strategic partnership with Temong cc, trading as Arthur William Creighton (AWC). This strategic partnership was preceded by a cotton joint venture between commercial plot holders and NSK, which ran from 2003 to 2004 and left smallholders indebted, food insecure and reluctant to enter into new contracts with private commercial agricultural enterprises (Section 5.8). During the four years that lapsed before smallholders entered into a strategic partnership agreement with Temong cc, LDA made a significant financial investment into the development of a new floppy sprinkler irrigation system to replace the older conventional sprinklers. LDA also sought to pacify Phetwane smallholders and re-gain their interest in contract farming. At that time, some of the children of elderly and deceased Phetwane smallholders joined the fray, purportedly in defence of their smallholders' rights.

According to the youth, their involvement was a defence of progenitorial land rights, through ensuring that their elderly parents did not get 'cheated' by external agencies. However, involvement of the youth might also have been a means to their gaining access to perceived financial benefits from strategic partnerships. Explanations that youth involvement was a defence of parental land rights pointed to a conflation of customary land tenure rules with land tenure rights formalization through PTOs. Regulations governing PTOs and issued in terms of the Bantu Areas Land Regulations (Proclamation R188 of 1969) granted exclusive lifetime usufruct rights. In practice, however, such rights in black rural communities were generally viewed to be rights in perpetuity, to be inherited by living spouses and/or their off-spring. Given that government interventions in Phetwane were perceived to harbour threats of alienating benefits from such land rights, the purported stance of Phetwane youth therefore resonated with traditional customs pertaining to land.

Despite evidence that there had been a marked deterioration of trust between smallholders and LDA, department officials did not sufficiently engage with smallholders to allay their concerns over possible losses of income. Rather, LDA's strategy was to encourage smallholders to again place their land, water and infrastructure resources at the disposal of a strategic partnership with Temong cc, which traded as AWC. This was done through an empowerment partner within Temong cc, who formerly worked for LDA as an extension officer based within the locality of Upper Arabie. Through the empowerment partner, Mr Lazarus Mosena, Temong cc by-passed smallholders and actively engaged with the traditional leader, *Kgoshi* (chief) Matlala, in order to get smallholders to agree to the strategic partnership.

The Temong cc empowerment partner was familiar with the local power dynamics and, in particular, was aware that many of the elderly smallholders had a strong allegiance to the chief. Such allegiance was demonstrated after failure of the cotton joint venture with NSK, when these smallholders appealed to Kgoshi Matlala, rather than elected councillors, for intervention. Elderly smallholders' respect for the authority of the chief was strongly linked to his customary role as custodian of land rights. This role had given Kgoshi Matlala power to allocate irrigation plots since 1957.

The chief's role in land allocation did not seem to have been weakened by the obsolescence of the Bantu Areas Land Regulations and emergence of the Communal Land Rights Act (CLRA) of 2004, which had yet to take effect. Under CLRA, the power of traditional leadership was, theoretically at least, counterbalanced with the power of elected members of land committees. PTOs or 'old order rights' were upgraded into 'new order rights', effectively meaning that smallholders' land rights remained secure. The persistence of elderly smallholders' allegiance to the chief also indicated that his power base was broader than land rights issues. It was entrenched in elderly smallholders' trust in the traditional governance system. Consequently, when Kgoshi Matlala accompanied Temong cc to a meeting held on 01 November 2008 to discuss the strategic partnership with smallholders, many of the elderly smallholders agreed with the chief that the contract was acceptable.

The chairperson of Phetoane Farmers Cooperative, who was heir to an elderly woman smallholder who passed away in 2005, and Mr Arthur Creighton, on behalf of Temong cc, signed the contract on 01 November 2008, witnessed by four people. Duration of the contract was to be from 01 November 2008 to 01 November 2011. Thereafter, Temong cc was to relinquish its shares either to Phetwane smallholders or to shareholders nominated by LDA as part of an “exit strategy”. According to some of the smallholders, the chairperson of Phetwane Farmers Association, re-constituted as Phetoane Irrigation Farmers Cooperative, was compelled to sign the contract before reading it. In the chairperson’s own words, he “signed under the barrel of a gun”.

5.9.2 INSTITUTIONAL ARRANGEMENTS

Sharing of costs and benefits within the partnership agreement was such that the two parties would each get a 50 per cent share of profits in each of the three years of the contract duration. As in the case of Makuleke, Temong cc assumed more active roles in the enterprise while smallholders became ‘equity labourers’, whose roles were effectively reduced to those of passive beneficiaries. As equity labourers, smallholders’ roles were largely to relinquish their access to land, water and infrastructure to the strategic partnership and to receive dividends at the end of each production and marketing cycle. This contrasts with the more active involvement of smallholders in crop production during the 2003 to 2004 cotton joint venture. Given that the most (82.6 per cent) of the smallholders on Phetwane are over sixty years old, it is perhaps not surprising that many were happy with the labour arrangement. Difficulties associated with cotton production labour had been a major source of grievance for the elderly smallholders, who were too infirm to do all work and were hence compelled to hire labour at their own cost.

Roles, responsibilities and obligations of Temong cc, Phetwane smallholders and the Limpopo Department of Agriculture were broadly according to the generic contract model used in many similar RESIS-Recharge strategic partnerships, except that between EBIS Trust and AWC. Active roles in the enterprise, however, were heavily skewed towards Temong cc. Phetwane smallholders played the role of passive ‘equity labourers’, who had very little influence over

decision making. As equity labourers, smallholders' roles were largely to relinquish their access to land, water and irrigation infrastructure to the strategic partnership and to benefit from dividends at the end of each production and marketing cycle.

In an effort to facilitate the strategic partnership, the provincial department of agriculture contributed substantial capital expenditure (R500 000 budgeted for 2008/2009 alone) towards developing floppy sprinkler irrigation in Phetwane. This was part of part of floppy sprinkler infrastructure development for all four schemes in the Upper Arabie Balemi Trust area. Although AWC preferred centre pivots, which he used in similar partnerships with smallholders of Makuleke (Chapter 6) and Elandskraal, he was willing to work with smallholders using the floppy sprinkler system⁹³.

5.9.3 CONTRACTUAL FLAWS

Evidence showed that the Phetwane contract was flawed both in the process of inception and in the technical and substantive contents. Firstly, there were procedural irregularities created by failure to respect the democratic principle in engagements with smallholders. Secondly, when the chairperson of Phetwane's management committee signed the contract, smallholders believed that they were entering into a partnership with Mr Arthur William Creighton (AWC) and not Temong cc. Clause 8 of the contract identified Arthur William Creighton as the strategic partner. It was only after smallholders scrutinized a copy of the signed contract that they realized that the agreement contained various confusing statements about the partner they had contracted with. The front page of the Memorandum of Agreement, which was not signed by the chairperson of the smallholders' group, clearly identified the partner as "Temong cc trading as Mr Arthur William Creighton (AWC) and duly represented by Mr Arthur William Creighton". Clause 5.1.3 of the contract and small print at the bottom of each page and on the last page also mentioned Temong cc. However, all other references to the strategic partner within the contract referred to "Arthur William Creighton", not to Temong cc. This and the fact that the existence of the empowerment partner was not made explicitly clear at the meeting of

⁹³ Meeting with Mr Arthur William Creighton at Modimolle (formerly Nylstroom): 14 March 2008.

01 November 2008 might account for the view among the younger and more literate of Phetwane smallholders that Temong cc did not negotiate in a transparent manner.

Smallholders also realized that the contract had other technical errors after they had entered into the agreement. An example of such errors was the discrepancy between the reference to “PFIC”, which Clause 5.1.3.1 explained was abbreviation for Phetoane Farmers Irrigation Cooperative, and reference in Clause 13.3 to “SIFC”, which Phetwane smallholders have queried. While errors such as this might have been due to shoddy revision of the cut-and-paste generic contract template, the fact that there were typographical errors in a legally binding document brought into question the level of quality control exercised by those administering the drafting of strategic partnership contracts.

5.9.4 DISSATISFACTION OVER POWER AND FINANCIAL ACCOUNTING ISSUES

As in the case of all other RESIS-Recharge strategic partnership contracts except that between EBIS Trust and AWC, a distinctive feature of the Phetwane strategic partnership agreement was that the contract, as an institutional arrangement, governed relationships primarily between smallholders and private investors. The contract also governed relationships between these contracting parties and LDA, as responsible authority. Theoretically at least, the contract remained critical to allocating degrees of power and control among these three parties. This was irrespective of the possibility that the power of private capital might otherwise have curtailed the exercise of power by LDA and smallholders. The involvement of LDA was based on an assumption that the government department would ensure that AWC complied with obligations to train smallholders, among other contractual requirements. The background to LDA’s involvement was that past experience had shown that smallholder institutions generally did not have sufficient capacity to deal with power dynamics associated with engagements with private investors.

Despite LDA’s involvement in the contractual arrangement, the more educated and younger among Phetwane smallholders saw themselves as having been deprived of much of their power. For example, Phetwane smallholders were not happy with clauses such as Clause 12.3,

which stated that “shareholders of the Partnership will not be entitled to transfer their shares freely”. In light of the fact that the younger smallholders contested the merits of awarding 25 per cent of shares to Temong’s ‘black empowerment partner’ from outside the ranks of local farmers, this clause restricted transfer of the contested shares to Phetwane smallholders. Of particular concern was that consideration of such transfer was subject to consent by LDA. The black empowerment partner in question was a former employee of LDA and smallholders feared that LDA officials might adjudicate in favour of their former colleague. Dissatisfaction with Clause 12.3 also related to perceived restrictions of smallholders’ degrees of freedom in making decisions that would affect their lives. Furthermore, there were perceptions that the contract accorded LDA inordinate decision making powers, whereas smallholders’ long-standing PTOs or old order rights gave them a significant stake, in terms of secure land tenure rights, in interventions in Phetwane Irrigation Scheme. Effectively, the younger among smallholders felt disempowered by the strategic partnership contract, while the same contract empowered external black individuals at the expense of land rights holders.

Another contentious issue raised by younger and better educated among Phetwane smallholders was the lack of transparency and accounting relating to accrued interest from a government grant of R500 000, which was deposited into a trust account on behalf of Phetwane smallholders. Although the study was not able to verify this information, it resonated with allegations by Elandskraal smallholders about earlier conduct by Temong’s empowerment partner.

5.9.5 IMPLEMENTATION OF CONTRACT

Although the Phetwane strategic partnership contract was signed in 2006 with a view to commencing implementation on 01 November 2008, by October 2009 this strategic partnership had yet to be implemented. A major constraint, according to smallholders, was that the floppy sprinkler system was not yet functional.

Despite delays to project implementation, five labourers from Phetwane underwent training in various operational skills. Two of these were trained as pump operators, two were trained in

health and safety issues and one worker got training in operating the floppy irrigation system. The training was part of skills development for Upper Arabie Balemi Irrigation Trust area. Five people from each of the four irrigation schemes comprising the trust area took part in the training session. Beyond this, there was no other implementation activity by the time the study was concluded in 2009.

5.10 SUMMARY

Prior to the RESIS project, the history of Phetwane revolved around the creation and dismantling of an apartheid framework for social security in labour reserve. An essential feature of such reserves was the marginalization of the majority of indigenous people from the mainstream economy. Marginalization remained a defining feature for rural communities, such as Phetwane. Although post-1994 reforms had sought to address challenges of poverty and inequality, an immediate result of the sudden withdrawal of subsidies was a deepening of food and livelihood insecurity for resource-poor small-scale farmers and rural communities living in neighbourhoods of irrigation schemes. Phetwane Irrigation Scheme, in particular, virtually ceased to function and infrastructure deteriorated, while levels of uncertainty and insecurity among smallholders, farm workers and the broader local community increased as hunger, unemployment and poverty reportedly took their toll.

In light of consequences such as these, the LDA initially prioritized both commercial production and food security objectives in the design of RESIS. The longer term plan by the department was eventually to transfer irrigation management to farmers, in accordance with similar developments in many countries globally. As the RESIS programme unfolded, however, there was a shift away from objectives of commercial crop production and livelihood and food security towards a greater emphasis on infrastructure development, strategic partnerships for integrating smallholders to agri-business. State interventions during both the RESIS and RESIS-Recharge phases had critical implications for livelihoods of individuals, households and the community, and conversely, affected members of Phetwane community responded in ways that significantly affected institutional arrangements and interventions.

Some particularly significant responses to effects of RESIS and RESIS-Recharge interventions, among other concomitant factors, were increases in informal fishing and home gardening activities. Whereas informal fishing had hitherto been viewed to be a subsistence and recreational activity that augmented household food supplies, the activity grew in proportion and became commercially orientated. In light of the open access scenario that developed due to an influx of larger informal commercial fishers from distant locations, Phetwane fishers called for assistance in averting possible threats to the security of their livelihoods. By contrast, home gardens were said to have been encouraged by a rain water harvesting project, which sought to enhance local food security. However, instead of collecting rain water, many Phetwane households 'cannibalized' state-funded water reticulation infrastructure by making illegal water connections and watering gardens. That way, they avoided paying for water services in excess of free basic water (6000 litres), but this has negative effects on water availability in downstream communities (Tapela, 2009).

A challenge for the study was that these coping strategies, while evidently linked to RESIS and RESIS-Recharge interventions, also had a complexity of other causal factors. For example, there was a concomitant increase in food prices nationally in 2005, which contributed to the adoption of alternative livelihood strategies. The influx of outsider commercial fishers from other parts of Limpopo Province also seems to have influenced decisions by local fishers to diversify from informal subsistence and recreational fishing to include commercially orientated exploitation of fisheries.

There seemed to be a need for interventions to, firstly, recognize the socio-economic differentiation of resource-poor irrigation farmers and thereby develop appropriately targeted smallholder support initiatives. Secondly, there appeared to be a need for agricultural interventions to recognize links between farm-based and off-farm livelihoods, and be designed accordingly.

CHAPTER 6

MAKULEKE IRRIGATION SCHEME



6.1 INTRODUCTION

Makuleke Irrigation Scheme is part of Cluster 4 of the Limpopo provincial RESIS Programme, which consists of a total of eight (8) schemes located close to or within the lower reaches Levubu River Basin (Table 30). The irrigation scheme is located outside the Levubu River Basin and within the catchment area of Mphongolo River. The latter is a tributary of the Shingwedzi River, which in turn is a tributary of the Olifants River. Both the Olifants and the Levubu Rivers are tributaries of the Limpopo Watercourse System.

TABLE 30 CLUSTER FOUR OF RESIS PROGRAMME SCHEMES IN LIMPOPO

Name of Scheme	Spatial Area	Number of Farmers
Homu	165	22
Lambani	44	50
Makuleke	239	243
Malavuwe	26	24
Mangondi	17	59
Matsika	102	47
Morgan	75	24
Tshaulu	150	69
Total	1831	1499

Source: Limpopo Department of Agriculture (2002:46)

In 2002, Makuleke Irrigation Scheme was included in the “Water Care” Programme, a sub-programme of RESIS Phase 1. Since then, emerging commercial farmers in the smallholder irrigation scheme had been involved in a series of contractual joint venture and strategic partnership arrangements (Table 31). Farmers had received substantial financial, material, technical and managerial support from government, private investors and non-governmental organisations. They had complemented such support with own investments of time, labour and other resources. At best, support from the various stakeholders had enabled farmers to engage in and gain exposure to the workings of commercial agricultural enterprises while earning income from farming. The shadow side, however, had been exposure also to the risks associated with capital intensive farming.

TABLE 31 STRATEGIC PARTNERS IN MAKULEKE IRRIGATION SCHEME, 2002 TO 2009.

Year	Produce or Product	Category of Farmers	Strategic Partner
2002 to 2005	Cotton	Emerging commercial farmers	NSK
2005	Internet-enabled cell phones	Emerging commercial farmers	Consortium: Alcatel and Manobi (Senegal-based)
2006 to 2008	Vegetables	Consortium of 4 emerging commercial farmers (greenhouse project funded by GtZ)	Spar (Makhado)
2006 to 2008	Vegetables	Consortium of 4 emerging commercial farmers (greenhouse project funded by GtZ)	Wilderness Safaris and Outpost Game Lodge (tourism operators in the Makuleke Region of the Kruger National Park)
2008 to 2009	Maize and Potatoes	Emerging commercial farmers	Arthur William Creighton

Source: Fieldwork.

This chapter presents findings from Makuleke Irrigation Scheme. Although particular attention is given to agricultural commercialization and livelihoods during the RESIS-Recharge phase, reference is also made to RESIS phase joint ventures. The chapter begins by describing the context within which agricultural commercialization unfolded in the Makuleke community. Described contextual attributes include location, population, historical background, socio-economic profile, land allocation and use as well as water sources and uses. Following this, the chapter examines agricultural commercialization and livelihoods during the RESIS and RESIS-Recharge phases. The examination scrutinizes in detail the livelihood strategies adopted by various socio-economically differentiated individuals and households in response to joint

ventures, strategic partnerships and agricultural commercialization interventions in general. Such examination goes beyond the livelihoods of smallholders in the Makuleke Irrigation Scheme to include livelihoods of the broader Makuleke community. Attention is given to roles of community leadership and LDA in mediating relationships between externally-induced agricultural commercialization initiatives and the livelihoods of local people.

6.2 LOCATION

6.2.1 SITUATION

Makuleke Irrigation Scheme is located within Makuleke community in Ward Five of Thulamela Local Municipality in Vhembe District of Limpopo Province. Before 1994, this area fell under jurisdiction of the Gazankulu homeland government. The community is situated within Nthlaveni (2 MU) communal area along the western boundary of the Kruger National Park (KNP) (Figure 31; Figure 32). The specific area occupied by the Makuleke people is referred to as the 'Makuleke area'. This area extends from three to sixteen kilometres to the south west of the KNP's Punda Maria gate. The Makuleke area is approximately 5 000 hectares in extent (Carruthers 1995).



FIGURE 31 LOCATION OF MAKULEKE COMMUNITY

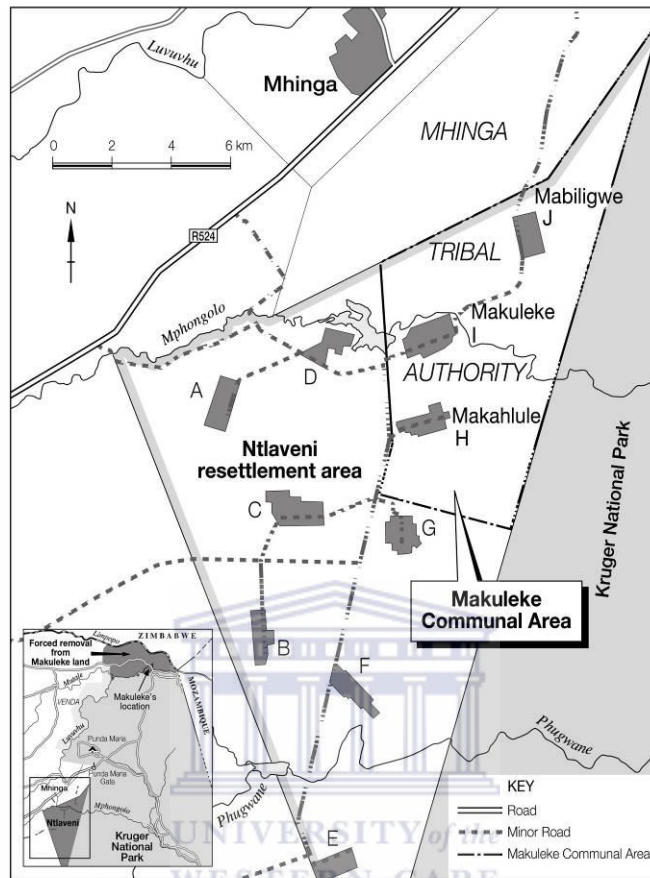


FIGURE 32 SITUATION OF MAKULEKE COMMUNITY, 2008

In addition to the Makuleke area, the community owns land in the Pafuri area, historically known as the 'Crooks' Corner' (Harries 1984). Since 1998, the area has also been referred to as the Makuleke Region. The Pafuri area is situated at the confluence of the Limpopo and the Luvuvhu Rivers along the northern boundary of the KNP. This is the point where the boundaries of South Africa, Zimbabwe and Mozambique intersect (Figure 31). This area, which is 21 887 hectares in extent (South Africa, 1998), is not occupied by the community but has been set aside as a resource that will be used to offset community development.

6.2.2 SITE AND BIOPHYSICAL CHARACTERISTICS

Makuleke communal area is sited on gently undulating terrain, which is slightly dissected by Mphongolo River and its tributaries. The only major dam in the area is Makuleke Dam on the Mphongolo River. Makuleke Irrigation Scheme is sited along Mphongolo River, downstream of Makuleke Dam (see map in Appendix 1). The altitude of the area ranges from 386m along river valleys to about 500m in the northernmost and southernmost parts (South Africa, 1999). At less than 600m altitude, the area falls within the 'low veld' region. The climate is of sub-tropical continental type, with relatively low mean annual rainfall (375 – 500mm) that is distributed mainly in the hot wet season from November to May (Tapela & Omara-Ojunga, 1999). Rainfall also varies over the years, with some years experiencing lower rainfall and droughts than others. Vegetation is predominantly the Dry Northern Savanna Bushveld Type, which is kept open by the crop farming, grazing by livestock, harvesting of fuel wood and thatching grass and seasonal burning for pasture improvement (Ibid).

6.3 COMMUNITY PROFILE

6.3.1 POPULATION

6.3.1.1 Population Distribution

At the time of the study, the population of Makuleke community was distributed among three villages namely, Makuleke (Block I), Mabiligwe (Block J) and Makahlule (Block H) (Figure 32). Community records showed that the total population was 3 244 households (Table 32). Average household size was approximately five people, which gave an estimated total population of over 15 000 people. Makuleke village had the highest population (1 444 households) and was the seat of the chieftainship and development administration. Makahlule had the smallest population (800 households), while Mabiligwe had 1000 households.

TABLE 32 MAKULEKE COMMUNITY: POPULATION DISTRIBUTION BY NUMBER OF HOUSEHOLDS, 2008

Name of Village	Number of Households
Makuleke (Block I)	1444
Mabiligwe (Block J)	1000
Makahlule (Block H)	800
Total Population	3244

Source: Makuleke Community Administration Office Records, 2008

6.3.1.2 Population Growth

There were no statistics specifically relating to Makuleke's population growth rate. According to Statistics South Africa (StatSA) estimates, the average population growth rate for Thulamela Local Municipal Areas from 2001 to 2010 was 1.01 per cent, which was above the estimate for the Vhembe District (0.96 per cent), Limpopo Province (0.99 per cent) and South Africa (0.96 per cent). A water and sanitation survey by DWAF estimated that the total population of Makuleke in 1995 was 8 560 people, while a study by Tapela & Omara-Ojungu (1999) estimated the 1996 population to be 8 160. Despite differences between such estimates, it seemed that Makuleke population had almost doubled in the twelve to thirteen years since the mid-1990s. This was significantly higher than the population growth rate of the local municipality, district and province. Apart from natural growth variables, such as fertility rate, other identified factors included an increase in unregistered immigrants from Zimbabwe and Mozambique.

6.3.1.3 Migration

Most Makuleke males and fewer females of working age tended to migrate to other areas in search of employment opportunities. While male migrations involved all age groups within the working age population, women's migrations were often associated with the younger and better educated, whose migration patterns similarly varied from short, oscillatory to long term.

Many men tended to migrate to Gauteng Province to seek employment while others worked in the KNP and towns and mines within Limpopo Province. Women tended to migrate to places within Limpopo Province, with fewer going to distant locations. Prior to the broadening of social grants beyond old age pensions to include child support grants, in particular, many female heads of households tended to migrate temporarily to tomato-growing farms around Mogoebaskloof, close to the town of Tzaneen, to work as seasonal tomato pickers (Tapela, 1997; 1999; 2002). This was a means of supplementing the meager (R185) mean monthly incomes that these women earned from working on plots in Makuleke Irrigation Scheme (Ibid.). Social grants had effectively released indigent Makuleke women from low paid farm labour in the irrigation scheme and from the need to seasonally abandon their households for labour in distant tomato farms. Social grants had also effectively increased the time available for

women's reproductive and productive roles as well as ameliorated the levels of poverty and vulnerability for women-headed households in Makuleke.

Whereas historically, older women aged between the mid-twenties and late forties had tended to temporarily migrate to commercial farming areas for employment as seasonal tomato picking labour, contemporary female migration mainly involved younger and/or better educated women. The latter often went beyond the tomato farms to seek employment or education opportunities in urban centres further afield. For the labour force that remained within the locality, the irrigation scheme and KNP were seen as the loci for economic activity and possible sources of livelihood opportunities, employment, income and food security.

6.3.2 HISTORICAL BACKGROUND

The Makuleke belonged to the Tsonga-speaking group of people who occupied much of the eastern Transvaal prior to proclamation of the KNP in 1926. Makuleke people originally lived in the portion of land at the confluence of the Limpopo and Luvuvhu Rivers that is also known as the Pafuri Area or 'Crook's Corner' in the northern section of the KNP. They were forcibly removed from the area in 1969 (Harries, 1984; Carruthers, 1995; Gilfillan 1997 in Tapela, 2001) to make way for the northward extension of the KNP. The Makuleke were resettled on "an equivalent" piece of land along the western boundary of the KNP. Their dispossession was formalised in 1975 under the Development and Trust Land Act of 1936. The removal of the Makuleke marked the culmination of a protracted effort by the conservation agencies to evict them from the Pafuri Area against their will.

Gilfillan (1997) states that the dispossession of community land rights such as the Makuleke's was gradually effected through a steady down-grading of rights until members of the community were declared squatters and evicted in terms of ostensibly race neutral legislation that governed legitimate and internationally acceptable nature conservation. Prior to 1913, the community had traditional communal tenure rights over land in the Pafuri area. Under traditional tenure systems, all members of the community had usufruct and access rights to the

land for various needs. Yet, the finiteness of land was recognised and rationed through an allocation procedure based on kinship and local conventions.

At the promulgation of the Native Land Act 27 of 1913, there was a downgrading of traditional rights and the Makuleke held the land at Pafuri in terms of crown tenancy (Gilfillan, 1997). In 1933, the Limpopo-Luvuvhu confluence area was proclaimed to be Pafuri Game Reserve by the Transvaal administration (Harries, 1984; Carruthers, 1995). The exception to this proclamation was a small portion called the Makuleke Reserve, which was occupied by some members of the Makuleke community. While the Makuleke living within the small reserve had legal tenure to their land, the government regarded those living outside the reserve on Crown land that became Pafuri Game Reserve as 'squatters' (Ibid.). When the National Parks Board initiated the first attempts to move Makuleke squatters from Pafuri Game Reserve, lack of personnel to control poaching in the isolated area was cited as the main reason for their eviction (Carruthers, 1995). Harries (1984) and Carruthers (1995) however have proved that the harvesting of natural resources through hunting, fishing and collection by the Makuleke tended to be at subsistence level and was never characterised by the ravages of commercial exploitation.

The Makuleke living in Pafuri Game Reserve were the first to be forcibly removed, but there was protracted resistance from those living in the Makuleke Reserve, who mostly included members of the royal family (Ibid.). In 1969, the latter were subsequently dispossessed of their crown tenancy rights in terms of the Native Trust and Land Act 18 of 1936, and declared squatters on the land (Gilfillan, 1997). The removal was effected soon after the death of old Chief Makuleke in 1968 (Carruthers, 1995; Harries, 1984).

The Makuleke were resettled in the Ntlhaveni 2 MU communal area, on an 'equal' portion of compensatory land that was excised from the western part of the park (Harries, 1984; Carruthers, 1995). The resettlement land was scheduled for occupation by blacks in terms of the Native Trust and Land Act 18 of 1936 (Gilfillan, 1997), which meant that although the community could use the land they had no security of tenure or title to the land. Respondents to the study stated that many of those who lived in Makuleke Reserve initially migrated to join other communities elsewhere, such as parts of the former Venda, south-eastern Zimbabwe and

south-western Mozambique, where they had kinship relations. Some of these later re-grouped with other Makuleke in the Nthlavheni area, where the community is presently based.

The forced removal of the Makuleke coincided with the nation-wide tide of forced removals sanctioned by the apartheid government's Bantu Promotion of Self-government Act of 1959. The implications of this coincidence were that other Tsonga people from elsewhere were also resettled in the Ntlhaveni area between 1972 and 1973, such that instead of the promised 20 000 hectares of land, the Makuleke retained a mere 5 000 hectares (Harries, 1984 in Tapela 2001). This seems to have constituted a major grievance, particularly as the community shifted towards commercial agriculture following the development of an irrigation scheme within the Makuleke area (LRG, 1995 in Tapela 2001). Following the adoption of the land reform policy by the post-apartheid state, the Makuleke lodged a land claim for the restitution of their rights to the Pafuri area in December 1995. The community, through a newly-formed Makuleke Communal Property Association (CPA), was granted ownership rights to the Pafuri area through a Settlement Agreement signed on 30 May 1998 in terms of the Restitution of Land Rights Act of 1994. With the restitution of land rights in the Pafuri area, a key question for the Makuleke became how to translate their gain into tangible community benefits without compromising the natural resource base for the local economy. The Settlement Agreement has subsequently had significant bearing on the Makuleke community development plans, projects and political power dynamics.

6.3.3 DEFINING 'COMMUNITY'

For this case study, the study used definitions of 'community' that were voiced by members of Makuleke community (Tapela *et al*, 2007). According to representatives of Makuleke CBOs, "community is sharing tradition, culture and values. It is the shared consciousness of ancestors. It is cohesion and the existence of respect between the young and old and among members of various groups". Furthermore, "community perpetuates despite day-to-day conflicts" and "exclusion happens when a member deliberately excludes him/herself by seriously working against or undermining cohesion". Within Makuleke community, "outsiders are NOT excluded, but welcome. However, community is clearly bounded, and not an open access system" and

“although we accept other people [into our community], they must adhere to our customs” (Ibid.). Indeed, although membership of Makuleke community was drawn primarily from Tsonga speaking people who were removed from the Pafuri area in the northern reaches of the Kruger national Park, a significant proportion of the population in 2008 consisted of people who originate from various localities in Limpopo Province, southern Zimbabwe and Mozambique.

In focus group discussions conducted during the study, respondents variously stated that Makuleke community included a significant number of people who resided outside the Makuleke area (Tapela *et al*, 2007). Many such people lived in distant industrial areas, such as the Gauteng Province, and neighbouring areas, such as Mhinga. Their membership of the community was retained through kinship and other ties to the Makuleke area, as well as migrations in and out of the geographical area. For many of those who lived in industrial centres, nexus with the Makuleke area derived partially from their continued support of relatives and community initiatives through financial remittances.

What emerged therefore was that Makuleke people clearly perceived themselves to be a porously bounded entity, whose membership expanded and contracted in time according to circumstances in the lives of individual members of households. However, they were also emphatic in stating that this porosity did not mean that their community was an open access system. Rather, there were clear rules and rights regarding access, inclusion and exclusion.

6.3.4 SOCIAL AND POLITICAL ORGANIZATION

Organizational structures observed within the community included Community Based Organisations (CBOs) such as local political party structures, interest groups and blended CBO structures. These included a local branch of the African National Congress (ANC) and its Youth wing and Women's League, Makuleke Irrigation Farmers' Co-operative, Primary Care Group, Environmental Club and Women's Project. The Women's Project sought to enhance entrepreneurial and other interests of Makuleke women.

The Makuleke community was administered by three governance structures. Firstly, there was the Tribal Council, headed by Chief Makuleke and the Royal Family. The Tribal Council was the

traditional authority within the community. It was composed of village headmen and elders, who advised the chief on aspects of traditional governance. Secondly, Makuleke people were administered by a Community Development Forum (CDF), which consisted of elected members representing various portfolios including agriculture, women, health, education, transport and housing. The third prominent structure was Makuleke Communal Property Association (CPA).

The CDF was established following recognition that, in replacing the Transitional Local Government Act (TLGA) of 1995 (South Africa, 1995), the Municipal Systems Act of 2000 had not made adequate provision for community level representation in the IDP process. Historically, the TLGA provided for community representation through ward councilors within Transitional Local Councils (TLCs). TLCs were the democratically-elected third tier of government, and ward councilors wielded a considerable degree of political power owing to the fact that TLCs were legally responsible for service delivery and community development. Prior to 1994, Tribal Councils and South African National Civic Organization (SANCO) had fulfilled such roles. In the late 1990s the CDF replaced Makuleke Civic Organisation, which had historically acted as a pressure group urging for the delivery of services denied to the community under the previous apartheid government. Concomitantly, the Tribal Council had continued to wield considerable power as it controlled access to all communally held land within the Makuleke area. The political clout of the Tribal Council was also based upon a historical legacy of established authority derived from kinship and descent. The blending of traditional and elected structures in Makuleke contrasted with tensions typically observed between similar structures in many rural communities in South Africa (Ntsebeza, 2006), such as Phetwane (Chapter 5). Such blending seemed to have contributed to the relatively high degree of social cohesion observed by various scholars (LRG, 1995; Tapela, 1999, 2002; Steenkamp, 2003).

Although both the CDF and the Tribal Council could be construed to be building blocks of Thulamela Local Municipality, the latter appeared to be the stronger structure since it was legally recognised as an integral part of the local municipality, while the CDF was only indirectly represented through a ward councilor. Personal observations over a period of ten years

revealed that the balance of power between the two structures was strategically maintained through a blending of traditional and newer elected structures. This was initiated through formation of the Makuleke Tribal Authority Executive (TAE) in the mid-1990s. The TAE was a blended CBO structure consisting of Chief Makuleke, the Tribal Council, a former councillor for Ward Five (Mr Livingstone Maluleke) who resided in the community and representatives of the Civic, Youth, Women's and Farmers' organisations.

The CPA owned the land that was restituted to the Makuleke in 1998 and was responsible for ensuring the success of a Community Based Natural Resources Management (CBNRM) initiative within the restituted Pafuri area. Membership of the CPA was not universal within the community, but included, in theory at least, only those who had valid claims to land in the Pafuri area of the KNP. These were listed in 1997 and, following constitution of the Makuleke CPA as a representative and accountable legal entity in 1998, were formally registered as members of the CPA. The CPA was administered by an elected Executive Committee. The first Executive Committee was largely drawn from the Makuleke Land Claim Committee, which in turn had evolved from the TAE. Many members of the first Executive Committee had since been replaced by newer elected members, in line with Makuleke CPA constitutional requirements for three-year tenure. Such change resulted in problems relating to loss of institutional memory as well as power dynamics between outgoing and incoming members, which accounted for the appointment of an 'official representative' of the community.

In an attempt to maintain continuity and strength within the CPA, Chief Makuleke had appointed Mr Livingstone Maluleke as the official representative of the Makuleke community. The latter was the former Chairperson of the erstwhile Makuleke Land Claims Committee and Makuleke CPA. He was also a former councillor for Ward Five of Thulamela Local Municipality and, at the time, held a full-time job as the headmaster of a local primary school. Due to a perceived need to "retain his expertise", the post of official representative was created and the incumbent appointed. The process through which such representation came about was not clear to many respondents, but some considered that the Chief was instrumental in ensuring the appointment of the representative.

The power base of the Makuleke CPA was primarily its ownership of land in the Pafuri area. This portion of land was an extension of the land area occupied by the Makuleke in Ntlavheni, and was increasingly linked to the latter as a source of revenue, employment, wealth and power for the Makuleke, as well a viable market for agricultural produce from the irrigation scheme. This link required the Makuleke CPA executive committee, CDF and Tribal Council to work in close collaboration. Although this was initially the case, there were observed episodes when power dynamics between the latter two structures undermined their working relationship, while that of the CPA executive committee and Tribal Council became strengthened.

6.3.5 POWER DYNAMICS

Until around 2004, the different degrees of power between the three community governance structures did not seem to have posed a major problem within the community. The blending of traditional and elected structures had indeed contributed to the relatively high degree of social cohesion observed by various scholars (LRG, 1995; Tapela & Omara-Ojunga, 1999; Tapela, 2002; Steenkamp, 2003). The study found that although the community largely retained a semblance of cohesion, its leadership and members were split between two main factions. One faction consisted of community members with allegiance to Chief Makuleke and the other consisted of adherents to Chief Mhinga. The latter was a neighbouring chief who had been engaged in protracted conflict with Chief Makuleke since the resettlement of the Makuleke in “his area” in Ntlavheni in 1969. Claassens & Cousins (2008) cite Chief Makuleke’s affidavit in a court case related to the CLRA, which states that since the resettlement of the Makuleke in Ntlavheni, Mhinga had, among many things, repeatedly tried to thwart various development projects in Makuleke as well as attempted to allocate irrigation scheme plots to outsiders and re-name the scheme ‘Mhinga Irrigation Scheme’. Prominent among supporters of Mhinga were the headman of Makahlule village and an owner of the largest cattle herd in the community (estimated at more than 200 head in 1996).

The observed cleavage was not new but had historically been contained and largely kept hidden from outside perceptions through a carefully orchestrated strategic and public relations initiative, which was assisted by an externally-based ‘Friends of Makuleke’ trust organization.

The objective of the Friends of Makuleke organizational development initiative had been to create a cohesive community structure with margins 'hard' enough to withstand pressures associated with the land claim process of the 1990s. Evidence from studies in the mid-1990s (Tapela, 1997; 1999; LRG, 1995) show that the affiliation of Makahlule village, for example was contested and such contestation was resolved towards settlement of the land restitution claim. While such cleavages had historically been linked to contestations by leadership over power and socio-economic resources during the apartheid era and the Makuleke land claim process of the 1990s (Tapela, 2001; Steenkamp, 2003), the study found that there had emerged a second layer of cleavages in the aftermath of the land claim settlement agreement in 1998.

Within the observed post-1998 cleavages, politics of 'belonging' were evoked and community membership became defined according to 'origin' rather than "that web of personal relationships, group networks, traditions and patterns of behaviour that develops against the backdrop of the physical neighbourhood and its socio-economic situation" (Flecknoe & McLellan, 1994:4 in Warburton, 1998:15). Many respondents voiced concerns about discrimination by traditional leadership against Tsonga-speaking people who originate from various localities in Limpopo Province, southern Zimbabwe and Mozambique. By contrast, traditional leadership was seen as unfairly according those with traceable origins in Pafuri a greater legitimacy of belonging to the Makuleke community than those from rural areas elsewhere (Box 12). Those who perceived themselves to be discriminated against were distributed across all three villages, but mainly resided in Mabiligwe and Makahlule.

Box 12 Makuleke Community: Politics of 'belonging'

Comment by a local key respondent on political dynamics underlying problems of domestic and irrigation water use:

"There are divisions within the community over who belongs where, who stays where and so on... due to forced removals. Despite that we are all Tsonga speakers, we are not united. This division is at the root of all that is happening here.... Not long ago, just before the signing of the land claim settlement agreement in 1998, we were required to fill in forms to apply to be "second class" citizens of Makuleke, although we are first class citizens under the South African Constitution!

We need to heal this division. People from other areas cannot be forced to fall under particular chiefs, for example Chief Makuleke. In all other villages, people were forcibly removed with their chiefs and therefore have no problems of division. In Makuleke, many of us were brought here without our leaders and had to fall under Makuleke. When we resist that, we get into the problems you are seeing now."

In this development, traditional leaders and the CPA were in allegiance and were pitted against the CDF. The reason for this was that, while both the CPA and CDF were democratically elected structures, the CPA and Tribal Council had a shared power base, which was land in the Pafuri area and economic benefits emanating from that. By contrast, the CDF's power depended on the extent to which the structure could mobilize tangible development support from Thulamela Local Municipality. The likelihood of the CDF achieving this seemed to be constrained by, among other factors, the fact that the Ward Five councilor representing Makuleke in municipal decision making belonged to a different community.

In light of the precarious nature of the observed community cohesion, the glue that held the fragmented community together seemed to be the shared territorial space and support that Chief Makuleke received largely from residents of Makuleke village, where he resided. These and others in the two other villages tended to rally behind decisions and rules ratified by the chief, thereby effectively countering dissent. Such socio-political behavior seemed to weather the power dynamics that threatened to split the broader community, which perhaps accounts for the view that "community perpetuates despite day-to-day conflicts" (Section 6.5).

Makuleke irrigation farmers, like other interest groups within the community, had variously been affected by and responded to political power dynamics according to shifts in their fortunes. Perceptions of failure or success and conflicts or conflict resolution within the farmers' group tended to draw community-wide power dynamics into the fray of irrigation-related issues. Conversely, political factions capitalized on irrigation issues to garner support. An interesting aspect of the political dynamics was that the existence of two centres of power tended to introduce checks and balances to community leadership, such that a certain level of downward accountability persisted albeit in a less perfect state than most community members would have liked to see. Traditional leadership and the CPA, in particular, demonstrated such accountability with respect to problematic issues pertaining to RESIS and RESIS-Recharge interventions.

6.3.6 LAND USE AND TENURE

Land use in the Makuleke area was mainly agricultural, and Makuleke Irrigation Scheme constituted a major development project in the area. The main types of land use in the community were arable and pastoral farming, as well as settlement (Figure 40; Appendix 1). Some of the land was allocated to a number of individual small, medium and micro-scale enterprises (SMMEs) in the transport, retail trade, micro-lending, building and other sectors. Many of such enterprises were informal.

There were two types of tenure systems operating within the Makuleke area. The first was the traditional communal system in which the Tribal Authority allocated land, mainly through Chief Makuleke or delegated responsibility to headmen of the three villages. The communal tenure system applied to village settlement areas, rain-fed croplands and grazing lands. Allocated rain-fed crop fields were passed down family genealogies, according to customary practice. Land under communal tenure was classified as state land and held in trust by the community, through the chief. Holders of such land had usufruct rights but no title deeds. However, their tenure rights were largely considered to be secure and were recognized by other members of the community. The second tenure system was the leasehold system in which land allocation was initially performed by the Provincial Department of Lands and Agriculture, through consultation with the Tribal Authority. The latter system was subsequently administered by LDA and applied to land within the state-funded Makuleke Irrigation Scheme.

In addition to land tenure in Makuleke, many members of the community collectively owned land in the Pafuri Area through their membership of the CPA. This land was largely used for natural resources conservation and tourism-related business ventures. Funds generated from commercial activities were channeled towards socio-economic development in Makuleke community. The constitution of the CPA attempted to ensure that the sharing of these resources was equitable among male and female members of the CPA. The Settlement Agreement that was signed upon restitution of Makuleke land rights, however, limited the extent to which members of the CPA could utilize natural resources, including valuable minerals, in the Makuleke Region of the KNP in Pafuri (Tapela, 2002). Makuleke Irrigation

Scheme necessarily had to be seen in context of the Pafuri Area since both were regarded by the Makuleke as twin engines for community development.

6.3.7 SOCIAL SERVICES AND INFRASTRUCTURE

The Makuleke community had a relatively low level of social service and infrastructure development. Social services infrastructure within the community included three primary schools and one secondary school, a primary health clinic, an administrative office, an irrigation scheme office and community production centre, a bed and breakfast lodge and an arts theatre owned by the Makuleke CPA, a telecommunications office, individual mobile phone service providers, general dealers' shops, market stalls, and old and new brickyards. Since 2005, access roads had been upgraded and tarred and were therefore easier to use than the earlier dust and gravel roads, which tended to become impassable during the rainy season. A new wide tarred road linked the community to market and administrative centres, such as Malamulele, Thohoyandou, Polokwane and Johannesburg. Homesteads consisted of a mixture of traditional mud and thatch structures as well as brick and iron or tile dwelling units. The number of households living in mud and thatch structures appeared to have decreased from the 77.2 per cent observed by Tapela (1997).

Unlike many similar villages in Limpopo Province, Makuleke villages had street lighting. Most homesteads had electricity owing to a land restitution grant of R500 000, which provided the R450 000 required for electrification. Although such investment resulted in increased access to electricity, a number of the households retained the use of firewood as their main source of domestic energy. This was mainly due to inability to pay for electricity supply services. A pump station in the irrigation scheme was also powered by electricity. The allocation of commercial plots in the irrigation scheme was said to have been partly influenced by the ability to pay for the cost of running the electrical pump station supplying water to the irrigation scheme.

Through a project implemented by Mvula Trust in 1996, domestic water supply was improved from a few communal water taps or "stand pipes" (Tapela, 1999a) to a combination of both communal stand pipes and individual homestead taps. Improvements in water supply

infrastructure had been accompanied by the densification of pit latrines, which remained a key feature of community sanitation. Health care workers reported fewer outbreaks of diarrhoea, particularly among younger children, than in the 1990s when members of the community were often compelled to supplement their domestic water needs with unpurified water from the dam or irrigation canals. Despite improvements in water services infrastructure, access to potable water remained a major challenge particularly in Makuleke (Block I) and Makahlule (Block H) villages. Consequently, many households in these villages had made their own investments in homestead taps. A few others had invested in boreholes for domestic water supply. While some of such investments were formally registered with the community administration office, most were termed “illegal” by both community authorities and members⁹⁴.

TABLE 33 MAKULEKE COMMUNITY: COMMUNAL AND INDIVIDUAL PIPED DOMESTIC WATER SUPPLIES, 2008⁹⁵

Village	Communal Water Taps (“Stand Pipes”)						Individual Homestead Water Tap Connections					
	Reliable and functional		Unreliable or non-functional		TOTAL		Legal		Illegal		TOTAL	
	n	%	n	%	n	%	n	%	n	%	n	%
Makuleke	5	13.9	31	86.1	36	100	139	84.8	25	15.2	164	100
Mabiligwe	33	100	0	0	33	100	0	0	0	0	0	0
Makahlule	9	36	16	64	25	100	20	10.4	172	89.6	192	100

Source: Ground truthing fieldwork, 2008.

Table 33 shows that Makuleke village also had the greatest deficit in water from homestead taps. The village had the highest frequency (84.8 per cent) of households with legally-connected

⁹⁵ Ground truthing by the study found that data recorded by the community administrative office was often incorrect. Whereas community records showed that Makuleke and Makahlule villages had 38 and 24 communal water taps respectively, this study found that these villages had 36 and 25 communal water taps. Community services staff could not supply any data on illegal homestead tap connections. There was clearly a lack of staff capacity to gather and provide correct information on water services infrastructure.

homestead taps and yet none (0 per cent) of these issued water. By contrast, Makahlule village had the highest frequency (89.6 per cent) of illegal connections and a fair proportion (approximately 25 to 30 per cent) of both legal and illegal homestead taps provided access to water. This might seem to justify why most (89.6 per cent) of the households in Makahlule opted for the informal or illegal route of hydraulic property rights creation. The lower frequency of illegal connections in Makuleke village might be attributed to the fact that the village was situated closer to the dam and irrigation canal, which constituted alternative sources of raw water for laundry and bathing purposes. However, the observed differences were also due to political power dynamics and issues governance at the village and community level.

From the few telephone lines and the small telecommunications office that existed in the mid-1990s, there had been a significant expansion of communication services to include a denser distribution of mobile phones and public telephone facilities provided by local small entrepreneurs. Administrative offices and all schools in the community had become linked to the internet.



6.3.8 SOCIO-ECONOMIC CHARACTERISTICS OF SMALLHOLDER HOUSEHOLDS

It was evident that in 2005, emerging commercial farmers had not yet benefited from joint ventures and their profiles were broadly similar to socio-economic profiles of many unemployed people in the community, including food plot holders. Although commercial plot holders and subsistence food producers could both be described as 'resource poor', there was a degree of socio-economic differentiation between the two groups and among farmers in each group.

This section presents selected findings on the socio-economic characteristics of smallholders and their households. Although attention is given to both commercial plot holders and subsistence food producers, greater emphasis is placed on the former group of smallholders. The rationale is that such farmers were targeted by agricultural commercialization under the

RESIS Programme and were commonly called 'emerging commercial farmers', which is equivalent to petty commodity producers.

6.3.8.1 Household Size

While the average size of households in Makuleke community was five (5) people, average household sizes for commercial and food plot holders were seven (7) and eight (8) people respectively. A possible reason why irrigation farmers generally had larger households than the community population in general was that plot allocation in the irrigation scheme tended to favour older members of the community, whose households were often composed of three or more generations, rather than younger members, whose households consisted of fewer generations. The population of food plot holders was generally older than that of commercial plot holders. A greater proportion (38.5 per cent) of food plot holders was aged sixty-five (65) years and above, while the same age group among commercial plot holders was smaller (26.5 per cent).

6.3.8.2 Education

Many of the emerging commercial farmers were literate but a few had no formal education (Figure 33). Of those who never went to school, one had attended Adult Based Education and Training (ABET) classes and could read and write. Three farmers could not read or write and eight could not speak English and Afrikaans. Such differentiation underscored the importance of ensuring that communications were either conducted in or translated into XiTsonga.



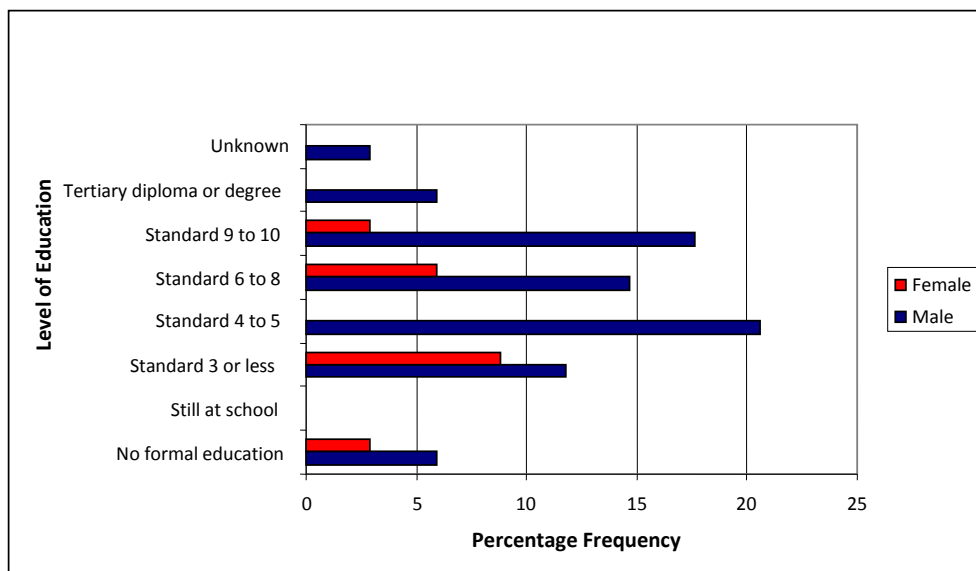


FIGURE 33 MAKULEKE: PERCENTAGE FREQUENCY OF COMMERCIAL PLOT HOLDERS BY EDUCATION AND AGE, 2005

6.3.8.3 Employment Status

The study revealed that the rate of unemployment for the working age population in smallholder households was relatively high, while local formal employment opportunities were scarce. A comparison between employment profiles of farmers' households showed that food plot holding households had a greater proportion (62.4 per cent) of unemployed people than households of commercial plot holders (52 per cent) (Figure 34). Households of food plot holders also had a greater proportion (22 per cent) of people with full-time paid employment than households of commercial plot holders (18 per cent). Households of commercial plot holders, however, had a much greater proportion (22 per cent) of self-employed people while food plot holder's households had fewer (5 per cent).

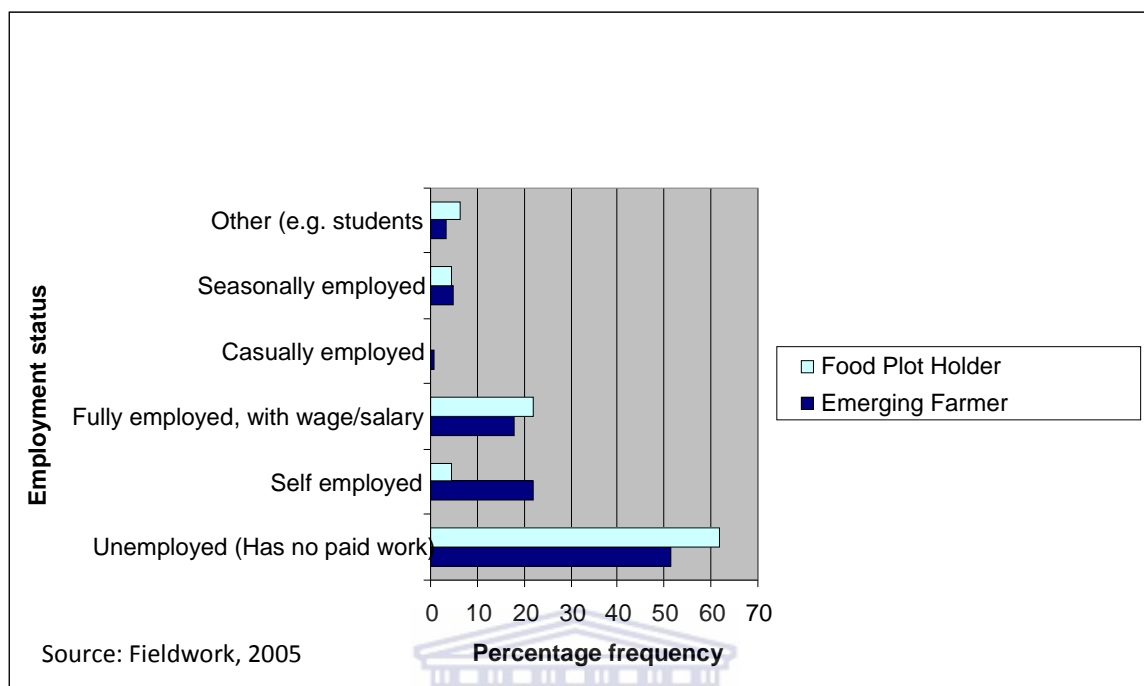


FIGURE 34 MAKULEKE: COMPARISON OF EMERGING FARMER AND FOOD PLOTHOLDER HOUSEHOLDS BY EMPLOYMENT STATUS, 2005

Among the 43 emerging commercial farmers, although both males and females had high rates of unemployment, more women than men were unemployed (Figure 35). Most (82.4 per cent) of emerging commercial farmers, and significantly more men (70.6 per cent) than women (11.8 per cent), considered themselves to be self-employed, mostly within the Makuleke Irrigation Scheme. A few (11.8 per cent) farmers considered themselves to be unemployed. One female farmer occasionally found casual employment outside the scheme, while one male farmer had full-time, paid employment within the irrigation scheme.

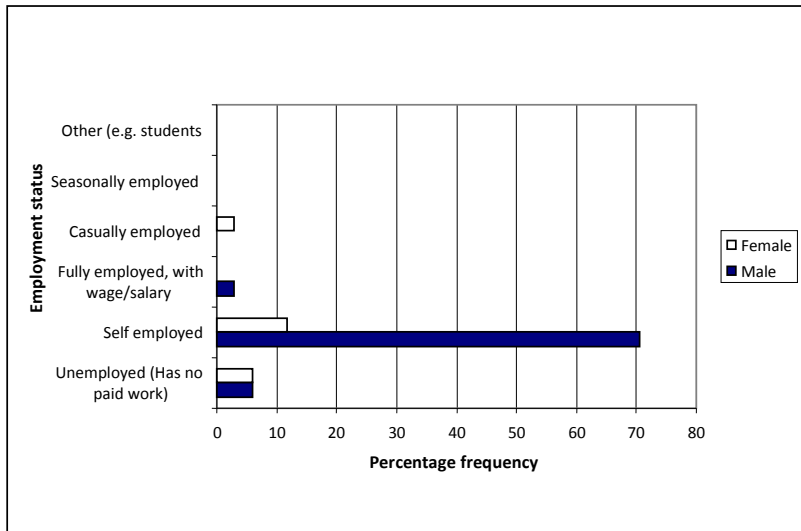


FIGURE 35 MAKULEKE: EMPLOYMENT STATUS OF EMERGING COMMERCIAL FARMERS BY GENDER, 2005

By contrast, a study conducted in 2000 by Tapela (2002) showed that the unemployment rate for heads of households in Makuleke community as a whole was relatively high (Figure 36). Significant proportions of men were unemployed and looking for work (23 per cent) or engaged in unpaid farm labour (21 per cent). The majority of women were either engaged in unpaid house work (37 per cent) or unpaid farm work (32 per cent) while few (2.4 per cent) were unemployed and looking for work. Collectively these occupational groups, which had no monetary income, constituted nearly three-fifths (57.7 per cent) of the productive population of Makuleke community.

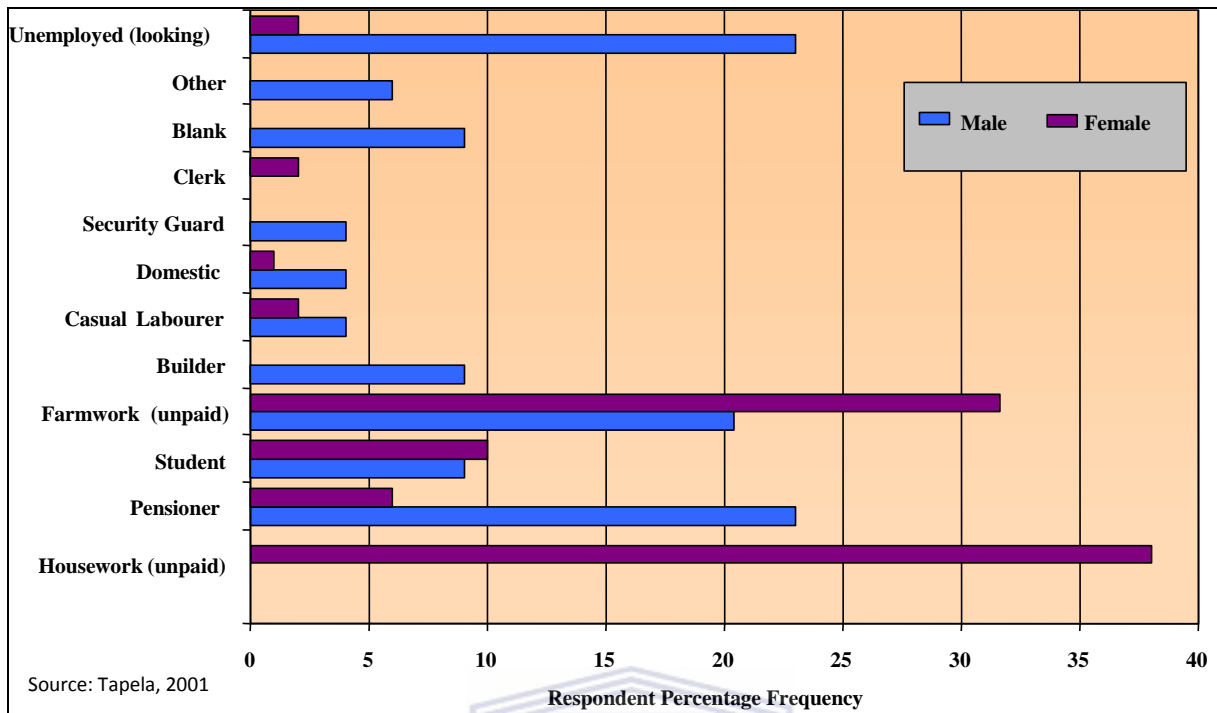


FIGURE 36 MAKULEKE COMMUNITY: OCCUPATIONAL STATUS OF PRODUCTIVE POPULATION BY GENDER, 2000

6.3.8.4 Income

Household level employment rates, however, did not necessarily indicate levels of income for respective households. Many respondents stated that contributions to household income by individual members were not assured. Many migrant workers, for example, did not regularly send remittances. Similarly, fully-employed locally-resident household members did not necessarily contribute their wages or salaries to the common household pool of financial resources. Hence, although food plot holding households had greater proportions of fully employed people, levels of poverty for these households were similar to or higher than for commercial plot holding households. It was possible that the greater presence of unemployed people in food plot holding households tended to deepen levels of poverty, while the greater presence of self-employed people in commercial plot holding households tended to ameliorate levels of poverty.

Earlier studies (Tapela, 1997; Tapela & Omara-Ojunga, 1999; Tapela, 1999; 2002) conducted prior to the Watercare Programme (i.e. RESIS Phase 1) showed that Makuleke households had

relatively low mean household incomes (Figure 37). In 2005, a survey of emerging commercial farmers revealed that, levels of household income remained relatively low, with most of the farmers earning less than R2000 per month (Figure 38).

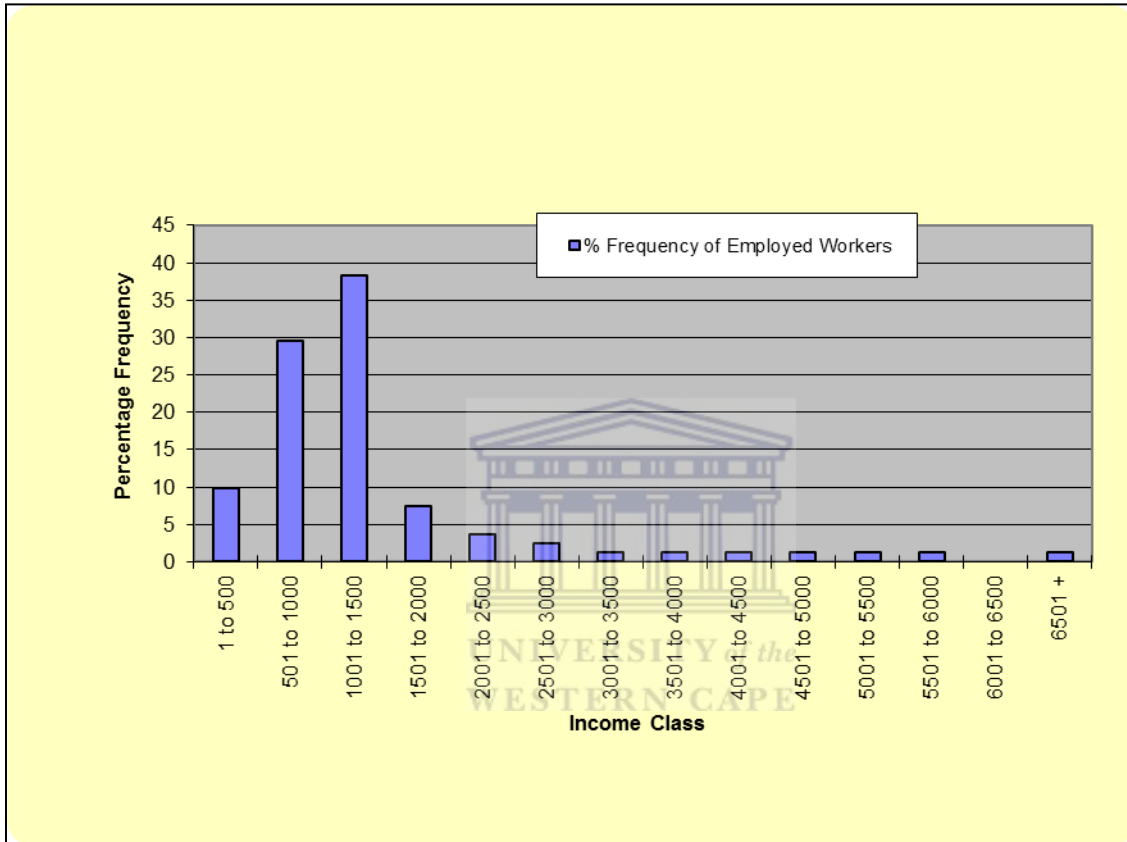


FIGURE 37 MAKULEKE COMMUNITY: DISTRIBUTION OF EMPLOYED HEADS OF HOUSEHOLDS BY MEAN MONTHLY INCOME, 1997

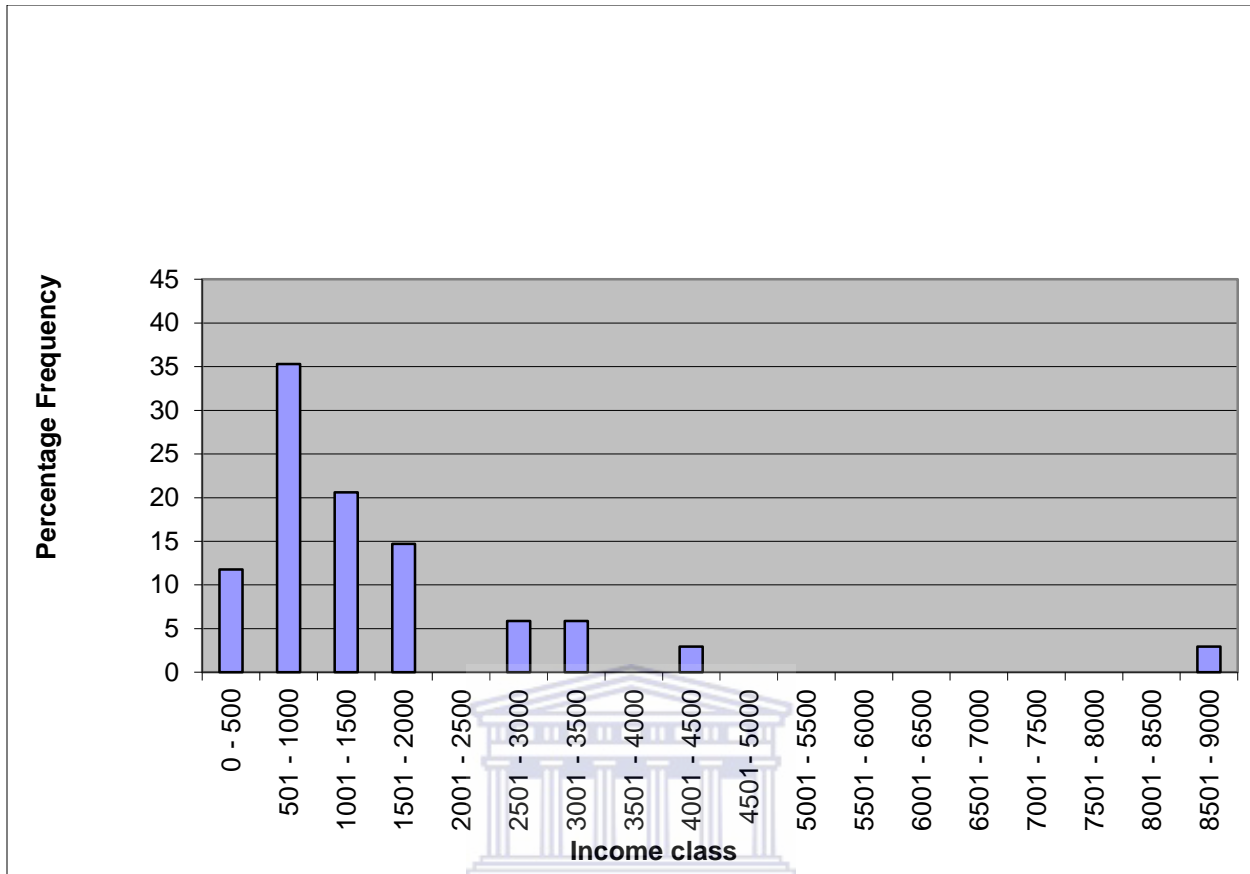


FIGURE 38 MAKULEKE: DISTRIBUTION OF COMMERCIAL FARMING HOUSEHOLDS BY MEAN MONTHLY INCOME, 2005

6.3.8.5 Crop Production

During the course of the study, the main types of crops grown in commercial plots were cotton, maize, potatoes and, to a lesser extent, other vegetables. Most (79.4 per cent) of the farmers produced cotton, maize and potatoes. All of the cotton, maize and potatoes were grown commercially within contractual joint ventures and strategic partnerships. Prior to RESIS-Recharge strategic partnerships, some of the emerging commercial farmers supplemented contractual cotton production with independent production of food crops, such as vegetables, maize and fruit. During that time, more than half (55.9 per cent) of farmers independently grew vegetables on their plots. Such farmers included six plot holders whose land was excluded from the cotton production venture from 2002 to 2005. A significant proportion (78.9 per cent) of independent vegetable growers and about half (48.1 per cent) of independent maize producers grew food crops for both commercial and subsistence purposes, while a few farmers grew

these crops solely for subsistence purposes. Three commercial fruit growers grew mangoes. Although the contract between NSK and Makuleke WUA did not permit joint venture members to engage in such practice, the WUA management committee appears to have exercised a degree of leniency towards informal food producers.

By contrast, subsistence food producers grew a greater variety of crops. These ranged from maize, pumpkins, groundnuts, cow-peas, beans, okra, sweet potatoes and sweet reed. Most of the produce was consumed within farmers' households and the surplus was sold to generate small amounts of income, ranging from R10 to R500 depending on productivity, supply and demand factors.

With the onset of RESIS-Recharge and its associated strategic partnerships, independent crop production by emerging commercial farmers was disallowed and alternate monocropping of maize and potatoes was strictly enforced. These farmers effectively lost control of the production enterprise. There also appears to have been an upsurge in the amount of water consumed by commercial plots. The impact of increased consumption on water availability in the irrigation scheme as a whole was not clear since different contract farming arrangements used different mechanisms of ensuring access to water. For example, an earlier RESIS cotton joint venture subsidized water supply costs for food plot holders and required each subsistence farmer to pay nominal tariffs of between R10 and R20 per month. By contrast, a latter RESIS-Recharge strategic partnership for maize and potato production provided no such subsidy. The inception of the partnership was accompanied by termination of food plot holders' access to water and, thereby, a halting of subsistence crop production.

6.3.8.6 Household Material Asset Ownership

Levels of household asset ownership among smallholders were generally low. However, there was evidence of socio-economic differentiation among smallholders' households. Some households had more material assets than others due to various factors, such as remittances by household members employed in economic centres elsewhere, disbursements of the land

restitution grant, employment opportunities in tourism and conservation, and individual entrepreneurship.

Similarly, levels of household material asset ownership were relatively low (Figure 39). The highest frequencies of asset ownership pertained to radios (79.4 per cent), chickens (76.5 per cent), cellular phones (67.7 per cent) and refrigerators (67.7 per cent). The high frequency of cellular phone ownership was directly linked to the joint venture involving three firms namely, Alcatel, Vodacom and Manobi, who provided farmers with internet-enabled cellphones to promote access to market-related information. The small proportion (11.8 per cent) of tractor-owning households belonged to farmers who had acquired these assets through the DBSA loan that was resuscitated during the Preliminary Phase of RESIS. Effectively, therefore, farmers' involvement since 2003 in a cotton joint venture had not yielded any significant change in these farmers' incomes.

Since the inception of RESIS-Recharge strategic partnerships, households of commercially-orientated farmers had become increasingly more affluent than subsistence food producers, who were mostly selected from the indigent within the community. While petty commodity producers enjoyed access to financial benefits emanating from the strategic partnership's use of commercial plots, food producers were increasingly marginalized from access to food plots, with negative effects on household food security.

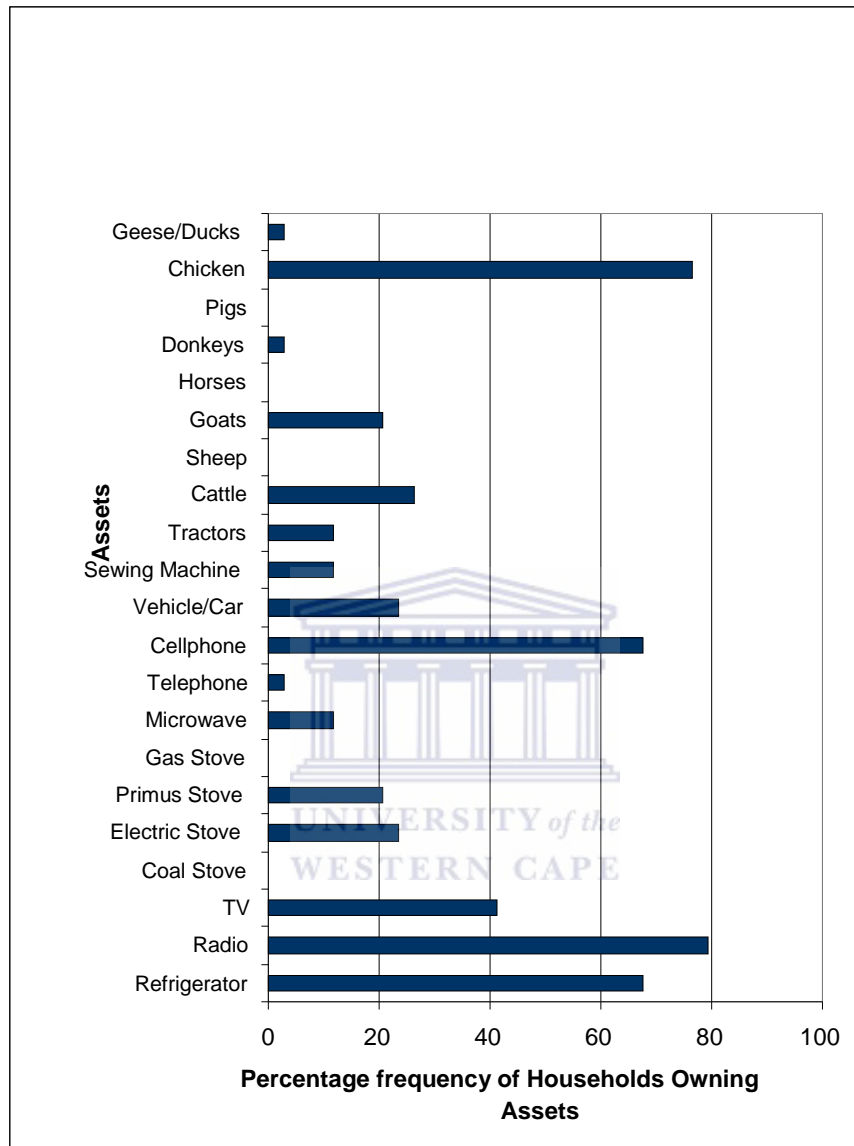


FIGURE 39 MAKULEKE: MATERIAL ASSET OWNERSHIP BY COMMERCIAL FARMING HOUSEHOLDS, 2005

6.4 MAKULEKE IRRIGATION SCHEME: HISTORICAL BACKGROUND

Makuleke Irrigation Scheme was established by the Gazankulu homeland government in 1991. Prior to that in the early 1970s, a weir was constructed across Mphongolo River to create Makuleke Dam (Figure 40; Appendix 1). According to respondents from identified key stakeholder institutions from the local community, Makuleke Dam belonged to Makuleke community because it was built in response to a request by the community. Makuleke's request for the dam was based upon their realization of the aridity of Nthlaveni area, where they were resettled following their displacement in 1969, relative to the wetter Pafuri Area, where they had subsisted on natural resources around the floodplain and wetlands at the confluence of Limpopo and Luvuvu Rivers.

A senior member of the Royal Family explained that when the community came to the Nthlaveni area, they looked for an area where they could dig for themselves a well for water supply. They walked upstream along Mphongolo River till they found a place where, according to their experience, they dug a well. The well was dug around a natural spring (called *xihlobo* in Tsonga), which is presently located immediately below the dam wall. The respondent said there was another fountain at the upper portion of the dam called *bvuma nyundu*, which never dried up. Another key respondent said that a local traditional belief was that a snake, given a name 'tube' to describe the size of a snake, guarded *bvuma nyundu* spring. During rainy seasons water used to accumulate in the area around the springs. During the apartheid era, government agencies used to bring water to the community using a tanker. A weir was built on the very spot where the fountain was located in early seventies.

The weir, however, was small and provided water supply for domestic use and livestock watering. Hence, in early eighties, a plan was proposed to extend the dam with the aim of starting up the irrigation scheme. One key respondent explained that the dam "came" as a result of a collective request by the local community, Chief Makuleke and the late Mr John Mashaba. Mr Mashaba was a farmer and businessman who ploughed land along the river long before irrigation scheme development. He was also a close friend of the former Chief Minister

of Gazankulu homeland government, Mr Hudson W.E. Ntsan'wisi. Hence, the dam proposal was quickly recommended for approval and funding.

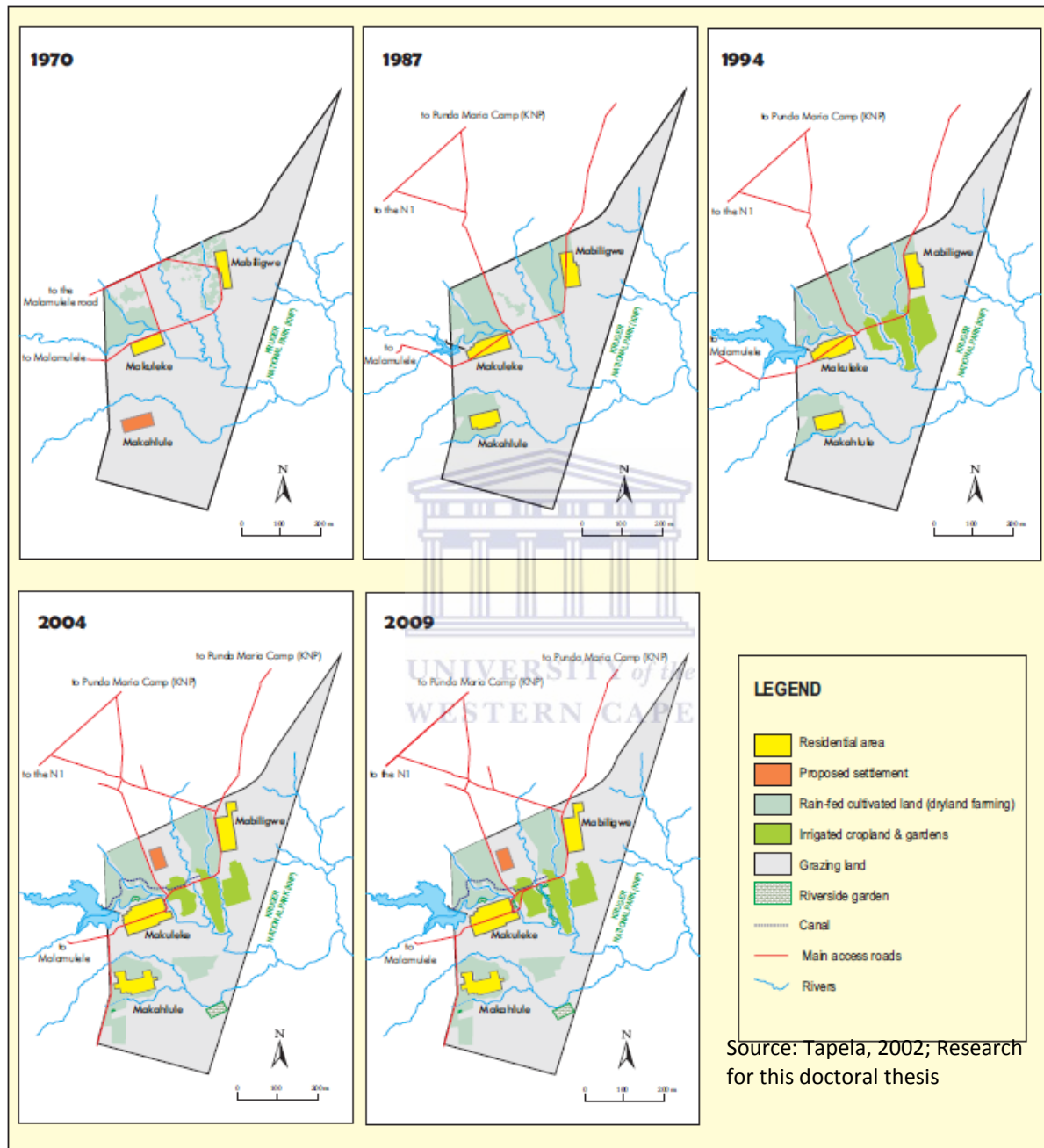


FIGURE 40 MAKULEKE LAND USE: 1970 TO 2009

The construction of the Makuleke Dam, which supplied water to the irrigation scheme, began in the late 1980s and the irrigation scheme was established in 1991. Water was channeled from the dam by a concrete-lined irrigation canal to a balancing dam and an electricity-powered

pump station in the scheme. Unfortunately, according to respondents, both the chief minister and Mr Mashaba, who were influential in the planning process, passed away before completion of the irrigation scheme development project. Respondents surmised therefore that they perceived the existing dam to be an extension the fountain, which, combined with that dam construction was at their behest, was why the community had the power to control and look after the dam.

Soon after the scheme was established the traditional leader of the community, Chief Joas Phahlela Makuleke, allocated plots on the scheme in consultation with the local agricultural extension officer. Irrigation plots were allocated to fifty-two individual tenants who paid an annual rental of R100.00, initially to the Gazankulu government department responsible for agriculture and, after 1994, to the Northern Province Department of Lands and Agriculture (now LDA). Tenants were not exclusively drawn from the Makuleke community, but included people from neighbouring communities, such as Mhinga. Smallholders established a cooperative organization, Makuleke Irrigation Farmers' Association, which served their collective interests.

Prior to RESIS Programme interventions, women made up most of the labour in the irrigation scheme (LRG, 1995; Tapela, 2002) and on rain-fed arable in the Makuleke area. Agricultural productivity remained generally low, owing to allocation of plots to part-time farmers who were gainfully employed elsewhere (Box 13). Crop production declined sharply in 1999 due to the cessation of government subsidies.

Box 13 Excerpt on the allocation of commercial plots in Makuleke Irrigation Scheme, 1991

With the introduction of newer tenure arrangements, the more powerful or affluent members of the community appear to have gained greater control over access to resources, while the poor have become further marginalised. This is illustrated by the distribution of plots in the Makuleke Irrigation Scheme that was established in the early 1990s (Tapela, 2002).

The 1995 Land Reform Group (LRG) Report states that, despite the fact that access to the plots was open to all the Makuleke people living within the vicinity of the scheme, a substantial number of plots were awarded mostly to people who were already employed and had the monetary resources. Some of these people resided in the more distant neighbourhood of Mhinga. Many unemployed people in the Makuleke area had not applied for the plots because they had had *"the mistaken impression that land would only be given to those who already had some capital"* (LRG, 1995 in Tapela 2002:76).

6.5 PRELIMINARY PHASE OF AGRICULTURAL COMMERCIALIZATION IN MAKULEKE: 1999 TO 2002

6.5.1 PRE-DEVELOPMENT SURVEYS

In 2002 RESIS project implementing agent, Loxton Venn and Associates (LVA), conducted a pre-development survey whereby local views were elicited through a group discussion. Although survey data was gender neutral, socio-economic needs expressed by members of the Makuleke community were broadly similar to those expressed in an earlier 1998 survey by this researcher (Table 34). Water remained a most critical need in the community. However, the two surveys employed different methodologies, which probably accounted for some of the variations. The 1998 study by this researcher elicited views through in-depth interviews of individuals as well as focus group discussions with women's groups and institutional structures predominantly composed of men. What emerged in the 1998 survey was gender disaggregated data that clearly showed differing perceptions of needs among men and women. For example, while men indicated that jobs were the second most important need, women stated that the second and third most important needs were improved livelihoods and food security respectively. Broadly, however, results of the two surveys were similar.

TABLE 34 MAKULEKE: PAIRWISE RANKING BY GENDER OF COMMUNITY NEEDS PERCEIVED AS MOST IMPORTANT, 1998

Male	Female
1. water	1. water
2. jobs	2. improved livelihoods
3. electricity	3. food
4. other (pension)	4. electricity
5. improved livelihoods	5. leadership
6. food	6. infrastructure and services
7. land	7. jobs
8. infrastructure and services	8. land
9. leadership	9. other (pensions)

Source: Tapela, 1999

6.5.2 RESTRUCTURING OF LAND DISTRIBUTION CRITERIA

In preparation for inclusion of Makuleke Irrigation Scheme in the RESIS Phase 1 Water Care Programme, new criteria were developed in an effort to redress the perceived misallocation of

land that took place at the inception of the irrigation scheme in the early 1990s. The new criteria sought to redistribute land in favour of full-time aspirant commercial farmers, on the one hand, and indigent people within the community, on the other hand. Land re-allocation was restricted to residents of Makuleke community, who had no alternative sources of income. Social grants were not counted among income criteria. A deliberate move was taken to exclude part-time farmers who, firstly, had alternative sources of income, secondly, were government employees and/or, thirdly, resided in other villages elsewhere in Thulamela Local Municipality. The study identified 31 farmers who became excluded through such screening process. Furthermore, the number of commercial plot holders was reduced from 52 to 46. Among excluded farmers, however, were three Makuleke farmers who met all criteria for inclusion but were excluded nonetheless. Their plots were allocated to three of the included farmers, who ended up with dual access to 5 ha parcels of land (see Section 6.4.3.2). Effectively, therefore, land redistribution resulted in a total of 43 commercial plot holders instead of 52.

6.5.3 LAND RE-ALLOCATION AND USAGE

6.5.3.1 Overview

Contrary to some of the official records of the Department of Agriculture (LDA 2002a; b) that the area of the scheme was 239 ha (Table 31), Makuleke Irrigation Scheme was found to be two hundred and eighty hectares (280.1 ha) in area (Table 35). Land within the scheme was subdivided into 'commercial' plots, 'food' plots and orchards. Commercial plots and orchards occupied the largest portion (90.1 per cent) of land.

TABLE 35 MAKULEKE IRRIGATION SCHEME: DISTRIBUTION OF PLOTS BY TYPE OF USE AND AREA, 2008⁹⁶

Type of Unit	Number	Average Plot Size (Ha)	Area (Ha)	Total Area
Commercial	43	5.0	216.5	252.4
	19	0.5 o 3.4	35.9	
Food Plots	273	0.1	27.7	27.7
Greenhouse Project	4	Less than 0.5		
Total Area				280.1

⁹⁶ Physical Plan of Makuleke Irrigation Scheme: 2001/2/3. Official records of LDA.

6.4.3.1 Allocation of Food Plots

Of the 280.1 ha that comprised the irrigation scheme, 27.7 ha were reserved for subsistence food production, mostly by indigent households (Table 35)⁹⁷. This portion was sub-divided into two hundred and 277 'food' plots of roughly 0.1 ha each. When the RESIS project commenced in 2002, 277 food producers occupied the food plots. Four of the subsistence farmers had since been replaced by a consortium of 4 emerging commercial farmers, who produced vegetables in a greenhouse built with funding from Gesellschaft Technische Zusammenarbeit (GtZ). These farmers supplied vegetables to supermarkets, such as Spar and Shoprite, in Thohoyandou and Louis Trichardt. Two of the displaced farmers were employed by the consortium. During the course of the study, there were therefore two-hundred and seventy-three (273) subsistence irrigators, who produced food crops primarily for household consumption and sometimes sold surplus produce within the local community. The majority (69.6 per cent) of food plot holders were women.

While the allocation of food plots was primarily intended to favour the most indigent households within the community, the study identified a number of non-poor households among food plotters. Such households owned rain-fed crop fields in the area before the scheme was established and were displaced by irrigation development. They therefore had prior land rights. As compensation, the chief allocated food plots to these households in 1989, which they had used since the irrigation scheme was established in 1991. At the time of this study, all food plot holders had been stopped from producing crops in the irrigation scheme.

6.4.3.2 Allocation of Commercial Plots

Two hundred and fifty-two (252.4) ha had been set aside for commercial production. This portion was sub-divided into forty-six (46) 'commercial' plots of approximately 5 hectares (ha) each and allocated to forty-three (43) emerging commercial farmers or petty commodity producers. In an attempt to achieve the equitable allocation of around 5 ha per farmer, some of

⁹⁷These statistics differ from those in many reports of the Limpopo Department of Agriculture (LDA). According to LDA records, the area of the scheme is variously reported 270 ha (LDA, 2000), 239 ha (LDA 2002a) and 242 ha (LDA, 2002c). Similarly, the area of the portion reserved for food plots is reported to be 24 ha (LDA, 2002a) and 27 ha (LDA, 2002b). Commercial plots are reported to occupy 215 ha (LDA, 2002a) and 243 ha (LDA, 2002b).

the farmers had been allocated a combination of two to three of the nineteen (19) smaller plots ranging from 0.5 to 3.4 ha. This left a surplus of three 5 ha plots, which were then allocated to three of the registered commercial plot holders, thus giving them contested access to two 5 ha plots each. Such dual access to land contradicted the principle of equitable allocation that was adopted at the onset of revitalization of the scheme.

Regarding the issue of contested dual access to 5 ha plots, members of the farmer's management committee ascribed inequitable allocation to the fact that the three farmers had entered into informal arrangements to utilize plots allocated to relatives. The sharing arrangements were described as involving farmers using both their plots and plots registered in the name of a relative, and not shared production on the land. However, the widespread view by Makuleke community members and the landless in particular was that such arrangements were irregular. Contrary to earlier justifications by members of the farmers' management committee, this study found that those occupying two of the contested commercial plots had benefited from the exclusion of three farmers belonging to a political faction that was embroiled in a protracted conflict with Chief Makuleke. A consequence of farmer exclusions was a sense of tenure insecurity among all smallholders and emerging commercial farmers in particular. Some of the insecurity was directly linked to strategic partnerships, which introduced uncertainties among smallholders despite government reassurance that such contract farming arrangements were viable mechanisms for ensuring entry into the highly competitive and globalized agri-food systems.

6.4.3.3 Allocation of Orchard Plots

Beyond the groups of 43 petty commodity producers, 273 subsistence food producers and one consortium of 4 commercial vegetables growers, three (3) farmers within the community had mango orchards that were established prior to revitalization of the scheme. Chief Makuleke was one of the fruit producers, but he subsequently removed his mango trees in anticipation of joining a RESIS-Recharge strategic partnership.

6.4.3.4 Allocation of Smallholdings by Gender

Examination of land allocation by gender showed that most (79.4 per cent) of the commercial plots were allocated to men while most (68.5 per cent) of the food plots were allocated to women (Figure 41). Four plots comprising the Greenhouse Vegetable Project were allocated to a consortium of four men.

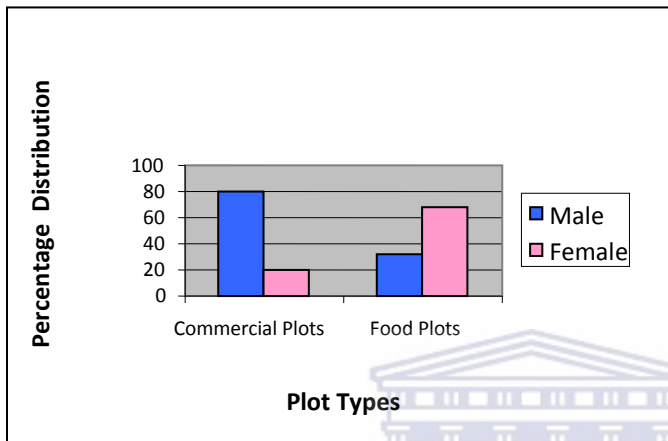


FIGURE 41 MAKULEKE: PERCENTAGE ALLOCATION OF PLOTS BY GENDER

Examination of land allocation by age revealed that food plots had a greater proportion (38.5 per cent) of elderly farmers aged 65 years and above. By contrast, commercial plots had a smaller proportion (26.5 per cent) of such elderly farmers. Most (82.4 per cent) of the commercial plot holders were over 40 years old, and the predominant age group was 40 to 49 years old (Figure 42). Unemployed youth within the community were not happy about the relatively small proportion (3 per cent) of commercial plots allocated to their age group (18 to 29 years old). The youth felt side-lined by the land re-allocation process and therefore prevented from gaining access to productive resources. Such contestation had compelled the WUA management committee to explore possible means to involve the youth in commercial agriculture and agri-business. Possible options included a scholarship fund to sponsor tertiary education of interested youth. Alternatives also included involving the youth in value adding activities, such as processing and packaging of crop produce. The search for alternative livelihoods was informed by a belief that the youth were not really interested in farming but in

income from farming. For that reason, it was considered futile to allocate a greater proportion of land to young people.

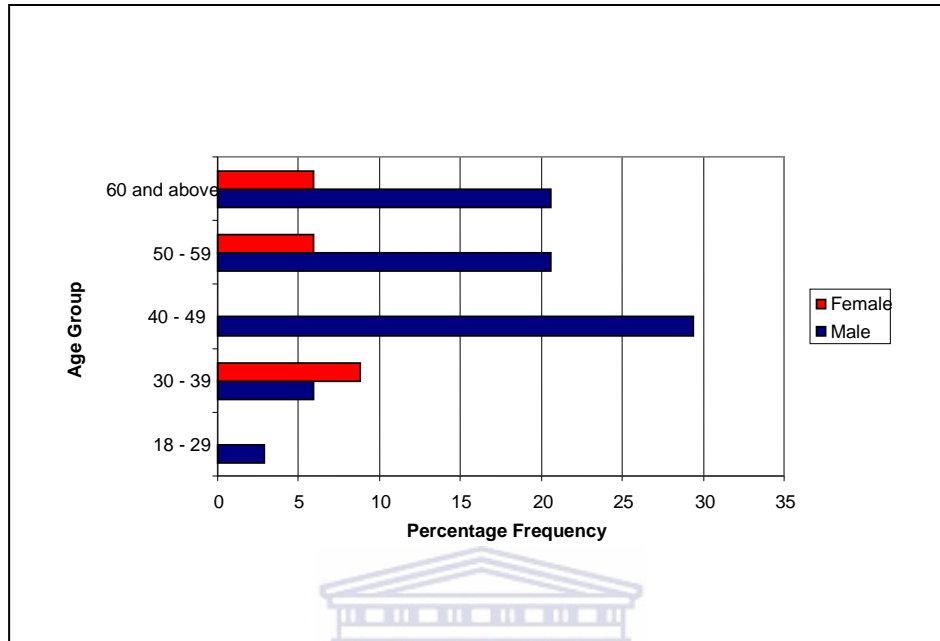


FIGURE 42 MAKULEKE IRRIGATION SCHEME: PERCENTAGE FREQUENCY OF ALLOCATION OF COMMERCIAL PLOTS BY AGE AND GENDER, 2005

Apart from re-allocation of the larger proportion (90.1 per cent) of land a new group of emerging commercial farmers, preparations for RESIS entailed a re-structuring of the farmers’ organization. Makuleke Farmers Association was reconstituted as ‘Makuleke Irrigation Scheme Water User Association’ (WUA)⁹⁸. The earlier association⁹⁸ was a cooperative structure that had previously been formed by the original group of 52 commercial plot holders in the 1990s. The constitution of the WUA, through its objective “to have only one organization representing the farmers on the scheme”, sought to achieve inclusive representation of both commercial and food plot holders. An application for registration of the Water User Association (WUA) had reportedly been submitted by an implementing agent⁹⁹ some years previously, but by June 2009¹⁰⁰ farmers had yet to receive the WUA certificate. Despite that, farmers continued to use

⁹⁸ Constitution of the Makuleke Water User Association.

⁹⁹ Golder & Associates, previously Loxton, Venn & Associates (LVA).

¹⁰⁰ Concern expressed by the Secretary of Makuleke WUA at a workshop on ‘Water, Land and Agrarian Reform’, convened by the Water Research Commission (WRC) in collaboration with the international Water Management Institute (IWMI), Institute for Poverty Land and Agrarian Studies (PLAAS), Waternet and the Global Water Partnership (GWP). Workshop held in Pretoria on 24 June 2009.

the WUA constitution as their main point of reference in matters pertaining to irrigation management. Provisionally constituted as a WUA, Makuleke irrigation farmers also paid annual membership fees of R400 for emerging commercial farmers and R10 for food plot holders.

A committee managed affairs of the irrigation scheme on behalf of both emerging commercial farmers and subsistence food producers. The committee was composed of an executive committee and five sub-committees that were responsible for natural resources, human resources, services, technical aspects and non-farming issues. The management committee consisted of nominated and elected farmers. Except for one female food plot holder, representation in the management committee was exclusively by emerging commercial farmers.

6.5.5 CAPACITY BUILDING

In preparation for RESIS Programme interventions and irrigation management transfer (IMT), in particular, members of the Makuleke WUA underwent training in institutional awareness and mobilization. LDA's farmer support objective was to strengthen the farmers' organization and enable it to take ownership of irrigation scheme management responsibilities.

During its early tenure, the management committee underwent capacity building in organizational development, with specific training in institutional roles and responsibilities. Consultants implemented capacity building measures for members of the executive committee and sub-committees. Such measures included skills development in leadership, minute taking, book keeping, budgeting and financial management. There was also training in general business principles, water management, production and conservation and non-hydraulic infrastructure management.

It was worth noting that capacity building did not emphasize principles of good 'governance', such as accountability, transparency and equity. Subsequent conflicts in 2007 between commercial and food plot holders revolved around issues of accountability, transparency and equity. Such conflicts led to divisions within the smallholder group. The only representative from among food plot holders then recused herself from the WUA committee, which became

reconstituted as 'Makuleke Farmers' Cooperative' in preparation for entry into a new RESIS-Recharge contract farming arrangement. In March 2009, food producers formed a new splinter committee that represented their specific interests as a group. At the time of the study, the splinter organization was not formalized and the relationship of new committee and the WUA was not yet clear.

6.5.6 RESUSCITATION OF DBSA LOAN

In August 2000, LDA resuscitated a DBSA loan that was approved for Makuleke Irrigation Scheme prior to 1994¹⁰¹. The loan of about R900 000 was used to purchase moveable assets outlined in Table 36.

Since preparations towards a new cotton production joint venture with NSK were already underway, modifications were made to plans regarding the envisaged use of equipment purchased with the DBSA loan. The five sets of tractors and ploughs were deemed inadequate for requirements of cotton production. In particular, ploughs were considered to be too small for post-harvest destruction of cotton stalks through deep ploughing to bury crop residues. To guard against production failure, NSK committed to providing requisite field equipment. A decision was therefore taken to re-allocate DBSA-funded tractors and ploughs to five of the emerging commercial farmers, who would act as service providers to the irrigation scheme. The farmer's organization, however, retained ownership of the remaining equipment, such as the plough, harrow, ridger, slasher, trailer, spray unit and associated accessories. These were to be rented out to the five contracted service providers.

¹⁰¹ Source: 'A Proposal for the use of an existing DBSA moveable assets loan at Makuleke Irrigation Scheme in the Northern Region of the Northern Province. Proposal by the Northern Province Department of Agriculture and Environment, August 2000.

TABLE 36 MAKULEKE IRRIGATION SCHEME: TOTAL LOAN REQUESTED FROM DBSA, 2000

Item	Preferred Quote by OTK (in Rands)
5 x 53 kW 2-wheel drive tractors	400 000
5 x 3 furrow mouldboard plough (450mm)	43 650
5 x 2.3m medium disc harrow	98 980
5 x 3 row 2.4m ridger (furrow opener)	26 775
6 x set of essential accessories (estimate)	30 000
1 x spray unit (for field crops)	10 013
1 spray unit (for orchards)	47 520
1 x 1.5m p.t.o. driven Falcon slasher	8 955
1 x 6t 4-wheel trailer with drop sides	33 120
Total excluding VAT	699 013
TOTAL COST FOR MOVEABLE ASSETS including 14% VAT	792 675
Loan application facilitation fee (contracted service provider)	86 000
GRAND TOTAL OF LOAN	878 675

6.5.7 REHABILITATION OF INFRASTRUCTURE

Rehabilitation of infrastructure took place between 2002 and 2003. Since rehabilitation activities coincided with the then-newly incepted joint venture with NSK, some of the responsibilities were shared between LDA and the joint venture. Table 37 summarizes the preparatory rehabilitation activities, costs and sources of funding. The total cost of rehabilitation was approximately R1.5 million.

TABLE 37 MAKULEKE IRRIGATION SCHEME: REHABILITATION OF INFRASTRUCTURE, 2000 TO 2003

Priority	Rehabilitation Action	Cost (in Rands)	Source of Funding
1	Reconnection of electricity	+/-137 000 ¹⁰²	NSK (WUA contributed R1450)
2	Pumphouse: Inspection, servicing and repairs to switch gear and electric motors	60 000	LDA (through WOMIWU consultants)
3	Hydrants: Replacements	69 000	NSK
4	Food Plots: Replacement of taps in 106 plots and 8 dragline hoses per plot for 270 plots	588 000	LDA
5	Sprinkler Irrigation: Provision of equipment	2 300	NSK
6	Fencing: Installation of 6.5km of barbed wire fencing for 7km "bonnox" fence	210 000	LDA
7	Cattle crossings: Repairs to 3 cattle crossings over canal and related infrastructure	30 000	LDA
8	Mechanisation Plan and Implementation Plan for setting up sustainable management structures	n.d.	LDA
9	Configuration of Pumps: Investigation towards change of pump configuration (e.g. pump for food plots)	100 000	LDA
10	Canal: Sealing of expansion joints where necessary along 4km length of canal	25 000	LDA
11	Roads and soil conservation measures: Use of government equipment to protect infrastructure	100 000	LDA
12	Drinking water within irrigation scheme: Installation of 3 hand pumps	39 000	LDA
13	Valves to manage water supply to irrigation blocks	50 000	LDA
TOTAL		1 412 750	

¹⁰² Meeting with Graham Gerber, Managing Director of NSK, and NSK's team of personnel responsible for BEE joint venture project implementation. Meeting held in Mokopane on 15 October 2004.

6.6 EARLY PHASE ONE OF RESIS: JOINT VENTURE WITH NSK

This joint venture began in 2002 and produced and marketed cotton and maize from 2003 to 2005. The joint venture was, according to Denison & Manona (2007), a “share-cropping” arrangement. During Phase 1 of RESIS, which was termed the Water Care Programme, agricultural commercialization interventions were targeted at the ‘business farmer’ type of crop producer (see Table 7 in Section 3.7 of Chapter Three). An assumption was made that emerging commercial farmers of Makuleke possessed the degree of commercial orientation required to pursue higher yields and accept higher risks. The joint venture partner was NSK, which was the same cotton ginning and marketing company that is cited in the case of Phetwane (see Section 5.8 in Chapter 5). The majority (39) of the 43 emerging commercial farmers and 40 of the 46 commercial plots were involved in the joint venture. One of the farmers, Farmer ‘R’, was registered twice and effectively had dual access to allocated land (see Table 38 in Section 6.6.2). Excluded plots included three (3) plots with fruit growers’ mango orchards and three (3) plots located in the periphery of the irrigation scheme.

6.6.1 INSTITUTIONAL ARRANGEMENTS

The joint venture was constituted in terms of a contract signed in 2002 between emerging commercial farmers, constituted as Makuleke Water User Association (WUA) and NSK. According to the contract, the main objective was to make a profit out of cotton crop production. Profit from wheat production was specified implicitly as a secondary objective. While Makuleke WUA and NSK entered into an agreement, LDA initiated a parallel process to initiate the Water Care Programme in Makuleke Irrigation Scheme. This programme was a precursor to RESIS. Although the joint venture was initiated with little involvement of LDA, attempts were made to bridge the gap between the joint venture arrangement and strategic principles and objectives of the RESIS Programme. The result appears to have been a farmer targeting approach that blended the Equity Labourer type with certain elements of the Business Farmer type. Such targeting appears to have been based two sets of assumptions.

The first assumption was that the commercial orientation of Makuleke commercial plot holders required the production of crops with “more robust market opportunity” and was “likely to call

for higher yields and accept higher risks associated with adopted farming styles”. Secondly, that the “reality of scheme running costs and operational management”, on the one hand, and farmers’ insufficient skills, market opportunity and financial resources, on the other hand, called for commercial partners to invest in or run the farming enterprise. The blended targeting approach effectively placed Makuleke farmers under the mentorship of the private investors while simultaneously exposing them to risks associated with capital intensive production.

Examination of institutional arrangements for the joint venture showed that both parties equally shared costs, benefits and debts. The private investor also undertook to re-invest 50 per cent of its share of profits in the second season¹⁰³. NSK obtained a bank loan for infrastructure rehabilitation and committed R137 000 towards electricity reconnection. Government contributed a grant of R500 000 on behalf of farmers and resuscitated an existing DBSA loan (Section 6.4.4). NSK’s proviso was that Makuleke farmers should be constituted as a legal entity in order for the two parties to enter into a contractual agreement.

The joint venture contract specified that the duration of the joint venture would continue indefinitely, subject to the right of any member to withdraw from it by giving no less than twelve (12) month’s written notice to the other member “provided that no such notice shall be given, without written permission of NSK, as long as there is any amount due by the joint venture or by any member of the association to NSK forthcoming out of this joint venture agreement”¹⁰⁴. Some of the conditions attached to the duration clause were that:

- The joint venture should not terminate by reason of the alteration in the shareholding of NSK or alterations in members of the association (Makuleke WUA), but should continue between the company (NSK), on the one side, and an association duly constituted (Makuleke WUA), on the other side;
- The Makuleke WUA further undertook that for a period of three (3) years after termination of the joint venture agreement, for any reason whatsoever, it and its

¹⁰³ Meeting with Dr Graham Gerber, Director of NSK, and NSK BEE projects implementation team, held at Mokopane on 15 October 2004.

¹⁰⁴ Joint Venture Agreement entered into and between NSK (Pty) Ltd and the Makuleke Water User Association, 2002.

members would continue for the said period to deliver all cotton produced by the association or its members to NSK, because of the benefits derived from the joint partnership agreement;

- NSK undertook, for the 3 years after termination of the joint venture agreement, to guarantee “a market related price”, uptake of the total cotton and wheat crop and ongoing extension services to all growers concerned; and
- In the event that Makuleke WUA failed to deliver to NSK its members’ total cotton crop in the 3 years after termination of the joint venture agreement, NSK would be entitled to claim from the association “as pre-estimated and liquidated damages of the ruling seed cotton price in cents per kilogram cotton sold elsewhere”. Both NSK and Makuleke WUA consented that the damages would be calculated on the basis of the most recent crop estimate. In the event of such failure, all amounts due by the farmers’ association or its members would become due and payable immediately. Alternatively and at its own discretion, NSK would be entitled to claim from the association all damages suffered as a result of the breach by Makuleke WUA of the terms and conditions of the joint venture agreement.

Regarding the loan account, the contract stated that each member would have a loan account in the books of the joint venture, which shall reflect loans made to the joint enterprise. Any credit balance in the loan account would bear interest at the prime rate of ABSA Bank Limited, and that such credit balance would be repaid to the member who made the loan to the joint venture at the end of the crop season in which the loans were made. The contract further stated: “For as long as funding required by the joint ventureship is not provided by the members in equal shares, interest will accrue and be payable monthly in arrears on the amount by which any member’s loan account exceeds such member’s pro rata share or loan accounts of the members, at the rate contemplated in clause 4.2.1 [i.e. ABSA’s prime interest rate]”.

Although the financial clause of the original contract gave both NSK and Makuleke WUA equal signatory powers over withdrawals from the joint venture loan account, responsibility over book keeping, records of transactions and auditing of accounts was vested with NSK. The

private investor, however, was entitled to charge for these services. Alternatively the joint venture could appoint an independent accounting firm to perform the same services and defray annual costs. Responsibility for business management was vested entirely with NSK, who would consult with Makuleke WUA. In that regard, NSK managed daily operational activities and implemented all crop production on the Makuleke Irrigation Scheme. The joint venture made provision for each farmer to hire three workers per five hectares (5 ha) of land. These workers were paid R300 per month.

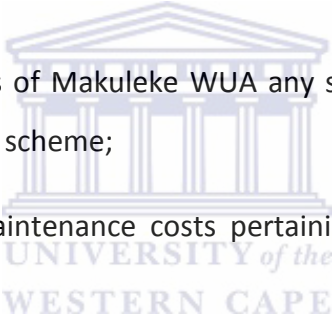
Duties and obligations of NSK were that the private investor would:

- Arrange any mechanization contractors on behalf of the joint venture where this was needed, and the costs of such contractors would be allocated to the crop being grown at the time;
- Purchase the total cotton and wheat crops grown by the joint venture on property that the farmers' association and/or its members had permission to occupy, at a price which would be determined for cotton in April of each year after the effective date, subject to "the A-index, exchange rate and export component" as applicable on the date of sale; Alternatively, NSK or its designated affiliate would purchase from the joint venture all cotton and wheat produced at market-related prices;
- Supply all bulk equipment necessary to handle cotton, free of charge, to the joint venture;
- Facilitate ongoing training of members of Makuleke WUA in cotton and wheat production, financial management and mechanization skills; and
- Stand as guarantor for any deposit on the electricity and/or water account on behalf of the joint venture.

Makuleke WUA undertook to:

- Ensure that its members signed a written cession ceding to the joint venture all their rights and privileges in the permission to occupy pertaining to their respective plots of land;
- Ensure that all its members adopted and remained bound to a resolution that Makuleke Irrigation Scheme WUA would be the only legally recognized entity that would represent any member of the association;
- Apply for electricity and water connections in its own name; and
- Ensure that its members signed a suretyship and confirmation of the agreement.

Rights, duties and obligations of the NSK-Makuleke WUA venture included that the joint venture would

- 
- Hire from among members of Makuleke WUA any staff necessary to perform farming operations on the irrigation scheme;
 - Pay for any repair and maintenance costs pertaining to irrigation equipment in the scheme;
 - Agree that no land no land rentals would be payable by the joint venture to the Provincial Government and/or any individual or institution concerned except in the case of an existing Tribal Authority lease;
 - Agree to leave a portion of the scheme open for the association to allocate to other crops, these crops funded from the association's own sources, and the area to be no larger than ten per cent (10 per cent) of the total land area allocated to the joint venture. The joint venture, however, reserved the right to exclude this area from the total area under the contractual agreement, for ease of management. The joint venture agreed to initially repair irrigation infrastructure in the externalized cropping area at its own cost;
 - Ensure that all necessary documentation is forwarded to the WUA on a monthly basis

- Ensure irrigation infrastructure against flood damage;
- Have no claim over any grants that might be forthcoming to the farmers' association, unless specifically requested by the association; and
- Accept risk in any cotton or other crop on behalf of the joint venture only on receipt of the cotton or wheat at a depot or ginnery of NSK or its nominee or when the crop is collected by a vehicle of NSK or its nominee.

Some of the key resolutions included that each member would be entitled to an equal vote and that any profit or losses of the joint venture in respect of business would be borne by the members in equal shares. All loans on the infrastructure, salaries, administrative costs, crop inputs and/or any other costs would be repaid by the joint venture before any net profit is shared. Responsibilities for repayment of debts incurred by the joint venture were to be shared equally. Upon dissolution of the joint venture, the business and assets of the joint venture would be liquidated, and the executor would use his sole discretion to allow a member to assume sole responsibility for a liability of the joint venture, with the consent of the creditors concerned. Other provisions relating to dissolution of the joint venture were that:

- Makuleke WUA and its member would agree that the WUA shall cede to NSK all of the members' PTO certificates and the full unencumbered use of the land falling under such ceded certificates for the duration of the repayment by NSK of any debts owed by the joint venture (Clause 18.4.8);
- NSK would repay the debt owed through the production of cotton and wheat, or any other crop that NSK would deem fit at that time, using land and irrigation infrastructure initially used by the joint venture. Once NSK settled the debt in full, the land and irrigation equipment would revert back to Makuleke WUA and its members for their own use (Clause 18.4.9).
- The association would revoke all its rights and title to any of the land, irrigation equipment and crops that may be planted by NSK in order to repay any debt owed by the joint venture (Clause 18.4.10)

On the basis of the above and other conditions, NSK and farmers, constituted as Makuleke WUA, signed the contractual agreement. Certain elements of the contract, however, were evidently not fair to the farmers. For example, clauses pertaining to joint venture duration placed an inordinately heavy burden on farmers, who would remain bound by the contract long after their decision to discontinue their roles in the joint venture. Officials of the Limpopo Department of Agriculture stated that the department intervened to ensure that contents of the joint venture contract did not contradict principles and objectives of RESIS regarding support to black farmers. However, the researcher was not able to obtain a copy of the contract between LDA and NSK. In the absence of such formal documentation, the study had to rely on the business plan for RESIS and on field observations.

Within the business plan, the Strategic Model for RESIS programme implementation specified that the role of Government with respect to Strategic Partners was to provide firstly, a framework within which private sector partners could operate (including appropriate policy and operating principles and guidelines) and, secondly, access and communication infrastructure¹⁰⁵. Formally therefore, the government department was vested with a facilitative role to ensure a “win-win” outcome within an institutional arrangement to empower black farmers, on the one hand, and create a framework within which the private sector partner operated, on the other hand. Hence, although the joint venture was started with little involvement of the Limpopo Department of Agriculture, field evidence shows that conditions of the original contract between farmers and NSK were modified during the RESIS Water Care Project in Makuleke Irrigation Scheme. Such modifications pertained mainly to the duration of the joint venture, which was reduced to three (3) years as opposed to continuing “indefinitely” and binding farmers to the contract for a period of three (3) years after termination of the agreement. Modifications also related to the types of crops produced. Whereas the original contract primarily emphasized production of cotton and wheat, the joint venture proceeded to produce cotton and maize during Phase One of RESIS. Much of the content of the joint venture contract, however, remained unchanged.

¹⁰⁵ RESIS: A Business Plan for the Revitalization of Smallholder irrigation Schemes in Limpopo Province, November 2002. Limpopo Department of Agriculture.

6.6.2 JOINT VENTURE PERFORMANCE AND FARMER'S RESPONSES

NSK and Makuleke WUA appear to have broadly adhered to the roles specified in the joint venture contract. Emerging commercial farmers contributed their plots of land as equity in the share-cropping scheme. Private investors contributed finance capital, mechanization, technical skills, infrastructure repair and maintenance services, access to markets, business administration, crop production management services and development of farmers' skills. In addition to the R500 000 capital outlay, NSK contributed approximately R1 million towards additional personnel costs and R137 000 towards settling arrears in the electricity account¹⁰⁶. Of significance was the fact that the NSK joint venture accommodated needs of food plot holders and, for example, subsidized their water supply and irrigation costs. This was partly due to the dual emphasis on agricultural commercialization and food security during the Early Phase of RESIS.

In the first season of implementation in 2003 to 2004, the joint venture did not generate anticipated financial returns mainly due to late season planting, which made the joint venture particularly vulnerable to losses¹⁰⁷. Production costs for cotton in 2003 accounted for three hundred and sixty per cent (360 per cent) of Makuleke farmers' net receipts after sales. Effectively, farmers were left with huge losses. Such losses were absorbed by the government grant to farmers¹⁰⁸, thus enabling farmers to continue with the joint venture. However, such action did not resolve the problem of lack of income for farmers. Despite this set back, farmers rationalized that the initial faltering performance of the joint venture was due to "teething problems", which would be resolved with practise. They therefore remained optimistic.

The second season from 2004 to 2005, however, also failed to yield expected incomes. Failure was due to an unanticipated decline in world cotton prices¹⁰⁹. Prior to joint venture failure, farmers had adopted various strategies to cope with hardship emanating from the previous season's crop production failure. A strategy that many farmers resorted to was using labour

¹⁰⁶ Meeting with Dr Graham Gerber, Managing Director of NSK, held in Mokopane on 15 October 2004.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ Interview with Dr Masoud Shaker, Limpopo Provincial Department of Agriculture, 10 May 2005.

from within their own households instead of hiring outside labour. The objective was to retain the R300 monthly wage per worker that the joint venture provided for each farmer to hire three workers for every 5 ha of land. Another strategy adopted by some of the farmers was to quietly disobey rules against growing other crops on land ceded to the joint venture. They grew maize and justified this by alluding to their need to assuage hunger in their households. They also justified such actions by pointing out that certain emerging commercial farmers were using joint venture resources to grow their own crops. These were mostly vegetable producers whose plots had been excluded from the joint venture because their plots were “located on the periphery of the scheme”. A member of the executive committee of the WUA management committee was among the cited vegetable producers. When, after initial leniency towards informal cropping practices, the management committee attempted to enforce rules against the production of private crops on ceded land, tensions began to rise between farmers and the management committee.

Tensions became manifest in the farmers’ increasing lack of enthusiasm to pick cotton on their plots. Lack of motivation was also due to perceptions by farmers, who mostly relied on labour from within their households, that cotton picking allowances were too low. Table 38 shows that in May 2005, farmers were paid a full month’s allowance for cotton picking labour costs. By June, it became apparent that the rate of cotton picking was slower than envisaged. NSK and the management committee became concerned that prolonged exposure of the crop to weather conditions and pests could possibly jeopardize the joint venture profits. Towards salvaging the crop, a decision was taken to replace human labour with mechanization. Farmers were therefore paid 7 day’s allowance for the hand picking of cotton in June (Table 38) and instructed to discontinue. They were also informed that practical requirements of mechanized harvesting would entail a consolidated approach to the cropped land. Effectively, the harvester would traverse plot boundaries, all produce would be pooled and plot size rather than yield level would determine each farmer’s share of profits. Farmers were not happy about this and pointed out that disregard for evident differences in individual farmers’ crop yield and quality would be a further disincentive for Makuleke commercial plot holders to continue with the NSK joint venture. Despite these concerns, mechanization of cotton picking began on 28 July 2005.

The curtailment of time spent on handpicking cotton meant that lower allowances were paid to farmers, which exacerbated hardships of both farmers and farm workers. Many farmers could not retain their workers since they could not afford to pay wages. The vulnerability of both farmers and workers increased as workers lost jobs and farmers could not adequately provide for needs of their own households. The strategy by farmers to use labour from within their own households, which was a means to retaining the R300 monthly wage per worker, was no longer seen as a worthwhile option, since such income fell far below expectations and was not enough to satisfy basic needs. The only exceptions to hardships experienced by farmers following joint venture failure were those emerging commercial farmers whose plots were excluded from the joint venture.

Such farmers were able to earn income from sales of food crops produced and marketed outside of the joint venture contract. This study identified three such farmers. Two of the farmers, Renias Chauke and Mr T. G. Phosa, practiced market gardening outside the scheme and irrigated their crops using river water and borehole water respectively. A third farmer, Farmer 'B'¹¹⁰, had acquired - amid heated contestation – dual access to two 5 ha plots within the irrigation scheme and spread his risk by committing one of the plots to the joint venture while retaining the other for his own private use. His total ownership of the production enterprise in the second plot gave him the freedom to make decisions and take actions independent of external actors. This farmer's strategy to retain a degree of freedom was demonstrated with respect to a cellular phone project aimed at linking farmers to markets.

¹¹⁰ Name withheld to protect the privacy of individual.

TABLE 38 MAKULEKE: COTTON PICKING ALLOWANCES, 2005

Name of Farmer*	Plot Number	Plot Size (in Ha)	Allowance	
			May	June
Renias Chauke	4A & B; 19A	11.8	2124	531
D	24B	5	900	225
E	19B	4.8	864	216
F	14A	5	900	225
G	22	5	900	225
H	15	5	900	225
Tobias Hlongwane	11A1 & B1	6.5	1170	292.5
J	6	5.4	972	243
K	18A	5	900	225
L	12 A& B	6.7	1206	301.5
A	25A	5	900	225
C	21B	5	900	225
M	20A	4.8	0	216
N	27	5	1800	225
O	9A & B	7.9	1422	355.5
P	8A	3.4	612	153
Q	7B	5	900	225
R	2A & B	7.4	1332	333
S	23B	5	900	225
T	17B	5	900	225
U	22B	4.8	864	216
V	26B	5	1098	225
B	16B	5	900	225
W	10A & B	6	0	270
X	1A	5	900	225
Y	13A & B	7	1260	315
Z	26B	5	900	225
BA	24A	5	900	225
BB	25B	5	900	225
BC	27B	5	1800	225
BD	1B	5	900	225
BE	14B	3.2	576	144
BF	11A2 & B2	6.6	1188	297
BG	22A	5	900	225
BH	20B	5	900	225
BI	18B	5	900	225
BJ	17B	5	900	225
BK	7B & 8B	5.2	936	234
BL	3A	5	900	225
R	23A	5	900	225
			39024	9742.5

*Pseudonyms and code names used.

The joint venture project was sponsored by Vodacom and Alcatel in collaboration with Manobi, a Senegalese-based firm. In 2005 the project linked farmers to markets via the internet through

a joint venture project entitled “Bridging the Digital Divide” implemented by Alcatel, a mobile phone company, and Manobi, a Senegal based private investor. This joint venture, whose benefits were spread to include a few other scale-scale irrigation farmers outside the irrigation scheme, was initiated at a time when smallholders were “hemmed in” by a cotton joint venture contract with NSK (Tapela, 2005). They were therefore unable to make use of this opportunity, despite their desire to seek alternative production and marketing arrangements¹¹¹. By contrast, Farmer ‘B’ was able to use his cellular phone to market his produce and obtain information on possible buyers for future produce. He was also able to retain all his three workers.

Since the performance of farmers such as Famer ‘B’ starkly contrasted with the poor performance of the joint venture, pressure from households and the broader community mounted for the joint venture to generate incomes for farmers and job security for workers. Such incomes and jobs were seen as contributing to ameliorating poverty and hunger within households and unemployment and poverty in the community. Such incomes were also considered valid proof of the wisdom of a decision by these farmers to commit their land resources to the joint venture. For most of the farmers, commercial plots were the only major economic asset that they possessed. As pressure mounted, many of the farmers increasingly voiced a demand for greater freedom to grow other crops. This demand was turned down by the management committee, who cited contractual restrictions on use of land whose rights had been ceded to the joint venture for three years until contract termination in 2005.

Although the contract made provision for the WUA to allocate 10 per cent of land in the scheme to other crops, such land was already allocated to the 277 food plot holders. Among these were a consortium of 4 commercial vegetable growers, who used GtZ funding to invest in a greenhouse and enter into contracts to supply produce to local supermarkets and tourism enterprises in the Makuleke Region of the Kruger National Park. The majority of food plot

¹¹¹ Within a year of project commencement, LDA took over the Alcatel-Manobi joint venture and, according to smallholders, promised to provide computers and internet connection to irrigation farmers. Up to the end of this study’s research, this promise had yet to materialize and farmers were no longer electronically connected to markets. According to farmers, the move by the department of agriculture was also prompted by political questions over the involvement of a “foreign” private investor in efforts to assist resource-poor irrigation farmers.

holders, however, were among the poorest and most vulnerable people in the community. Although these produced crops primarily for subsistence, many also sold surplus produce and earned relatively small incomes of around R500 per crop. In the context of deep poverty, such incomes and food crops were important safety nets against vulnerability to hunger and resilience-failure. Effectively, therefore, there were no alternative options for independent crop production by emerging commercial farmers of Makuleke. What was particularly daunting for these farmers was the fact that the joint venture contract still had at least one more year to run before most of the emerging commercial farmers could be free to explore alternatives. Caught between the contract, on the one hand, and landlessness, poverty and social pressure, on the other hand, these farmers demanded that the contract be terminated. In their frustration, they reiterated, “We cannot eat cotton!”¹¹²

Failure of the cotton joint venture in the 2004 to 2005 season led to tensions among farmers over differences of opinion regarding a decision whether or not to continue with the joint venture. The management committee was only too aware of the implications of breaching the contract, particularly Clauses 18.4.8., 18.4.9 and 18.4.10. Such implications included possible losses of land rights within the scheme as NSK sought to repay debts emanating from dissolution of the joint venture. In desperation, the management committee appealed to traditional leadership for assistance, since the land was not owned by farmers but held in trust, on behalf of the community, by Chief Makuleke.

The decision by the Chief, in consultation with the Royal Family, the Traditional Council and the CPA, was that farmers should allow the joint venture contract to run its course and thus avoid compromising land rights that in effect belonged to the community as a whole. While some of the farmers acceded to this decision, others did not. Conflict erupted between the latter and other members of the WUA management committee. Tensions spread into the broader community, casting people into two main camps. One group consisted of people whose allegiance was to Chief Makuleke. The other group was composed of people who supported

¹¹² See the title page picture of this chapter (Chapter 6), which shows Makuleke petty commodity producers voicing their dissent about being compelled to continue growing cotton while they faced food insecurity due to lack of income from the joint venture.

Chief Mhinga, Makuleke's long-term adversary. Farmers who been most vocal in expressing dissatisfaction about the leadership's handling of the joint venture issue were then marginalized from mainstream political life within the community.

Despite challenges pertaining to joint venture failure in Makuleke, it was apparent that the community had a remarkably high degree of resilience. This became particularly clear when, at the height of tension in October 2005, the researcher convened a workshop to engage with Makuleke leadership and CBOs, which included a representative of the WUA. A key objective of the workshop was to engage these institutions on issues of conflict within the community, how such issues intersected with the research process and, conversely, how the study affected local power and livelihood dynamics. The background was that conducting research was becoming increasingly difficult due to the need to consistently negotiate relationships between the researcher and people in the two conflicting camps while retaining the trust of both camps.

Workshop participants resolved to convene a meeting to address the issue of conflict. The proposed meeting was envisaged to exclusively involve members of Makuleke community, who would be drawn from key actors in both camps. The CPA committed to sponsoring the meeting. The researcher did not attend the proposed meeting and was therefore not privy to discussions that took place. However, at a subsequent workshop convened by the researcher in May 2007, feedback by farmers was that contentious issues had been resolved and harmony among farmers restored. The Limpopo Department of Agriculture had also intervened to bring closure to the joint venture with NSK. Farmers were looking forward to a new strategic partnership with greater optimism. Resilience of community was captured in the words of one participant at the October 2005 workshop, who state that "Community perpetuates despite day-to-day conflicts".

6.6.3 CONCLUSION

The unsuccessful cotton joint venture with NSK was an example of Makuleke farmers' exposure to risks associated with capital intensive production (Tapela, 2008). Drawing from studies by De Klerk (1996) on similar farming schemes in the Western Cape, adequate financial support is central to any programme to establish small-scale farmers, and 'gearing' (i.e. the degree to

which farming activities are funded by a small-scale farmer's own funds relative to finance through creditors' funds) critically determines the viability of farming activity (see page 223 in Section 4.10.3) is 'gearing'. Although a rule of thumb of the South African Agricultural Union is that farms with a debt of more than 30 per cent in their financial structure are unsound, while those with a debt level above 50 per cent are unlikely to survive, in the case of Makuleke, cotton production costs far exceeded 50 per cent of net earnings, with much of the costs financed through subsidy grants from private investors and government. Production costs for cotton in 2003 accounted for 360 per cent of Makuleke farmers' net receipts after sales, which effectively left farmers with huge losses. The poor performance of the first generation of RESIS joint ventures seemed to have contributed to the decision by the provincial department of agriculture to modify the structure of strategic partnerships in the second phase of RESIS.

6.7 RESIS-RECHARGE PHASE: STRATEGIC PARTNERSHIP WITH AWC

With the onset of RESIS-Recharge in 2005, LDA encouraged farmers to place their land, water and infrastructure resources at the disposal of a strategic partnership with AWC for a period of three years as from March 2007. This section examines the institutional arrangements and implementation of the strategic partnership. The examination is limited, however, by the fact that some critical financial records of the partnership were inaccessible to the study.

6.7.1 INSTITUTIONAL ARRANGEMENTS

6.7.1.1 Modification of Equity Labourer and Private Investor Relationship

The poor performance of the first generation of RESIS joint ventures may have contributed to the decision by the provincial department of agriculture to modify the structure of strategic partnerships in the second phase of RESIS. The classification and targeting of Makuleke emerging commercial farmers changed from the hybrid business farmer-cum-equity labourer type that characterized the NSK joint venture to a distinctly equity labourer type. According to the RESIS typology of irrigation farmers (Denison & Manona, 2006), the difference between the two types of farmer was that while the business farmer maintained a degree of autonomy in decision making, the equity labourer was basically a worker, with very little influence over decision making. The sharing of costs and benefits was structured such that the private investor

would get a 60 per cent share of profits in the first year and thereafter both partners would each get equal (50 per cent) shares.

6.7.1.2 Contributions by Parties

Contributions by LDA included over R14 million (R14 159 206.12) financial capital for establishing new hydraulic infrastructure comprising twenty-one centre pivots, at an estimated cost of R60 795 per ha. Contributions by the private investor included technology, managerial expertise and transport worth an undisclosed multi-million rands in value¹¹³, as well as a lead role in decision-making, management and implementation of the whole enterprise from production, technical support, marketing to financial accounting. The contract made provision for the private investor to also ensure effective transfer of skills to farmers. A key responsibility for the private investor was to ensure that the enterprise was profitable and did not get bogged down by debt. Farmers contributed their allocated plots of irrigated land and, when required, labour. Labour force requirements of the strategic partnership were mostly drawn from the Makuleke community at large. The farmers' management committee was delegated the responsibility to engage directly with the community regarding issues of labour, communication, theft and the distribution of benefits to the community, such as casual employment and surplus produce.

6.7.1.3 Organization of Equity Labourers

When Makuleke emerging commercial farmers entered into a strategic partnership with Mr Arthur William Creighton (AWC), they were constituted as 'Makuleke Farmers Cooperative' and not a WUA. The strategic partnership contract, however, referred to the farmers' cooperative as 'Makuleke Farmer's Association', which was an old name of the organization. The farmer's association became singularly focused on the interests of registered emerging commercial farmers or equity labourers, to the exclusion of subsistence farming interests of food plot holders. The exclusion of food plot holders from the new organization, however, was not formally announced. This and the subsequent physical exclusion of food plot holders from

¹¹³ Meeting with Mr Arthur William Creighton in Modimolle on 14 March 2008.

access to water and land within the irrigation scheme led to the food plotters' representative recusing herself from the Makuleke Farmers' Cooperative. The farmers' organization had effectively been captured by commercial farming interests of equity labourers, which converged with similar interests by AWC, as private investor, and LDA, as responsible government authority.

6.7.1.4 Duration of Contract

The duration of the initial contract was three years as from 19 March 2007 to 28 February 2010. Given the substantial capital expenditure by the private investor, the envisaged tenure of the strategic partnership was ten (10) years. What was envisaged to change after February 2010 was shareholding within the partnership. This was because the "exit strategy" of the contract made provision for AWC to relinquish his shares either to Makuleke farmers or to shareholders nominated by LDA.

6.7.1.5 Roles, Responsibilities and Obligations

Roles, responsibilities and obligations of the private investor were that AWC would:

- Play a lead role in decision-making, management and implementation of the whole enterprise from production, technical support, marketing to financial accounting;
- Ensure effective transfer of skills to farmers, in terms of the Limpopo Department of Agriculture Empowerment Framework; and
- Ensure that the enterprise is profitable and does not get bogged down by debt.

Roles and obligations of Makuleke Farmers Cooperative were to:

- Contribute their allocated plots of land, water and irrigation infrastructure; and
- Contribute, when required, their labour.

Delegated responsibilities of the Makuleke Farmers Cooperative' management committee included:

- Engaging directly with the community regarding issues of labour, communication, theft and the distribution of benefits to the community, such as casual employment and surplus produce.

There were several distinctive features to the institutional arrangements for the strategic partnership. These related primarily to issues of relationships, power and exit strategy for the private investor. These features were directly aimed at redressing the perceived negative aspects of the preceding joint venture contract between Makuleke WUA and NSK.

With regard to issues of power, a distinctive feature of the strategic partnership agreement was that the contract, as an institutional mechanism, was not restricted to governing relationships between farmers and the private investor. Rather, the contract governed relationships between the three main institutions namely, Makuleke Farmers Association, AWC and the Limpopo Department of Agriculture. Although the researcher was not able to obtain a separate written record of the agreement between AWC and Limpopo Department of Agriculture, key principles governing the relationship between these two institutions were captured in the strategic partnership contract. This framework had major implications on the balance of power within the strategic partnership.

6.7.1.6 The Issue of Power

A key instrument that changed the balance of power was captured in Clause 11 of the strategic partnership contract, which stated that “Upon establishment and implementation of this agreement, the Partnership will form an integral part of LDA and will interact with other entities of LDA, especially the farmers”. Effectively therefore the strategic partnership contract, as an institutional arrangement, significantly reduced Makuleke farmers degrees of freedom to make decisions or play active roles in crop production, curtailed the decision making power of the private investor and transferred much of the power over decision making to LDA. In other words, there was a greater centralization of power and control over agricultural commercialization in Makuleke Irrigation Scheme. Despite reduced powers, AWC retained a significant degree of power in terms of financial clout and the “free hand to manage the business”, the latter accorded under Clause 9.2 of the contract. In spite of significantly reduced powers of Makuleke Farmers Association’s management committee, the structure retained a small but critical degree of power, at the local level, to hire labour, distribute surplus produce,

deal with issues of theft in the irrigation scheme and represent the strategic partnership in communications with the community.

6.7.1.7 Exit Strategy

The exit strategy for the private investor, according to Clause 13 of the contract, envisaged that upon expiry of the strategic partnership agreement on 28 February 2010, AWC would relinquish his shares in the partnership, at no cost, in favour of Makuleke farmers or such shareholders that may be nominated for this purpose by LDA. At face-value, such provision appeared to be benign enough. However, the part about relinquishing shares to “such shareholders that may be nominated for this purpose by LDA” became a major bone of contention between farmers and LDA¹¹⁴. Provisions similar to this particular fragment of Clause 13 had similarly been a major problem for emerging commercial farmers elsewhere, who have been involved in RESIS-Recharge era strategic partnerships with AWC. These included farmers in Elandsdraal and Phetwane.

6.7.2 IMPLEMENTATION OF STRATEGIC PARTNERSHIP ARRANGEMENT: 2007 to 2009

6.7.2.1 Crop Production Approach

The farming approach adopted by the strategic partnership between Makuleke Farmers Association and AWC was to:

- Consolidate farmers’ small parcels of land;
- Change from the sprinkler irrigation system to centre pivots;
- Use sophisticated technologies of land preparation;
- Introduce a high level of mechanization;
- Drastically reduce reliance on human labour; and
- Delegate to the farmers’ management committee responsibility over externalized issues, such as socially-embedded transaction costs of hiring labour, communicating with the broader community, theft and distribution of surplus produce.

¹¹⁴ Meeting the Makuleke Farmers Association management committee at Makuleke Irrigation Scheme, 17 October 2008; Informal discussion with the secretary of Makuleke Farmers Association at a workshop on ‘Water, Land and Agrarian Reform’, convened by WRC in collaboration with IWMI, PLAAS, Waternet and GWP. Workshop held in Pretoria on 24 June 2009.

6.7.2.2 Roles in Crop Production

While private investor roles increased, Makuleke farmers' roles simultaneously became more passive rather than active. What emerged was a class of "armchair farmers" whose role in farming was mainly defined by privileged access to income derived from the leasing of communally-owned and state-sponsored hydraulic infrastructure to private investors, without contributing any tangible benefits or compensation to the community for the costs of foregone use. Such development was accompanied by an increase in land and water tenure insecurity for the less influential and most vulnerable among irrigation farmers, particularly subsistence food producers.

Contributions by the private investor included a lead role in decision-making, management and implementation of the whole enterprise from production, technical support, marketing to financial accounting. Labour force requirements of the strategic partnership were mostly drawn from the Makuleke community at large. The farmers' management committee was delegated the responsibility of engaging directly with the community regarding issues of labour, communication, theft and the distribution of benefits to the community, such as casual employment and surplus produce.

6.7.2.3 Performance: Crop Production and Income for Emerging Commercial Farmers

From 2007 to 2009, the production pattern consisted of two cropping seasons per year, in which cotton and maize production alternated. Effectively, therefore, income from sales was paid out in lumps sums twice per year. The strategic partnership performed remarkably well in terms of consistency of productivity and income generation for commercial plot holders. Commercial plot holders earned, on average, gross incomes of approximately R45 000 per 5 ha of potatoes per season and R36 000 per 5 ha of maize per season. Given that each season was approximately six months long, and that the cropping pattern alternated between potato and maize production, the majority (74.4) of equity labourers earned approximately R81 000 per annum from the strategic partnership in 2007/2008. This translated to mean monthly incomes of approximately R6 750 for the majority of equity labourers. In light of the fact that in 2005 the collective average of monthly incomes for emerging commercial farmer households was R1555,

income from the strategic partnership represented a three-fold (334 per cent) increase in earnings for nearly three-quarters of farmers whose plots were approximately 5 ha in size. Financial gains of farmers with dual access to commercial plots were at least double those of the larger proportion of plot holders with singular access.

6.7.2.4 Exclusion of Subsistence Food Producers

All 273 food plot holders were excluded from the scheme following inception of the AWC strategic partnership in 2007. The process of exclusion of food producers entailed subsistence food producers discovering one day that valves and sections of pipes supplying water to the food plots had been removed, thus interrupting their access to water. The management committee did not communicate with food plot holders regarding the issue and no one claimed responsibility. Although perceptions by food plot holders and the Makuleke community at large were that the management committee was responsible for cutting off water supplies to food plots, the management committee denied stopping food producers from growing crops on the scheme.

At a meeting held between the researcher and the entire management committee on 17 October 2008, some of the committee maintained that they never issued instructions to stop food plot holders from growing crops in the scheme. However, the treasurer, Farmer B, explained that food plot holders owed approximately R30 000 when water supply to food plots was cut off. It emerged that there were separate electricity accounts for commercial and food plot holders. While the NSK joint venture had covered electricity costs for all farmers, the AWC strategic partnership paid electricity bills applying to commercial plots and did not cover food plot holders. During the transition between the two contract farming arrangements, food plot holders had assumed collective responsibility to settle their own account. Each food plot holder contributed R20 per month in 2005.

Food plot holders, who attended focus group discussions convened by the researcher on 20 and 21 October 2008, confirmed that the reason belatedly given by the management committee was that they had failed to settle arrears on their share of the electricity costs for water supply. However, they disputed the amount they were said to owe. They accused the management

committee of failing to account for approximately R21 000 contributed by food plot holders towards payment of their account after the NSK joint venture in 2005. They questioned why the needs of food plot holders were not included in negotiations between commercial plot holders and government officials concerning a government grant for resource-poor irrigation farmers¹¹⁵. They also questioned the basis of the view that food producers were incapable of paying for the cost of water supply.

It appeared that the legitimacy of the management committee was further compromised by perceptions that the structure elevated interests of commercial plot holders at the expense of interests of food plot holders. The latter were generally very poor and less influential but nonetheless a critical mass that constituted a significant constituency within the irrigation scheme. In light of perceived illegitimacy of the management committee, the only member elected to represent food plot holders resigned from the committee, and food plot holders formed a separate committee of seven people to represent their interests.

Amid contestations over access to benefits from the irrigation scheme, a symbolic feature of subsistence food producers' exclusion by the new institutional arrangement was a heavy-duty fence that was installed by the AWC strategic partnership to keep out wild animals from the park and crop thieves from surrounding local communities. The fence enclosed both commercial and food plots, and access gates located close to Makuleke and Mabiligwe villages were removed. Inadvertently or by design, the fence also kept out both commercial plot holders, who had ceded their land rights, and food plot holders, who were not part of the decision to form the strategic partnership and did not voluntarily surrender access to their plots of land. This effectively made it difficult for the mostly elderly and frail food plot holders to gain access to their plots, since they then had to walk longer distances to and from their plots. Although food plot holders could not use their land due to interrupted water supply these farmers nevertheless saw the fence as embodying disrespect of their land rights by the strategic

¹¹⁵ This specifically related to the DWAF Policy on the Financial Assistance for Resource Poor Irrigation Farmers, which was adopted in 2005.

partnership¹¹⁶. The fence was therefore a source of conflict between emerging commercial farmers, on the one hand, and food plot holders, on the other hand. The most acrimonious confrontation about the fence, however, related to the issue of distribution by the strategic partnership of benefits, such as casual employment and surplus produce, to the broader community.

6.7.2.5 Distribution of Compensatory Benefits

The strategic partnership generated local employment benefits and surplus produce. As a result, there was greater availability of seasonal employment opportunities for unemployed community members in crop harvesting activities. Such employment periodically became available twice a year during harvest times. The strategic partnership also made attempts to distribute surplus produce to households living in the three villages namely, Makuleke, Mabiligwe and Makahlule. These achievements, however, were gained at the expense of livelihoods of many farmers, particularly food plot holders who are among the poorest and most vulnerable people in Makuleke community. The private investor suggested that the strategic partnership should compensate food plot holders for their losses by prioritizing them in the distribution of employment opportunities. The private investor had also suggested that surplus produce should be distributed freely to all interested members of Makuleke community. Until March 2008, AWC's view was that displaced food plot holders were given preferential access to employment and that they earned R550 per week for two weeks during harvest times. The private investor also believed that surplus food was distributed as suggested.

Contrary to perceptions by the private investor about how compensatory benefits were distributed to displaced food plot holders¹¹⁷, no preference was given to these farmers in the sourcing of casual labour by the management committee. Similarly, surplus produce intended for free distribution to these farmers and the rest of the community was appropriated by a few

¹¹⁶ Focus group discussions, workshops and interviews held with Makuleke women, men, food plot holders, management committee of the farmers association, key resource persons and selected community leaders from 17 to 22 October 2008.

¹¹⁷ Meeting with private investor, Arthur W. Creighton, at Modimolle on 14 March 2008.

members of the farmers' committee and sold for these members' individual benefit (Box 14)¹¹⁸. In a context where levels of poverty, unemployment and food insecurity were high, free access to surplus maize and potatoes, casual employment in potato picking and manual work within the largely mechanized maize harvesting were greatly valued and in high demand. For that reason, the lack of prioritization of displaced food plot holders and indigent members of the community in distributions of surplus produce and employment opportunities resulted in acrimonious contestations. Such contestations went beyond commercial and subsistence plot holders and pervaded the broader Makuleke community.

Box 14 Diversion of communal benefit towards individual gain

A decision by the private investor was that the strategic partnership should freely distribute or avail access to surplus produce namely, lower grade potatoes and potatoes that are not harvested by machine, to the Makuleke community in all three villages. The majority of beneficiaries of this gesture by the strategic partnership were likely to be the poorest within the community, many of who had lost access to their food plots at the onset of the strategic partnership. However, these meagre benefits were captured by elite among emerging commercial farmers.

Firstly, lower grade potatoes were to be transported by trucks and dumped in the villages, for access by interested community members. Two members of the executive committee, 'A' and 'B', diverted the trucks to a local secondary school, where they sold the potatoes at R35 per crate. 'A' and 'B' allegedly either pocketed the money raised or did not disclose who they shared it with.

Secondly, 'A' demanded that all persons intending to dig up the left-over potatoes should first fill a crate for 'A' before proceeding to dig up potatoes for themselves. 'A' sold each of these crates for R35, allegedly for his own benefit.

Thirdly, three elderly poor women from one of the villages entered a field through an open gate to dig up left-over potatoes. When one of the emerging commercial farmers, 'C' drove past the field, he noticed that the gate was open and proceeded to lock it to prevent livestock from entering. He had not noticed the women in the field. When 'A' later drove past the field, he saw the women and began to harass them. He was soon joined by 'B' and the two men assaulted the elderly women and called in the police to arrest them. The women spent two nights in prison and when 'A' and 'B' did not show up for the court hearing, the women were released. While there had been a previous instance of arrest for crop theft, many community members considered that 'A' and 'B' had grossly mishandled this case.

The above instances of resource capture, particularly the last one, created a lot of anger within the community. The anger soon spilled over into questions about power, discrimination and how the elites perpetuated their privileged access to power and resources through 'divide and rule' within the community. According to one respondent, "Whereas the South African Constitution recognizes that we are all equal citizens, here in Makuleke there are first and second class citizens, all living within South Africa..." The 'second class' citizens are those who are not originally from Old Makuleke in the Pafuri Area. 'B', who was also a beneficiary of a plot expropriated from a farmer who was excluded from the scheme, was murdered soon after the above incidents. The perpetrators and motives for the murder remain unclear, and the conflation of irrigation issues and the broader power dynamics within the community, the strategic partnership and stakeholder networks beyond create a further complication.

¹¹⁸ Information given by 138 respondents in all the five (5) focus groups and one (1) workshop held in Makuleke community, as well as by individual emerging commercial farmers. Exception was a meeting with the farmers' management committee (See Table 1 on page 13)

6.7.2.6 Conclusion

While food plot holders appeared to have borne the brunt of exclusions from the irrigation scheme, commercial plot holders also experienced a degree of exclusion, though to lesser extents. With emergence of the AWC strategic partnership and a shift from business farmer to equity labourer, these farmers' roles became passive rather than active. Apart from during harvesting and dividend pay out times, emerging commercial farmers became largely invisible. What emerged was a class of "armchair farmers", whose roles in farming were mainly defined by privileged access to income derived from the leasing of communal land and state-sponsored hydraulic infrastructure to private investors, without contribution of tangible benefits or compensation to the community for the costs of foregone use. In particular, ceding of land without adequate safeguards for security of land rights and access to water for food plot holders deepened the insecurity and vulnerability of the poorest among irrigation farmers.

Compared to the NSK joint venture, therefore, the AWC strategic partnership initially generated desired incomes for Makuleke farmers. However, due to the inaccessibility of critical financial records, the study could not determine to what extent such incomes represented actual 'success' of the business enterprise or, conversely, to what extent the apparent success was due or not to the benevolence of the private investor and LDA. The latter possibility would imply that farmers' financial gains in the three years of the strategic partnership were heavily subsidized by the private investor and LDA, which could not be ascertained by the study. What the research identified were effects of agricultural commercialization and the strategic partnership on livelihoods in Makuleke.

6.8 LIVELIHOOD IMPACTS: METHODOLOGICAL APPROACH AND CHALLENGES

Overviews of contractual arrangements, such as joint ventures and strategic partnership, provide useful summaries of effects of agricultural commercialization on Makuleke livelihoods during the Preliminary Phase, RESIS Phase and RESIS-Recharge Phase of interventions in Makuleke Irrigation Scheme. Deeper understandings and insights are gained through detailed scrutiny at four units of analysis. These are the community, farmers' group, household and individual levels. However desirable such analyses might be, the complexity and inter-linkage of

rural livelihoods and the multi-causality of livelihood outcomes presents methodological challenges to assessments of livelihood impacts. Although economists have devised econometric methods that enable disaggregation of effects of different factors causing specific outcomes, this study found such methods not sufficiently helpful to gauging qualitative impacts of agricultural commercialisation on livelihoods. It became clear therefore that a critical part of the study would be to devise a methodology that would provide both valid assessments and useful insights on how interventions towards agricultural commercialization have affected people living within or adjacent to small-scale irrigation schemes, such as Makuleke Irrigation Scheme, in poverty nodes in Limpopo Province.

The study attempted to achieve this by focusing on qualitative and quantitative ways by which agricultural commercialization had intersected with livelihoods of the rural poor living within small-scale irrigation schemes. A deliberate approach was adopted to side-step the compulsion to devote inordinate time and effort trying to attain rigor in isolating variables and effects as a means to obtaining, according to conventional wisdom, an acceptable assessment of 'livelihood impacts'. This strategy conferred a greater degree of freedom for the researcher to make causal, though cautious, statements about agricultural commercialization and livelihoods. However, it did not completely eliminate the need to isolate, where possible, the effects of agricultural commercialization from other factors and to distinguish between direct and indirect effects and short-term and long-term impacts.

A pertinent counterfactual question was: What would have happened without agricultural commercialisation and contract farming in Makuleke Irrigation Scheme? In a study by Ahmed & Lipton (1997:5) on the 'Impact of Structural Adjustment on Sustainable Rural Livelihoods', authors observe that the "before and after approach", which is often used to assess the impact of reforms, traces economic performance before and after adjustment and attributes differences to the adjustment. A major problem with the approach, however, is that it is difficult to control for exogenous shocks (Ibid.). The authors further state that such an approach can neither show that any element of adjustment or the whole package has succeeded or failed in changing a particular variable, nor account for changes that would have occurred without

adjustment. The above observations can be transposed to the methodological problem for this study. Both structural adjustment and agricultural commercialization, through contract farming, are premised on transaction cost economics approaches. However, the point of departure for this study is its focus on livelihoods and its basis on a view that neo-liberal approaches to rural development and agrarian reform are inappropriate constructs for resolving challenges of poverty and inequality in poverty nodes in Limpopo Province. From that perspective, the 'before and after' approach was only partially useful since it gave precedence to economic performance without giving sufficient attention to a whole range of quantitative and qualitative livelihood effects occurring between inception and conclusion of contract farming arrangements. It was important to gain insights into such effects, since they embodied rural people's experiences and perceptions rather than concerns by other stakeholders about the economic viability of projects.

The study therefore opted to combine the 'before and after' approach with narratives that traced collective and individual livelihood trends and trajectories throughout the course of the observed agricultural commercialization process. The rationale was, firstly, to use comparisons of characteristics prior to and after contractual joint ventures and strategic partnerships to determine qualitative and quantitative effects on livelihoods. Secondly, the rationale was to obtain qualitative and quantitative insights into how commercialization processes intersected with people's livelihoods, what coping strategies people adopted and what combination of factors predisposed households towards increasing vulnerability or resilience over a period of time. During such time, agricultural commercialization approaches shifted and projects came and went. Empirical data collection continued to track livelihood trends and trajectories, both in direct response to agricultural commercialization and, where possible, to a combination of this and other effects.

The researcher found that variables that were endogenous and exogenous to agricultural commercialization often co-existed in many of the affected households, such that it was not easy to isolate effects of agricultural commercialization from other effects. For example, there was antecedent socio-economic differentiation among different types of smallholders. There

were also variations in livelihood generation strategies, shocks experienced and coping strategies prior to, during and after the course of joint venture and strategic partnership projects. Some of the shocks emanated from outside of projects, while strategies for coping with shocks induced by joint ventures and strategic partnerships involved the reliance on other resources within the broader 'baskets' of livelihoods. It was possible though to make useful qualitative and quantitative causal descriptions and analyses of observed phenomena. It also appeared that disaggregating the individual facets of household characteristics and effects of commercialization was not as critical as acknowledging the reality that rural livelihoods were inherently complex and their various facets were closely inter-connected, often inextricably. Thus, rigor in isolating variables and effects was perhaps not as important as capturing the 'untidy' reality and analyzing, as faithfully as possible, the intersection between livelihoods and agricultural commercialization.

In attempting to overcome some of the methodological difficulties, the sampling frame for Makuleke community included individuals and households who had and had not been directly involved in contract farming. The latter did not necessarily constitute a 'control' group for the study and were therefore not intended to provide answers to the counterfactual question: What would have happened without contractual joint ventures and strategic partnerships in Makuleke irrigation scheme? This was because the existence of causal relationships between agricultural commercialization and livelihoods within Makuleke Irrigation Scheme, on the one hand, and livelihoods elsewhere within the community, on the other hand, effectively meant that the two groups were not sufficiently independent of each other. Causal relationships existed despite and because of spatial and institutional disjuncture between the locus of own private enterprise and that of RESIS-related enterprises in the irrigation scheme. Indeed, many livelihoods straddled the boundary between the irrigation scheme and the community at large. Some livelihoods emerged while others declined due to agricultural commercialization. Through such trajectories, linkages between scheme-based and off-scheme strategies were weakened or strengthened. Such realities, and antecedent socio-economic differentiation, therefore limited the usefulness of a 'control group' approach. Rather, the study's sampling approach was

intended to capture the range, as in 'distance from point of source', of contract farming initiatives.

This range often traversed physical and institutional 'enclosures' associated with the irrigation scheme, and could not therefore be adequately captured by a singular focus on the irrigation scheme. Combined with a thorough examination of household and individual case specific attributes, histories and experiences, however, the sampling approach provided useful qualitative and quantitative insights on the extent to which changes in livelihoods could be ascribed to specific agricultural commercialization interventions. In particular, this approach was useful in highlighting differences in shocks experienced and coping strategies adopted at specific points during commercialization processes. The following categories of small-scale irrigation farmer were sampled for in-depth individual case studies:

- 1) Emerging Commercial Farmer: AWC Equity Labourer (inside scheme);
- 2) Emerging Commercial Farmer: Equity Labourer (inside and outside scheme);
- 3) Emerging Commercial Farmer: Own Private Enterprise (entirely outside scheme);
- 4) Food Plot Holder: Displaced from scheme
- 5) Rain-fed cropping/Micro-scale Gardening: Not displaced
- 6) Landless/Micro-scale Home Gardening: Not displaced

The categories of farmer specified above were intended for practical purposes by the study and did not necessarily replace but complemented the RESIS farmer categories identified by Denison & Manona (2007). Since the study's examination of livelihoods went beyond the confines of Makuleke Irrigation Scheme to embrace also other affected farmers and members of the local community, it was found useful to classify different categories of farmers in terms of their position in relation to agricultural commercialization and, in particular, the AWC strategic partnership of 2007 to 2009.

Detailed descriptions of research methods and analytical frameworks are presented in Chapter One. The following section examines livelihoods of selected individual farmers in the context of RESIS Programme interventions and contract farming arrangements in Makuleke Irrigation Scheme. The subsequent section gives a broad overview of interactions between agricultural

commercialization interventions and livelihoods in Makuleke community in general. This is followed by a discussion of key findings and issues.

6.9 CONTRACT FARMING ARRANGEMENTS AND LIVELIHOODS OF SELECTED INDIVIDUAL FARMERS, 2008/2009

6.9.1 RENIAS CHAUKE: EQUITY LABOURER WITHIN IRRIGATION SCHEME AND MARKET-ORIENTATED RIVERSIDE GARDENER

6.9.1.1 Introduction

Renias Chauke was a sixty-three (63) year old male small-scale commercial farmer residing in Makuleke village. He was married and headed a household of thirteen people, three of whom were grandchildren aged below five years. Five members of the household resided elsewhere for study and work purposes for most of the year. These did not make contributions to the household income. Child support grants contributed R660 towards needs of the three grandchildren. The bulk of household income was generated by commercial farming activities led primarily by the head of household. Chauke had access to two commercial plots comprising 11.8 ha of land in the irrigation scheme and 4.1 ha of land along Mphongolo River on the outskirts of Makuleke village. The farmer also had a 10 ha plot of land along the Limpopo River in Mozambique, which was allocated by a local traditional leader, who once visited Makuleke. Although Chauke had no formal title deed to his riverside garden in Makuleke, his land rights were secure. All the locally-based household members aged 15 years and above contributed their labour towards crop production, harvesting and marketing on a day to day basis. Care for the grandchildren was done mostly on-farm as the older household members worked. Although this work was shared by male and female members of the household, women seemed to have the primary responsibility.

6.9.1.2 Historical Background

In his earlier years, Chauke worked in the Orange Free State (OFS) Province, where he taught himself about farming. He began farming in Makuleke in 1981 while still a migrant worker. He finally returned home in 1983 and became a full-time farmer. His initial experience as an emerging commercial farmer was characterized by severe hardship. The only sources of water

for farming purposes were seasonal rainfall and Mphongolo River. Access to water in the rain-fed crop fields was poor and crops were often consumed by stray wild animals from the park, without any compensation from conservation agencies. The river was infested with crocodiles and fetching water by bucket was therefore risky. Establishing a homestead garden was not an option, however. Domestic water supply infrastructure was confined to a few communal sources, namely, two boreholes, a small reservoir and five communal taps or 'stand pipes'¹¹⁹. These sources were insufficient for basic human needs and there prevailed a community rule against use of potable water for garden irrigation. Rather than resort to rain-fed cropping, as most Makuleke farmers did then, Chauke asked for and obtained permission from the chief to use land along a portion of Mphongolo River to establish a garden. His first garden was 1 ha in area. In it, he honed his skills in tomato production and marketing. Since he could not use potable water from communal sources located within the village, he used buckets to draw water from the river, which was risky.

When Makuleke Dam was constructed in the mid-1980s, Chauke established a second garden in his homestead. During drought years, he was compelled to walk half a kilometre to fetch raw water from the dam using 25 litre cans and a wheelbarrow. From both the riverside and homestead gardens, Chauke was able to meet the vegetable requirements of his household and to sell the surplus to members of the community. When the Gazankulu homeland government completed construction of the irrigation scheme in 1991, a decision by the chief and agricultural extension officer to allocate Chauke a commercial plot in the state-sponsored irrigation scheme was unanimously supported by members of the community. The farmer used this plot productively until irrigation scheme infrastructure collapsed after 1994. In the interim, Chauke continued to produce crops, mainly tomatoes, in his riverside and homestead gardens. He sold his produce, particularly tomatoes, to Sunny Deep Market in Johannesburg. He transported his produce to a collection depot in the small town of Louis Trichardt about 140km away, from where the produce was conveyed by a transportation firm, Landman Verwoer, to

¹¹⁹ Water Reticulation Layout Plan for Makuleke Water Project implemented by Mvula Trust on behalf of Makuleke Water Committee. Plan prepared by Africon in 1997.

Johannesburg. However, profit margins were too low and losses too frequent due to fluctuating market prices, spoilage of produce and relatively high transport costs.

In Chauke's calculation, he previously earned a gross seasonal income of at least R14 000 from tomato crop sales in the formal market in Johannesburg. Apart from costs of seeds, fertilizers, pesticides and fuel for the water pump, the farmer deducted R500 for transportation costs from Makuleke to Louis Trichardt, and R1 to R2 per crate for transportation from Louis Trichardt to Johannesburg. Labour expenditure by the farmer and members of his household was not factored in.

6.9.1.3 Interaction with RESIS and RESIS-Recharge Interventions: Livelihood Outcomes

Following infrastructure rehabilitation under the RESIS Water Care Project in 2002, Chauke resumed crop production in the irrigation scheme. Two commercial plots comprising 11.8 ha of land were allocated to him as part of a move to redistribute unused or underutilized plots. As a result, he scaled down and finally abandoned his homestead garden and the drudgery of conveying water over a long distance from the dam. However, since the introduction of joint ventures and strategic partnerships in the irrigation scheme in 2003, the farmer found himself gradually divested of decision making power over the production system and ultimately physically displaced from active roles in crop production. This was a source of frustration. Failure of the NSK cotton joint venture to generate expected incomes from 2003 to 2005 compounded his frustration and influenced his decision to increase the area of his 1 ha riverside plot by 3.1 ha to give a total of 4.1 ha.

The AWC strategic partnership that commenced in 2007 subsequently provided Chauke with approximately R90 000 per season for potatoes and R72 000 for dry maize. However, the farmer remained frustrated by not being allowed the freedom to actively engage in commercial farming in the irrigation scheme. Consequently, he used income from the strategic partnership to invest in various forms of infrastructure in his expanded riverside plot. Such infrastructure

included a secure fence and gate, a mud-and-thatch store room, a diesel-operated water pump, a drip irrigation system¹²⁰ and an elevated water storage tank.

Financial expenditure on infrastructure included R5000 for a 5000-litre jo-jo water storage tank, R3850 for seven rolls of 50mm irrigation pipes, R4500 for a diesel-powered water pump (Honda GX 160), R550 for one hundred metres (100m) of additional 50mm pipes, undisclosed amounts of money for 100m of 32mm irrigation pipes, a network of 12mm drip irrigation pipes covering 1 ha, a perimeter fence, gate and a mud-and-thatch store room. The farmer did not accord monetary value to labour expended by members of his household and himself in constructing the irrigation furrows, store room and fence.

From an earlier emphasis on tomato production, the farmer used financial resources gained from the strategic partnership to diversify into producing a wider range of crops. He diversified from solely growing tomatoes to producing paprika, maize, cabbage, Chinese cabbage, okra, spinach, beetroot and potatoes. He no longer supplied the Sunny Deep Market in Johannesburg but focused on local informal markets. He also began to experiment with small-scale bee-keeping and mango production. He considered mangoes to be in high demand by local fruit processing industries, which specialized in making 'atchar' or pickle. He considered these new ventures to be learning opportunities from which he expected to gain insights into characteristics of niche markets for honey and business opportunities in the local mango processing sector. In light of the envisaged development of his enterprise, Chauke considered the capacity of his irrigation infrastructure to be insufficient for his needs and he therefore intended to invest in an additional jo-jo tank, pump, and drip and sprinkler irrigation equipment at an anticipated cost of around R50 000.

Costs of household labour for crop production were also not quantified. Crop production inputs included seed, chemical fertilizer, pesticides, fuel for operating the water pump, packaging

¹²⁰ He uses 12mm drip pipes, a 50mm pipe for mielies (maize), 32mm for tomatoes and 40mm for other vegetables. He had mistakenly bought the 40mm pipe for tomatoes. Altogether the farmers has 100 metres of hose pipe laid out and a further 7 rolls of unused hose. This infrastructure enables him to irrigate under half of his garden. He intends buying an additional 400m of pipe and 7 rolls of 20mm drip pipes to cover the rest of his garden.

material for marketed produce, transport costs. The farmer did not disclose the costs of seeds, fertilizers, pesticides and fuel for operating his water pump, and had no records of such expenditure. Similarly, the farmer kept no records of crop output. However, he was able to specify that at the time of the field research, he sold an 80kg bag of dry maize for R200, a crate of tomatoes for R50, a bunch of spinach for R5, a 2kg bag of okra for R15 and a bunch of beetroot for R2. Since he did not keep records of output, and since his household consumed a quarter (25 per cent) of the total yield and sold small quantities on an *ad hoc* basis to community members, he could not estimate the gross income earned from the different crops except for tomatoes. Gross income from informal tomatoes sales was at least R500 per day for four weeks of the core harvesting period. However, because the farmer did not keep records, it was not easy to determine how much net profit the farmer earned from formal and informal tomato sales.

The farmer cited his own lack of record-keeping as a reason for his failure to disclose his actual income from market gardening. However, it was evident that he was not comfortable with disclosing such information, and the researcher was ethically bound to abide by the respondent's wishes. The farmer, however, subsequently volunteered what appeared to be a conservative estimate of his mean monthly income from the riverside garden, which was R5000. Among the farmers' plans were an investment of about R50 000 towards purchase of a second 5000-litre jo-jo water storage tank, an additional water pump, a stronger perimeter fence and drip and sprinkler irrigation equipment. Future plans also included indeterminate but significant investments in his 10 ha plot in Mozambique.

In year 2007 to 2008, Renias Chauke earned a gross income of approximately R162 000 per annum from ceding his 11.8 ha plot to the AWC strategic partnership and from his informal riverside gardening enterprise. This translated into a mean monthly income of approximately R13 500 per month. Through ceding his allocation of land to the AWC strategic partnership, Renias Chauke directly gained a fifteen-fold increase from the R900 monthly allowance he used to receive from the NSK joint venture in 2005. His private gardening activities contributed an average gross monthly income of approximately R5000. Effectively, the strategic partnership

and Chauke's riverside gardening enterprise contributed to raising the total household income from R1410 per month in 2005 to approximately R19 160 per month from 2007 to 2009. Contributions by the AWC partnership accounted for most (70.5 per cent) of the farmer's income at the time of the study.

It was evident that, owing to his dual access to commercial plots, this farmer had the advantage of a larger share of profits from the strategic partnership than the majority (74.4 per cent) of equity labourers in the irrigation scheme. Qualitative examination of Renias Chauke's case revealed also a complex inter-linkage of livelihood strategies and social networks through which the farmer gradually built up the asset base of his household. Critical among these strategies and social networks was the process of property rights creation pertaining to the farmer's riverside plot.

6.9.1.4 Water Use

The farmer produced vegetables throughout the year. He grew tomatoes, potatoes, paprika, sweet potatoes and okra mainly in the hot wet season between October and April. He produced spinach, Chinese cabbage and beetroot in the cool dry season. He used his water pump to abstract water from Mphongolo River to fill up his 5000 litre jo-jo tank and then used drip irrigation to water his crops. Due to the high frequency of dry spells in the wet season, his reliance on rainfall necessarily had to be supplemented by water abstractions from the river. He therefore irrigated his crops throughout the year, with significantly higher rates of consumption in the dry season. His water consumption was approximately 5000 litres of water per day during the dry season and 5000 litres per week during the wet season¹²¹. Effectively, the farmer consumed a total of 900 000 litres (900 kilolitres or 900 cubic metres) of water in the dry season and 12 000 litres (12 kilolitres or 12m³) in the wet season. Chauke's total annual water consumption from the river was approximately 912 000 litres (or 912m³). Existing irrigation infrastructure did not meet the farmer's water requirements for intensive horticulture. Hence, his intention to install a second 5000 litre water storage tank, to effectively double the water

¹²¹ In-depth interview with farmer Renias Chauke.

storage capacity on his land to 10 000 litres. This was to be accompanied by further investments in irrigation pipes and a stronger fence to keep out small livestock, such as goats.

Chauke's water abstraction and use seemed to be above Schedule One limits but within the threshold for General Authorisations, although such thresholds were not explicitly defined in the NWA. The farmer's maximum dry season water consumption of 5000 litres (5m³) per day, however, was far below the 50m³ per day threshold requiring registration under General Authorisation. Similarly, the envisaged increase in Chauke's water consumption seemed to imply a future daily abstraction rate that was below the mandatory 50 m³ per day registration threshold for surface water abstraction under General Authorisation. In terms of the National Water Act, Chauke would be required to register his water use. This was due to that while Chauke's use of water on his initial 1 ha garden plot constituted 'lawful water use', since such use began in 1983 and therefore more than two years prior to 1998, water use on the remaining 2 ha plot extension was not.

Chauke's case was not unique, as field evidence pointed to the existence of many other similar small-producers in Makuleke community and possibly in rural communities elsewhere within the Olifants Basin. Individually, these users' surface water abstractions were above Schedule One limits but below the level requiring registration under General Authorisations. Collectively, their water abstractions could possibly constitute a significant quantity. At the time of the study, there were no clear provisions for General Authorisation of small-scale black commercially-orientated users who abstracted quantities of surface water exceeding Schedule One limits within the Olifants River Basin¹²². Although some of the productive uses were 'existing lawful uses', many began after 1998 and hence required registration. Registration of these water users, who were often scattered across many different villages, presented an administrative challenge for DWA.

¹²² See DWAf. 2004. Revision of General Authorisation in terms of Section 39 of the National Water Act (Act 36 Of 1998). Gazette 26187, Number 399, 24 March.

6.9.1.5 Discussion and Conclusion

Chauke's case was an example of a black small-scale commercial farmer who was emerging through self-driven enterprise and other support. The latter included the combined support of his household, local traditional leadership, locally-based extension officers, peer group of black farmers and the community at large, on the one hand, and state-sponsorship and private sector investment, on the other hand. The main impetus for the emergence, however, had been the farmer's own tenacity, commitment and acumen.

The term 'equity labourer' did not seem appropriate for individuals like Chauke, who were emerging farmers engaged in diversified commercial farming enterprises with and without state support. Such farmers were widely considered to be successful by their peers and many other people within Makuleke community and similar communities elsewhere. Farmers such as Chauke seemed to approximate the 'business farmer' type.

Renias Chauke's history shows that, following retirement from migrant labour in the Orange Free State (OFS) in 1983, the farmer approached Chief Makuleke to allocate to him a small 1 ha plot along Mphongolo River on the outskirts of Makuleke village. Contrary to common practice with respect to land allocation for commercial use, the Chief did not require a royalty from him. He proceeded to demonstrate his commitment to becoming a market gardener through sheer hard work. During drier seasons when Mphongolo River dried up, he often used a wheelbarrow to convey water over a distance of half a kilometre from Makuleke to the garden. In wet seasons, he often risked his life by using a bucket to abstract water from the crocodile-infested river, which was also the occasional haunt of hippos from the Kruger National Park. The farmer was able to supply members of the community with a variety of vegetables, at a time when access roads from urban markets were poor and overcoming the frictional effect of distance therefore more onerous. Thus, Renias Chauke built a solid farming reputation within the community. It was through this social capital that the farmer obtained in 1999 Chief Makuleke's recommendation and the community's unanimous support that he be allocated two commercial plots in the irrigation scheme.

Whereas the farmer had achieved relative success prior to RESIS, during the NSK joint venture Renias Chauke diverted his time and energy to the joint venture and consequently remained with insufficient resources to profitably run his market gardening enterprise. Following production failure by the joint venture in the 2004 to 2005 season, the farmer took a decision to spread risk by giving greater attention to his garden, where at least he had full control of the production enterprise, while ceding his commercial plots to externally-driven commercialization initiatives. He requested and obtained from Chief Makuleke a further allocation of land adjacent to his existing garden. As had been the case with the earlier riverside land allocation, the Chief did not require any royalty from the farmer. Chauke then mobilized all available labour resources from within his household and resumed vegetable production. He soon re-established his reputation as a successful farmer, and tomato producer in particular, within the community and surrounding communities in Nthlaveni communal area. Through trans-boundary social networks, Renias Chauke obtained from a Mozambican chief an allocation of 10 ha of land along a river in a communal area.

When the AWC strategic partnership began in 2007, Renias Chauke's decision to maintain his risk-spreading strategy was reinforced by a frustration with being relegated to 'arm-chair' farming. Arm-chair farming pertained to a change of roles from active business farmer to passive equity labourer. This was what the shift in farmer targeting approach entailed during the transition from RESIS to RESIS Re-charge. Renias Chauke's frustration with the equity labourer role, however, related specifically to his own personal aspiration to become a successful commercial vegetable farmer. Realization that prospects for attaining his ambition depended heavily upon support by institutional arrangements, such as the AWC strategic partnership, inured him to the bitter taste of having to cede his 11.8 ha plot to the full control of the partnership. He seized the opportunity presented by surplus financial, labour and time gains from the strategic partnership to invest in infrastructure and inputs for his riverside garden.

From the foregoing account, it is evident that livelihood strategies and assets for this farmer were inter-twined in complex ways with the AWC strategic partnership as well as a range of

other factors. Some of the factors were antecedent to the partnership, others were concomitant to it and yet others were envisaged beyond the duration of the partnership agreement. There were flows and feedback loops between various factors and variables. What compounded the complexity was the social embeddedness of RESIS Programme implementation in Makuleke. Institutional arrangements for the AWC strategic partnership attempted to externalize social factors, such as grievances by food plot holders over loss of land rights, demands for compensation and contestations emanating from 'outstanding' social issues. Members of the farmers' management committee, such as Renias Chauke, were at the 'coal face' of contestations. They therefore had to expend greater time and human resources negotiating ways to resolve conflicts, address outstanding social issues and rebuild social capital.

The net effect of such complexity is that it is therefore difficult and perhaps futile, in this and similar cases, to seek to accurately determine the extent of impact of the AWC strategic partnership on Renias Chauke's livelihood. This study therefore makes a cautious causal assessment that the AWC strategic partnership contributed, to a certain extent, to both enhancing and detracting from Renias Chauke's livelihood. The net effect, however, seemed to be a greater personal gain than previous to agricultural commercialization and contractual arrangements. Given that the farmer's livelihood was embedded in the social matrix within which he lives, it was difficult to see how gains in one small arena, which is the farmer's individual livelihood, could be completely extricated from losses within the broader social arena. In other words, the methodological dilemma still prevails.

6.9.2 MR T. G. PHOSA: MARKET-ORIENTATED GARDENER WITH PRIVATE BOREHOLE IN RAIN-FED CROPPING AREA

The study identified a robust example of an enterprising commercial irrigation farmer, Mr T. G. Phosa, who eked out a livelihood outside the ambit of the RESIS Programme but was nonetheless directly influenced by it in devising his livelihood strategies. The objective of including the farmer in this examination is to demonstrate the livelihood outcomes of a farmer with full control of a self-owned commercial irrigation farming enterprise compared to results

of similarly controlled and owned enterprises by emerging commercial and subsistence farmers associated with RESIS Programme interventions and, in particular, contract farming arrangements.

6.9.2.1 Introduction

Mr Phosa was a sixty-eight (68) year old male small-scale commercial farmer residing in Makahlule village. He was married and headed a household of nine (9). Three household members were grandchildren aged between ten (10) and sixteen (16) years, while three (3) others resided elsewhere in Gauteng for study and work purposes during much of the year. These did not make contributions to the household income. Child support grants for two of the grandchildren contributed R440 per month. The bulk of the household mean monthly income, which ranged from minimums of R4 000 to R8 000 to undisclosed higher amounts, was generated by commercial farming activities primarily by the head of household and his wife. The farmer had no access to land in the irrigation scheme. However, Phosa had land use rights to 5 ha of land in the rain-fed crop fields to the south-west of Makahlule village.

6.9.2.2 Historical Background

Prior to retirement in 2003, Phosa worked as an agricultural extension officer in various parts of Limpopo Province. During that time, he practiced rain-fed crop farming on his field, primarily for subsistence. Chief Makuleke allocated this land to him in the 1970s. He used the land for rain-fed crop farming until 2003, when he retired. Thereafter, Phosa invested about R57 000 of his retirement grant from LDA to enable a shift from subsistence to commercially-orientated crop production, and in 2004 became fully productive.

6.9.2.3 Interaction with RESIS and RESIS-Recharge Interventions: Livelihood Outcomes

In the farmer's point of view, his decision to embark on commercial irrigation farming was influenced by two main factors. Firstly, he received requests for fresh produce supplies from informal traders in Malamulele business centre and surrounding villages, including Bhevula, Makahlule and Makuleke. During that time, expectations that the revitalization of food crop production in Makuleke Irrigation Scheme would meet local demand for fresh produce had

been dashed by the inception of a cotton joint venture, which took up about half of the land in the scheme. Secondly, Phosa needed to earn an income after retirement.

The farmer's retirement grant provided requisite financial resources for capital investments in both infrastructure and production enterprise. Security of land tenure was critical to his decision to commit a significant proportion of his financial, human and natural resources to invest in infrastructure. Support from local traditional leadership was crucial to ensuring the security of his investment, particularly with respect to land tenure security, formalization of productive water use through registration of his borehole with municipal authorities and application for a connection to the Eskom electricity grid. The importance of the chief's support owed to the traditional leader's control over land allocation and development of land in Makuleke community. Phosa's investments in hydraulic and related infrastructure further strengthened his land rights as well as the security of his household's access to water.

Other than the two initial processes to formalize his water and electricity access and use, the farmer had subsequently conducted his commercial irrigation farming enterprise outside of the formal economy. Unlike Renias Chauke (Section 6.11.1), Mr Phosa did not have a commercial plot in the irrigation scheme and therefore could not rely on income from RESIS-Recharge contract farming arrangements. Instead, he leveraged his retirement income and combined this with his antecedent farming skills and knowledge. He used social networks with traditional leadership to gain secure access to land, water and electricity. Upon such foundation, he strengthened his position by investing in requisite infrastructure and developing his business skills.

In 2004, the farmer invested about R35 000 towards developing a borehole, electricity supply, water pump, irrigation pipes and a perimeter fence in his field. Other expenditure related to costs of obtaining the chief's approval for his commercial enterprise (R200), fees for registration of the borehole with either the district or local municipality in the small

administrative centre of Thohoyandou¹²³ (over R500) and payment for the chief to travel with him to Thohoyandou to support his application to formally register the borehole (R500).

The farmer also invested in land preparation, purchase of production inputs and the construction of a two roomed brick-and-iron roofed building, which was originally intended to be a vegetable pack house and store room. Details of the capital outlay are presented in Table 39. After this, he was not able to obtain state subsidies or assistance and resorted to cost-saving strategies and starting production at a modest scale. He decided to focus on growing tomatoes, beetroot, spinach and okra. He invested in a 5000 litre jo-jo water storage tank and one large pipe, with no drip irrigation. This had negative results in that it led to the drying up of soil, leaching of nutrients and soil erosion.

Phosa, his wife and three (3) hired workers contributed labour towards crop production, harvesting and marketing on a day-to-day basis. The farmer and his wife, who increasingly shared the decision-making role, gradually broadened the range of crops produced to include tomatoes, cabbage, onion, water melon, Chinese cabbage, cow peas, butternut, beetroot, sweet potato, carrot, okra, and green and dry maize. None of the other household members were directly involved in farming activities except one daughter, who occasionally used Phosa's bakkie to transport harvested produce to markets in the nearby small town of Malamulele. The same daughter used the bakkie to transport water for household consumption and as part of the household's informal water vending activities.

To avert these problems, Phosa bought thirty (30) rolls of drip irrigation pipes early in 2005. These cost him R16 500 (at a unit price of R550 per roll). Immediate impacts of the change of irrigation system were that water became more available to his crops and he was able to increase the variety of crops and cropping frequency. This coincided with the period of RESIS-Recharge infrastructure development in Makuleke Irrigation Scheme, when land preparation for centre pivot irrigation completely halted crop production.

¹²³ Efforts by the research to determine whether the borehole was registered with Thulamela Local Municipality or Vhembe District Municipality were unsuccessful since neither the farmer nor employees of both municipalities knew where boreholes were registered. Most officials of the local office of DWA were away attending to the cholera crisis in the province and the few available were unaware of borehole registrations.

TABLE 39 CAPITAL INVESTMENTS BY MR T. G. PHOSA, 2003

Item	Amount (in Rands)
Borehole construction	13 000
Electricity infrastructure and connection to Eskom grid	5 000
Electricity wiring	495.00
5000 litre jo-jo water storage tank	2 500
Drip irrigation system	16 500
2-roomed pack house and store room	10 000
Purchase of electricity cables for connection to farm building	390
Payment of electrician	200
Bush clearance	300
Perimeter fence (labour, material and transport costs)	3282
Ploughing of field (by hired tractor)	200
Transport (donkey cart) of cattle dung from farmer's homestead kraal to the field	80
Purchase of inorganic fertilizer (2:3:2 and KAN)	258
1200 vegetable seedlings	126
Seeds: okra (" <i>mbewu ya mandhandi</i> ")	23.64
5 – litre spray can	294.75
Pesticide	39.15
Hand gloves	25.90
Watering cans	50.50
Small implements, such as shovels, picks, hoes and rakes	206
Hired labour for land preparation and production	2550
Royalty towards chief's approval for commercial enterprise	200
Borehole registration fee	500
Payment to the chief for travel to municipal office to support farmer's registration of borehole	500
TOTAL EXPENDITURE	56 720.94

Fieldwork, 2008 to 2009.

By 2009, the farmer practised two cropping seasons on 1 ha of green maize per annum and grew tomatoes and other vegetables throughout the year in the remainder of his 5 ha garden. He had become a major supplier to informal traders in the locality, earning an average net income of at least R4000 to R8000 per month. Although he sometimes used the cellular phone

from the Alcatel/Manobi joint venture of 2005 to market produce, his view was that many buyers “seemed to smell out” his crops since they generally came without invitation. He suspected that information got disseminated by word of mouth, mainly by passengers who travelled by taxi past his field. Phosa’s achievements also included food and water security for his household, being able to use income from farming to educate two (2) of his four (4) children up to university level, and purchase of a bakkie (or small truck) with combined funding from his retirement grant and income from commercial farming. His future plans included diversifying into growing vegetables, such as garlic and pepperdew, for the niche markets. His primary target, however, remained the local informal food markets.

Although the farmer had succeeded in firmly establishing himself in the local informal agri-food markets, he encountered challenges with respect to entering local formal markets. Towards overcoming these constraints, Mr Phosa had established links with similar black farmers elsewhere within the broader Malamulele area of Thulamela local municipality. Through their social network, they sought financial, technical and other assistance from an NGO, Small Enterprise Development Agency (SEDA). They had also begun to form a cooperative consisting of ten (10) small-scale commercial irrigation farmers. Their collective objective was to mobilize funding for hydraulic infrastructure, such as boreholes, and irrigation equipment, as well as to derive benefits from economies of scale associated with bulk purchasing of inputs and marketing of produce. An important asset in Mr Phosa’s relationship with the network of small-scale commercial farmers was the cellular phone provided by the Alcatel-Vodacom-Manobi joint venture as part of an effort to link farmers to markets.

Table 40 presents the farmer’s expenditure and income from production in 2008 of green and dry maize, tomatoes, cabbage and Chinese cabbage. The table excludes data on production of okra, cow peas, pumpkin, butternut, onion, beetroot and carrot. Data shows that the farmer earned an annual gross income of between R127 500 and R137 500 from the four types of crop presented in the table. His gross profit margin for green maize ranged from R30 000 to R40 000 per ha, while the net income from both green and dry maize was approximately between R18 000 and R28 000.

For each of his three workers, the farmer generated mean monthly incomes of R600, which translated into annual incomes of R7200. In addition to monetary income, the farmer gave his workers a share of each harvest, which contributed to enhancing their food security. This non-monetary contribution constituted a quantifiable income, in terms of cost savings in lieu of purchases of the same produce elsewhere by the workers. Given that the average monthly income for the poorest residents of Makuleke was less than R500 per month without any additional non-monetary income, Phosa's workers and their households gained greater benefits from the farmer's commercial farming enterprise. Such gains were comparatively greater than those that accrued to workers employed by commercial plot holders during the NSK joint venture, whose allowance was R300 per month. Although workers seasonally employed by the AWC strategic partnership to harvest potatoes and maize seemed to earn higher monetary wages, which were R550 per week for two weeks of harvesting in 2008/2009, such income was of shorter duration, insecure and in the longer term, of lesser gain than that consistently earned by Mr Phosa's workers.

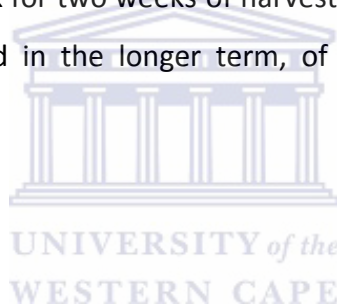


TABLE 40 PART OF PHOSA'S FARM BUDGET, 2008

CATEGORY	EXPENDITURE			INCOME		
	Item	Cost (in Rands)	TOTAL ANNUAL COST	Yield	Receipts from sales (Gross Margin)	Profits (Net)
Capital Investment (outlay): 2003-4	Institutional Costs (applications and registration with formal and traditional institutions), Infrastructure, Land Preparation and initial Crop Production	56720.94				
Monthly Operational Costs	Electricity	500	6000			
	Fuel (petrol)	400	4800			
	Labour: 3 full-time workers at R600 each	1800	21600			
Green maize (1 ha): Intensive production of 1 crop per annum	"Border King" maize seed: 2 x 25kg bags at R162.50 per bag	325	750	Green maize: 8000 - 10000 cobs at R4 per cob.	30 000 to 40 000	16 255 - 26 255
	Fertilizer (CAN and 2:3:4): 3 x 50kg bags at R400 during production	1200	1200			
	Fertilizer (CAN and 2:3:4): 3 x 50kg bags at R400 after production	1200	1200	Dry maize (by-product): 10 x 80kg bags at R200 each	2000	
	Pesticides (two types)	195	195			
	Tractor hire	1600	1600			
Dry maize (1 ha): 1 crop per year	"Border King" maize seed: 2 x 25kg bags at R162.50 per bag	325	325	Dry maize: 20 x 80kg bags at R200 each	4 000	1880
	Pesticides (two types)	195	195			
	Tractor hire	1600	1600			
Tomatoes (1 ha): 3 crops per year	Composite cost of tomato, cabbage and Chinese cabbage seedlings	15 000		40 crates per week at R50 each for 3 to 4 months: Gross income of R24 000 - 32 000 per crop	84 000 (at an average of R28000 per crop)	
	Composite cost of fertilizer: 3 x 50kg bags per hectare x 3 ha at R400 per bag, applied twice per year					
Cabbage (1 ha): 1 crop per year	Pesticide	3600	7200	10 000 heads at R300 for 1000; 100 heads at R5 each	3500	
Chinese cabbage (1 ha): 1 crop per year		600	600		4000	
			47 265		127500 - 137 500	

6.9.2.4 Water Use

Regarding water use, the only written records available related to electricity charges for operating the borehole water pump. Since the farmer paid a flat rate of R500 per month regardless of water consumption, such records were of limited use. In the absence of written records for water consumption, the researcher estimated water quantities on the basis of the farmer's disclosure of the frequency with which he filled his 5000 litre jo-jo tank per month in the wet and dry seasons.

Khosa mean monthly water consumption was greater (200 000 litres) during the dry season and lesser (100 000 litres) during the wet season¹²⁴. He filled his 5000 litre jo-jo tank approximately forty times per month in the dry season from May to October and twenty times per month in the wet season from November to April. He therefore used an average of approximately 6.7m³ of water for irrigation per day in the dry season and 3.3m³ in the wet season. Of these amounts, 200 litres per day were used for livestock watering while 50 litres per day were used for household laundry within the garden perimeter. The frequency of wet season abstractions of groundwater was associated with the frequent mid-season dry spells and the drier end-of-season period, which were characteristic of the prevailing climatic conditions. Effectively, the farmer's total dry season water consumption was approximately 1200000 litres or 1200 kilolitres, while the total wet season consumption is 600000 litres or 600 kilolitres of water. This gave a total annual consumption of 1800000 litres or 1800 kilolitres (1800m³) of water.

Although Phosa's water use was geared primarily towards small-scale commercial crop production, the water was used for multiple other purposes. These included watering the farmer's livestock, supplementing his household's domestic water needs and generating additional income from informal water vending in Makahlule village. Household laundry was also washed in the field and hung on the perimeter fence to dry, thus enabling Phosa's wife to play dual productive and reproductive roles.

¹²⁴ In-depth interview with the farmer.

Phosa's water use was above limits of Schedule One, but within the range permissible under General Authorisation. At a daily consumption of 3.3 cubic metres (or 3.3 kilolitres) per day in the wet season and 6.6 cubic meters per day in the dry season, Phosa's water consumption was less than the mandatory quantity requiring registration, which was 10 cubic metres for ground water abstraction¹²⁵. Likewise, the existing water storage capacity (5000 litres or 5m³) and planned capacity (10000 litres or 10m³) on the farmer's property were far below the threshold (10 000m³) required for water use registration under General Authorisation.

6.9.2.5 Discussion

Mr Phosa's case provides insights into enterprising behavior by small-scale black farmers who eke livelihoods outside RESIS Programme interventions but within the vicinity of smallholder irrigation schemes. While the re-allocation of commercial plots by RESIS Phase 1 (Water Care) interventions in Makuleke excluded Mr Phosa, since he was a former government employee, it was largely this same exclusion that provided him with the impetus to generate diversified farm-based and off-farm livelihood strategies in and around Makuleke Community.

While the farmer's small-scale commercial farming enterprise largely fell outside the ambit of RESIS Programme, his livelihood strategies and outcomes were directly influenced by agricultural commercialization and contract farming arrangements within Makuleke Irrigation Scheme. Mr T. G. Phosa and similar small-scale commercial farmers viewed "leap-frogging" of produce from the irrigation scheme to be an opportunity for their entry into and dominance of local informal food markets. The same local food market opportunities were perceived by the more enterprising among commercial plot holders within the irrigation scheme, such as Renias Chauke.

In his 5 ha plot in the rain-fed cropping area, Mr Phosa used his pension funds to make investments in a borehole, water storage tank, electricity supply, vegetable packing house, drip irrigation system, perimeter fence and truck. He applied his skills as a retired agricultural extension officer to manage his entire enterprise. He used a cellphone donated by the Alcatel

¹²⁵ DWAF. 2004. Revision of General Authorisation in terms of Section 39 of the National Water Act (Act 36 Of 1998). Gazette 26187, Number 399, 24 March.

and Manobi joint venture of 2005 to market his produce. Mr Phosa jointed a network of ten independent commercial farmers, who formed a cooperative and sought assistance from the SEDA, since they were not covered by RESIS Programme interventions. Each farmer within the group owned his production system but shared in the collective purchase of inputs, including training. The group's plan was to strengthen their entry into local commercial food markets, starting with informal markets. So far, Mr Phosa had achieved entry in the latter markets and generated meaningful and consistent income, food and livelihood security for his household and for his workers.

Although Mr Phosa's case appears, at face value, to fall into the 'control' group for the study, it does not exactly provide answers to the counterfactual question: What would have happened without agricultural commercialisation, joint ventures and strategic partnerships in Makuleke irrigation schemes? This is because there was a direct causal relationship between agricultural commercialization in Makuleke Irrigation Scheme and the emergence of Mr Phosa's livelihood as a small-scale commercial irrigation farmer. Such a relationship existed despite spatial and institutional disjuncture between the locus of own private enterprise and that of RESIS-related enterprises in the irrigation scheme.

It also seems that security of land tenure was critical to his decision to commit a significant proportion of his financial, human and natural resources to invest in infrastructure. Since his enterprise was located in rain-fed croplands, within which Chief Makuleke exercised power over land rights allocation, support from local traditional leadership was crucial to ensuring formal customary recognition and local support for his venture. Formalization of his water use, through registration of his borehole and application for a connection to the Eskom electricity grid, was also important in ensuring the security of his investment, access to water and commercial enterprise. Other than these two formal processes, the farmer largely conducted his commercial enterprise outside of the formal economy. Phosa's investments in hydraulic and related infrastructure strengthened his land rights as well as the security of his household's access to water.

The case of Mr Phosa indicated that:

- With requisite resources, it is possible for black small-scale irrigation farmers to succeed in generating gainful and sustainable livelihoods for themselves, their households and their workers outside of smallholder irrigation schemes and with full ownership of the production enterprise.
- Financial resources are a critical factor of production for farmers within and outside of smallholder irrigation schemes. Alternative sources of finance are particularly critical to farmers outside of formal institutional arrangements. At face-value, the profile of Mr T. G. Phosa appears similar to many emerging commercial farmers in Makuleke. However, a critical difference was that he had greater access to alternative sources of capital compared to the majority of Makuleke farmers. While a retirement pension grant provided relatively substantial seed capital for Mr Phosa, migrant worker savings provided a relatively small start-up capital for Renias Chauke. The former was able to begin his enterprise with requisite productive assets and therefore relative ease. The latter was compelled to endure hardship and risk for several years before his enterprise became established. The growth of Renias Chauke's enterprise, however, was accelerated by financial contributions from the AWC strategic partnership. The same can be said for Farmer F and Tobias Hlongwane.
- In rural contexts, such as Makuleke, social capital is important to securing access to productive resources, such as land and water, both for farmers within and outside of smallholder irrigation schemes. The differences in Chief Makuleke's treatment of Renias Chauke and Mr T. G. Phosa with respect to royalties attests both to the differing levels of social capital between the two farmers, among other factors. By contrast, appropriation of riverside land without asking for the Chief's permission did not necessarily imply that farmers, such as Tobias Hlongwane, did not require social capital to obtain such land. On the contrary, social capital in the form of established customary rules governing use of the commons already existed within Makuleke community and farmers used it according to formal though unwritten customary codes. Externally-driven institutional arrangements, such as RESIS-Recharge institutional actors and

partners, seemed to assume that engaging with rural social capital and outstanding social issues constituted a transaction cost that was best externalized from the core business of contract farming ventures and partnership and delegated to the farmers' organization.

6.9.3 FARMER F: EQUITY LABOURER WITHIN IRRIGATION SCHEME AND MARKET-ORIENTATED RIVERSIDE GARDENER

Farmer 'F', like Renias Chauke (Section 6.9.1), was both an equity labourer in the strategic partnership with AWC an independent market-orientated riverside gardener within Makuleke community. The duality of his farming roles was directly influenced by RESIS Programme interventions. However, his pathway to livelihood diversification was different from that of Renias Chauke.

Farmer 'F' was a 60 year old male commercial plot holder, whose 5 ha plot was ceded to the strategic partnership. Involvement in the RESIS-Recharge strategic partnership contributed approximately R6 750 per month to Farmer F's total household income. Prior to the strategic partnership in 2005, Farmer F's regular household income was R1270 per month. Almost three-quarters (R900) of this income was from NSK joint venture allowances for crop production labour. Farmer F's household retained such allowances through using its own labour resources rather than hiring outside labour. After production failure by the NSK joint venture in the 2003 to 2004 season, Farmer F's household became particularly vulnerable to food insecurity.

To cope with poverty and hunger, Farmer F became one of several joint venture members who informally produced crops on ceded land before the contract with NSK came to an end in 2005. He grew vegetables and maize, mostly for subsistence. Amid contestations in 2005 over informal crop irrigation on land ceded to the NSK joint venture, the farmer decided to diversify livelihood strategies to include informal irrigation on a newly-established 1.5 ha garden alongside Mphongolo River, below the dam wall and close to Makuleke Bed and Breakfast facility. The farmer's primary motivation was to produce food crops for subsistence, with surplus produce sold within the local community. However, Farmer F lacked requisite financial resources to actualize his objective.

With inception of the AWC strategic partnership, contributions from the partnership elevated the farmer's total household income from R1270 per month during the NSK joint venture to R8498 per month. Of this amount, almost four-fifths (79.4 per cent) came from the strategic partnership while the rest (20.6 per cent) derived from the farmer's informal riverside gardening activities and, to a lesser extent, social grants. From his ceded 5 ha plot alone, Farmer F earned a total annual income of approximately R81 000 per year in 2007/2008, which translated into R6750 income per month. Within context of RESIS Programme interventions, this represented a seven-fold (750 per cent) increase to the R900 he used to get from the NSK joint venture in 2005.

Despite the significant increase in income from the AWC partnership, Farmer F continued to practice informal market gardening on his riverside garden. Factors that influenced the farmer's decision included a sense of achievement associated with success and freedom associated with full control of his own enterprise. These contrasted with the relatively passive role of equity labourer in the AWC strategic partnership and failure to earn income as a 'business farmer' in the NSK joint venture.

A qualitative examination of contributions by the strategic partnership shows that although the initial impetus for the farmer's decision to establish a riverside garden was production failure by the NSK joint venture, the more tangible gains from this decision were causally related to the surplus income, labour and time resources that emanated from reductions by the AWC strategic partnership of active roles for equity labourers. Farmer F used income from the partnership to invest in a diesel-powered water pump, construct a 2500-litre concrete lined water storage tank, purchase drip irrigation equipment and erect a perimeter fence and gate. Thus, his household material asset ownership became enhanced compared to the meagre material assets his household owned in 2005, which included a radio and a cellphone donated by the Alcatel-Vodacom-Manobi strategic partnership. The degree to which the AWC strategic partnership can be said to have impacted on the farmer's broader livelihood strategies is qualified by the fact that the farmer's decision to diversify livelihood strategies was antecedent to the AWC partnership. This, however, does not detract from the significance of contributions

by the AWC partnership. Compared to farmers like Renias Chauke and Mr Phosa (Section 6.9.2), Farmer F still had a lot more constraints to overcome before he could establish himself in local informal and formal agri-food markets.

6.9.4 TOBIAS HLONGWANE: EQUITY LABOURER WITHIN IRRIGATION SCHEME AND MARKET-ORIENTATED RIVERSIDE GARDENER

Tobias Hlongwane, was a 56 year old male commercial plot holder, whose 6.5 ha plot was ceded to the AWC strategic partnership. His experiences with agricultural commercialization were broadly similar to Farmer F's (Section 6.9.3). However, contrary to other enterprising farmers examined the study, who sought to maximize yields through intensive farming methods, Tobias Hlongwane's livelihood diversification strategy was to target a largely underrated or unknown and very localized informal niche market for organic vegetables.

The strategic partnership contribution of approximately R8775 per month represented a fourteen-fold (1462.5 per cent) increase to the R600 monthly income the farmer used to retain from the NSK joint venture allowance for labour costs. Prior to the strategic partnership in 2005, Tobias Hlongwane's total household income was R1110 per month. Nearly half (45.9 per cent) of this income was from child support grants, while NSK joint venture allowances accounted for the remaining 54.1 per cent. By contrast, from 2007 to 2009, almost nine tenths (88.5 per cent) of the farmer's household income derived from the AWC strategic partnership, while the contribution by child grants was reduced to 4.8 per cent. Effectively, therefore, by ceding his 6.5 ha plot to the AWC strategic partnership, the farmer increased the margin of income from his allocated land.

While income gains from the ceded commercial plot were a direct result of the strategic partnership, the reduction of Tobias Hlongwane's dependency on social grants was an indirect result. This is because the latter was directly due the farmer's agency in investing surplus income and time resources from the strategic partnership in informal gardening activities on a 0.4 ha piece of land along Mapangu River within communal grazing lands (Appendix 1). Through such investments, the farmer was able to maintain a slightly higher level (R1140) of average monthly income from 'other sources' than the level of his total mean monthly income (R1110)

of 2005. Income from informal market gardening filled in the gap created by cessation of the NSK joint venture, and exceeded erstwhile income from joint venture allowances by R100. When government child support allowances per child subsequently increased from R170 in 2005 to R220 in 2008, Tobias Hlongwane's dependence on such income contracted partly due to the reduction from three to two the number of children eligible for such grants as well as the increasing significance of income from farming activities.

A qualitative examination of contributions by the strategic partnership reveals other indirect non-monetary impacts on the farmer's broader livelihood strategies. The farmer invested in irrigation infrastructure in his riverside garden. Such infrastructure included a diesel-fuelled water pump, a 2500-litre 'jo-jo' water storage tank, a drip irrigation system, irrigation furrows, a perimeter fence and gate. These investments markedly enhanced Tobias Hlongwane's household material assets ownership, which in 2005 consisted of a fridge, a radio and a cellular phone that was provided through the Alcatel-Vodacom-Manobi joint venture.

The farmer also used part of his surplus income to invest in enhancing his farming skills through registering for formal training and certification at a local agricultural college. Knowledge gained from such investment made the farmer more aware of challenges associated with new entry into markets. It also influenced his decision to target niche markets rather than compete with established local commercial vegetable producers, such as Renias Chauke and Mr T. G. Phosa (see Sections 6.9.1 and 6.9.2). Tobias Hlongwane therefore chose to produce organic vegetables, which contrasted with reliance by the established farmers on chemical fertilizers and pesticides. His decision paid off as members of Makuleke and neighbouring communities increasingly showed a preference for the quality of his produce. Faced with increasing demand, the farmer made plans to increase the size of his garden, make further investments in additional hydraulic and irrigation infrastructure and widen the market for his produce. Although the farmer could not say how much income he earned from sales of organic vegetables, since he had no records, he emphasized that gross savings from such marketing had enabled him to accumulate in a six month period sufficient capital to buy a 5000 litre jo-jo tank

and a drip irrigation system to cover about 2 ha. This was not all the income, as the household also made *ad hoc* use of day-to-day earnings to pay for miscellaneous needs.

In the case of Tobias Hlongwane, therefore, the AWC strategic partnership could be said to have contributed directly and indirectly to enhancing the livelihood assets of the individual farmer and his household. However, the degree to which the partnership can be said to have impacted positively on livelihoods in this case was strongly determined by the agency of the farmer. Tobias Hlongwane used his freedom to make choices about expenditure of surplus financial and time resources emanating from the strategic partnership. He made decisions to enhance his natural, physical and human assets, and returns from such investments, specifically entry into a localized niche market for organic vegetables, reinforced the financial and economic assets of the farmer and his household. Given the farmer's limited resources and significant constraints, the strategy to target a particular localized informal niche market appeared to have paid off since it enabled him to survive competition from stronger farmers like Renias Chauke and Mr Phosa, who also targeted local informal markets.

6.9.5 FARMER 'G': EQUITY LABOURER IN IRRIGATION SCHEME

Farmer G exemplified equity labourers who, following reduction of productive roles by the AWC strategic partnership, did not diversify their livelihood strategies but instead opted to rely heavily on income from leasing their plot allocations to the partnership. Such farmers contrasted with Renias Chauke (Section 6.9.1), who used available time and resources to diversify and pursue aspirations of becoming fully-fledged commercial farmers outside of RESIS interventions and contract farming arrangements.

Farmer 'G' was 48 year old unmarried female commercial plot holder, who had a 5 ha plot that was ceded to the strategic partnership between AWC and Makuleke Farmers' Cooperative. Contributions by the AWC strategic partnership had elevated her total household income from an average R3 730 per month in 2005 to R10 370 per month in 2007 to 2009. From her 5 ha commercial plot alone, Farmer G gained an average income of approximately R6 750 per month from the strategic partnership, which represented more than a ten-fold (1125 per cent)

increase to the R600 monthly allowance she used to get from the NSK joint venture in 2005. From 2007 to 2009, contributions from the strategic partnership comprised nearly two thirds (62.9 per cent) of her total household income per month, while the rest (37.1 per cent) derived mostly from social grants.

The above quantitative gains had had qualitative implications on the livelihoods of Farmer G's household. While the commercialization model adopted by the AWC partnership had relieved farmers of active roles in crop production, Farmer G did not appear to have translated her increased time resources to other income-generating activities. However, Farmer G had translated such time gains into non-monetary reproductive activities, which resulted in qualitative improvements of quality of life and well-being for her household. In particular, Farmer G was able to devote more time to caring for four elderly household members, who were aged between 74 and 75 years. To be able to do that, Farmer G combined her own income from agricultural commercialization in the irrigation scheme with other income from social grants. A significant proportion (94.5 per cent) of the latter income was composed of old age pensions, which were transient and dependent on life spans of the pensioners.

Effectively, in this case, 'arm-chair' farming replaced self-determination with dependency, and it seemed possible that without alternative livelihood strategies or active roles in farming, Farmer G's dependency on subsidized sources of income could become a livelihood in its own right. However, such dependency could have critical long term implications on livelihood sustainability, since it militated against future prospects for ascendance into full control of production systems, to which emerging farmers like Renias Chauke aspired. At the same time, capacity constraints of farmers like Farmer G ironically seemed likely to continue to constitute opportunities for better-resourced people and enterprises from elsewhere to capture benefits associated with smallholder irrigation schemes.

6.9.6 MR WILBERT RENDANI HLONGWANE AND MR PHILLIP DUMAS MALULEKE: INFORMAL 'STRATEGIC PARTNERSHIP' FOR SUBSISTENCE RIVERSIDE GARDENING

This example relates to an informal partnership by two elderly subsistence food producers, who pooled their meager livelihood resources together to establish a riverside garden as a means to overcoming food insecurity following RESIS-Recharge interventions in Makuleke Irrigation Scheme. Benefits of these farmers' coping strategy were shared with similarly poor and vulnerable members of the community, although the partners clearly defined their ownership of the enterprise and boldly defended their right to exclude others from access. Juxtaposed with the AWC strategic partnership, this informal partnership engendered a caricature of neo-liberal corporate structure and relations in that while it painfully lacked financial and infrastructure resources, the enterprise was conducted with a significant measure of empathy and humanity. Critically, the enterprise provided an important safety net for a few households who would otherwise not have been able to cope with shocks due to RESIS-Recharge interventions and contractual farming arrangements.

6.9.6.1 Introduction

Wilbert Rendani Hlongwane (67 years old) and Phillip Dumas Maluleke (73 years old) were both pensioners who resided in Makuleke village. The two men were among the poorest and most vulnerable people in the community. They headed households of nine (9) and eleven (11) people respectively. Pensions of these men and their spouses amounted to R2000 per month per household. Child support grants contributed R380 to Hlongwane's monthly household income and R190 to Maluleke's. The rest of the adult members of these households did not contribute any money because of unemployment and had no tangible livelihood strategies. Besides social grants, therefore, households of both men subsisted on riverside gardening by the two men, who were occasionally assisted by their wives.

6.9.6.2 Background to the Informal ‘Strategic Partnership’

In 2007, Hlongwane and Maluleke entered into an informal crop production partnership and together practiced subsistence gardening on a small (600m²) piece of land along Mapangu River. While Hlongwane was a retired migrant worker, who had never had access to land in the irrigation scheme, Maluleke was a former food plot holder. His access to land in the irrigation scheme was terminated in 2002 on the basis that he earned an old age pension, which was provided by the state to all people aged over 65 years. His loss of land coincided with the onset of the RESIS Water Care Project and a cotton joint venture between emerging commercial farmers of Makuleke and a private firm, Noordelike Sentrale Katoen (NSK).

Since Maluleke’s displacement from the scheme in 2002 and Hlongwane’s retirement around the same time, the two farmers had separately supplemented food purchased using pension funds with food seasonally produced in their rain-fed crop fields or collected from the village commons. Factors that compelled Hlongwane and Maluleke to establish their riverside garden in 2007 included increasing hardships due to generalized food price increases, joblessness within their households, lack of access to land in the irrigation scheme and food insecurity within the community due to displacement in 2007 of food producers. Although most of the displaced food producers were subsistence-orientated, many had hitherto either sold surplus produce or shared it with others in their social networks, thereby broadening food security within the local community.

The effects of food producer exclusions and outward-orientation of food production by the strategic partnership therefore combined with widespread food price increases to exacerbate these men’s challenge to ensure food security for their households. Amid such constraints, the two men realized that their physical frailty and their poverty further narrowed their prospects to cope with shocks to their livelihoods. They therefore agreed to pool their meagre resources together, as a survival strategy, and embark on informal irrigation farming as an alternative means to ensuring secure access to food. Following such agreement, they quietly began looking for land to jointly establish an irrigated garden. Such a garden constituted a diversification from their earlier reliance on rain-fed crop production and pensions.

6.9.6.3 Livelihoods Generation Process, Strategies and Outcomes

Towards identifying a suitable place for their farming enterprise, Hlongwane and Maluleke first scouted the commons around Makuleke communal lands. They finally decided to establish their garden at a particular place along Mapangu Stream, which was close to a deep pool of water. The selected place was part of communal grazing land, distant from built-up areas, outside of the irrigation scheme boundary and close to a constant supply of water. Their rationale was that such a site would not require the chief's approval since access to the local commons was open to all *bona fide* members of Makuleke community. A related advantage was that they would not be required to pay any royalty to the chief, which they could not afford. Disadvantages included a higher risk of crop losses due to birds and stray livestock and wild animals from the Kruger National Park, possibilities of crocodile attacks and the greater daily walking distance (1.5 km) between the village and the garden.

While the farmers accepted the challenge of walking the relatively long distance everyday, they sought to minimize challenges associated with risks of crocodile attacks and stray animals. They first made sure that they knew the exact location and habits of the only crocodile known to reside in Mapangu River. To protect their crops from stray livestock and wild animals, they also erected a secure perimeter fence and gate using discarded raw material and wooden poles and saplings from the bush. The farmers then proclaimed their partnership with a prominently displayed signpost at the entrance gate, which clearly stated the company as "Rendani and Dumas Pty Ltd"¹²⁶ and warned against trespassing ("*Hakungenwi lapa haikona!*", which is Tsonga language equivalent to "Warning: No unauthorized entry!").

In terms of institutional arrangements, the partnership involved the two men pooling their labour to establish, maintain and guard the fenced riverside garden. Without any access to finance, they jointly invested their labour into developing infrastructure, such as two earth platforms that enabled manual bucket abstraction of water from the river, irrigation furrows, a fence and gate, and a rudimentary pole and thatch shelter that they referred to as their "office". The shelter had a roof but no walls, and served as a source of shade from the hot mid-

¹²⁶ Psuedonym.

day sun and an overnight storage for buckets and miscellaneous objects. The latter included items such as empty hessian sacks, pieces of string and sticks for tying climbing plants, rags for cushioning hands from the hard bucket handles and thin scraps of wire for mending holes in the fence.

Hlongwane and Maluleke used buckets to abstract water directly from the river. This constituted hard work for the elderly people, who had to carry buckets full of water from earth platforms on the river's edge up a steep bank to their garden above. The farmers stated that if they had money, they would invest in a portable water pump and not a borehole. Their rationale was that the high rate of theft of transformers in the local district was a major deterrent to investments in boreholes. Such crime restricted small-scale farmers to using water pumps, which were portable and could be carried home for safe-keeping. Until such time that they were fortunate enough to realize their aspirations to own a water pump, the two farmers resolved to continue using buckets on a rotational basis, to ease the hardship.

Hlongwane grew spinach and Chinese cabbage in the cool, dry season and beans and pumpkins in the hot wet season. By contrast, Maluleke produced spinach, Chinese cabbage and carrots in the cool dry season and pumpkins, cabbage and beans in the hot dry season. Maluleke also grew some cassava. The farmers favoured pumpkins, beans and cassava because these crops also provided leafy vegetables for relish. They both sold surplus produce to neighbours on an *ad hoc* basis, often when they were tired of eating vegetables and needed to buy meat or to avoid spoilage of highly perishable vegetables and/or bolting of leafy vegetables. Their individual incomes ranged from R10 per month, when one person bought their vegetables in the entire month, to R500 per crop in the dry season, when more buyers approached them. Effectively, the farmers ensured that their households had consistent supply of fresh vegetables, which they occasionally supplemented with fish caught from the river bank alongside their garden or meat bought with financial income.

The higher demand for their vegetables coincided with the dry season because then, wild indigenous vegetables such as okra, spinach-like *amaranth* and other leafy vegetables were scarce. Consequently, during the wet season, the two male farmers focused their energies

mainly on their rain-fed crop fields, where they individually grew maize, cow peas, groundnuts, okra, pumpkins, indigenous squash, sweet reed and sweet potatoes. Whereas labour in the two men's portions of the riverside garden was virtually male-exclusive, labour in these farmers' rain-fed crop fields was shared by all members of their households.

Despite the two men's clearly defined, uncontested and exclusive claims to the property rights they created through investments in irrigation infrastructure for their riverside garden, they had generously agreed to allow two indigent elderly female neighbours to grow food on a portion of their small plot. The women paid no rent as the arrangement was not monetary but based on values of social reciprocity and communal responsibility. All four farmers took turns to scare off birds from eating vegetables in the garden. They shared the fenced garden space but produced crops independently.

The two men's decision to allow poor and vulnerable neighbours to use a portion of their garden was informed both by their empathy for the neighbours as well as their own realization that, due to physical frailty, they were not able to fully utilize their entire garden space or walk to the garden everyday to consistently chase birds off the crops. Before Hlongwane and Maluleke accepted their female tenants, they were only able to water a third of their portions of land each day. Even then, they found it difficult to sufficiently irrigate their crops and ended up under-watering with five buckets per row per day instead of ten. This led to water stress in the crops and losses of yields. Hence their decision to allow the two women to join them in producing crops in the garden.

6.9.6.4 Water Use: Quantity

The men and their women 'tenants' irrigated 30 rows of vegetables that were approximately 30 metres long and 60 centimetres apart. Collectively, it took roughly ten 25-litre buckets for farmers to water an entire row during the dry season. The estimated total quantity of water used on the two men's garden was approximately 7500 litres (or 7.5m³) per day in the dry season. This translated to an average dry season abstraction volume of 1875 litres (1.875m³) per farmer per day. Less water was used during the wet season, with watering done only during

prolonged dry spells. Water use by these subsistence food producers well within the Schedule One water limits.

6.10 OVERVIEW OF EFFECTS OF CONTRACT FARMING ON LIVELIHOODS IN MAKULEKE COMMUNITY

This section presents findings on the ways in which agricultural commercialization and contract farming arrangements affected livelihoods in Makuleke community during implementation of the RESIS Programme from 2003/2004 to 2008/2009. Although attention is given to both the cotton joint venture of earlier RESIS Phase (Water Care Programme) and the strategic partnership of the RESIS-Recharge Phase, emphasis is on the latter. The rationale is that RESIS-Recharge signified a more dramatic shift away from crop production practices that Makuleke farmers were familiar with to a completely different approach, whose neo-liberal orientation seemed to ride rough-shod over local livelihood contexts and interests.

6.10.1 EMPLOYMENT

Inceptions of the NSK joint venture and AWC strategic partnership were greeted with high expectations of job opportunities by unemployed people of Makuleke community. Data on employment creation for the twelve months from 2000 and 2003 showed that approximately 400 temporary, seasonal, long term and permanent jobs were created within and outside the irrigation scheme (Table 41)¹²⁷. In view of the high (84 per cent) rate of unemployment and under-employment for the working age population in Makuleke community (Tapela, 2002), the employment of 11 per cent of the jobless labour force represented a remarkable achievement. Employment data (Table 41) also highlighted the importance of the irrigation scheme as a source of local employment, since it provided the highest proportion (32 per cent) of jobs in 2003. Such jobs were generated by the NSK joint venture, which provided farmers with crop production allowances for the employment of three workers in each of the 43 plots within the joint venture. Due to poverty and unemployment, many farmers retained their allowances and instead sourced labour resources from within their households. Others retained up to two-thirds (R600) of their allowances and employed between one and three workers from among

¹²⁷ Interview with CPA Implementation Officer, Mr Dennis Skhalele, held at Makuleke on 08 December 2003.

indigent members of the community or informal immigrants and refugees from Zimbabwe and Mozambique. Although initiation of the NSK joint venture in 2002 increased access by the unemployed and under-employed to seasonal job opportunities in the irrigation scheme, access to such jobs was inequitable. Respondents from the broader community stated that such jobs were often informally reserved for people with close personal links to commercial plot holders. The net effect of NSK joint venture related employment on joblessness within the community was therefore not easy to determine. Part of the difficulty lay with the transient nature of some of the jobs and the presence of external factors, such as social grants.

Child support grants, in particular, appeared to have released most of the indigent Makuleke women from low paid farm labour in the irrigation scheme and from the need to seasonally abandon their households for work in distant tomato farms (see Section 6.3.1.3). Receipts of child support grants reduced women's vulnerability and changed their employment status and patterns. The gap left by these Makuleke women in the irrigation scheme was filled by either unemployed Makuleke men and women or informal refugees and immigrants from Zimbabwe and Mozambique. The latter had settled temporarily or permanently in Makuleke community. Although social grants increased the time available for women's reproductive and productive roles, it was not clear whether or not such women could be considered to be 'unemployed'.

Despite achievements in job creation by the NSK joint venture and the strategic partnership with AWC, the majority of the working age population could not be absorbed by local employment opportunities. Most males and fewer women of working age tended to migrate to other areas in search of employment opportunities. This tendency characterized the community during colonial and apartheid eras, when Makuleke community, like many similar communities in South Africa, constituted a labour reserve for urban, mining and industrial centres elsewhere (Tapela, 1999). Employment-related migrations observed by this study had distinct gender and time characteristics (see Section 6.3.1.3).

TABLE 41 EXAMPLES OF JOB CREATION BY MAKULEKE COMMUNITY DEVELOPMENT INITIATIVES, 2000 TO 2003

Employer	Nature of employment	Type of worker	Number of jobs
Department of Public Works	Construction of buildings in the lodge operated by Wilderness Safaris in Makuleke Region of KNP (Pafuri); Short term	Builders, bricklayers, general hands – skilled , semi-skilled and unskilled	78
Department of Public Works	Finishing touches to newly-constructed lodge operated by Wilderness Safaris; Short term	Electricians (2), plumbers (3), thatchers (5), others (7) – skilled, semi-skilled and unskilled	17
Wilderness Safaris (sub-contracted security firm)	Anti-poaching activities; Full-time, permanent	Filed rangers	15
Wilderness Safaris	Hospitality; Full-time, permanent	Cleaners, waitrons, kitchen staff, general hands, junior managers etc Skilled and semi-skilled (some of these are beneficiaries of the CPA skills development programme, which sponsors training of two young people per year)	61
Outpost Lodge	Hospitality; Full-time, permanent	Cleaners, waitrons, kitchen staff, general hands, junior managers etc Skilled and semi-skilled (some of these are beneficiaries of the CPA skills development programme, which sponsors training of two young people per year)	18
Makuleke CPA	Joint Management Board	Administrator	1
Makuleke CPA	Office administration	Implementation Officer, Administrative assistant,	2
Makuleke CPA	Natural Resources Management (data collection)	Field rangers	0

			(2 trained but not employed)
Cotton joint venture (NSK & emerging commercial farmers)	Cotton and maize production and harvesting in Makuleke Irrigation Scheme; Short-term, seasonal	Unemployed and unskilled farm labourers (Among these are informal immigrants and refugees from Zimbabwe and Mozambique, who have settled temporarily or permanently in Makuleke)	129 (theoretically) ¹²⁸
DWAF Working for Water Programme (WfW) contractors	Clearance of invasive non-endemic plant species in Makuleke Region of KNP (Pafuri Area); Temporary (2 years maximum per worker)	Trained labourers and a skilled supervisor	19 (2 teams)
DWAF Working for Water Programme (WfW) contractors	Clearance of invasive non-endemic plant species in Makuleke community; Temporary (2 years maximum per worker)	Trained labourers	9 (1 team)
DWAF Working for Wetlands Programme (WfWetlands) contractors	Clearance of invasive non-endemic plant species in Makuleke Region of KNP (Pafuri Area); Temporary (2 years maximum per worker)	Trained labourers and a skilled supervisor	28 (3 teams)
London-South Africa (LOSA) partnership with Makuleke community	Training with possibility of long term employment in a newly-developed local textile and handicrafts manufacturing and export industry; Long term employment beyond the 3-year project cycle, subject to availability of funding	Unemployed women	23 (17 women remain self-employed)
Strategic Partnership with AWC	Seasonal labour during harvesting of potatoes and maize; Consistent employment of +/-5 workers.	Manual labourers; Operational management support; security.	Data unavailable
Total number of people employed			400

¹²⁸ Joint venture provided an allowance of R900 for 3 workers in each of the 43 plots, and theoretically 129 jobs were created at each production and harvesting phase for 3 years. In some cases, however, employment opportunities were retained within households of commercial plot holders.

6.10.2 INCOME

From 2003 to 2009, agricultural commercialization through the NSK joint venture and AWC strategic partnership broadened access by commercial plot holders to incomes. There was a significant difference, however, in the levels of income generated by the two contract farming arrangements. Due to crop production failure in 2003 and declines in world cotton prices in 2004 and 2005, the NSK joint venture failed to generate expected incomes. Instead, farmers suffered major losses. Effectively, therefore, the main source of 'income' generated by the joint venture became the allowances of R300 per 5 ha plot that was intended to cover costs of hiring three workers. For many of the farmers' households, this income therefore ranged from R600 to R900 per month.

By contrast, from 2007 to 2009, incomes from the AWC strategic partnership were much higher. On average, the majority (74.4 per cent) of commercial plot holders, whose plots were approximately 5 ha in size, earned approximately R45 000 from potatoes and R36 000 from maize per season. Effectively, they earned an annual income of R81 000, which translated to mean monthly incomes of approximately R6 750. A few of the farmers, particularly those with dual access to plots, earned at least double these gains. The significance of such increases was best compared to earnings by farmers prior to and during the NSK joint venture.

Prior to the NSK joint venture, commercial plot holders' earnings from all sources did not significantly differ much from similar incomes of other Makuleke heads of households. In 1997 income from all sources for Makuleke heads of households was R1 665.50 (Tapela, 1999) while in 2005 income from all sources for households of commercial plot holders as a group was R1 555. The reduction of average income in 2005 data was due to the exclusion from the study's sample frame of employed part-time farmers, who had hitherto dominated land allocation in the irrigation scheme but had subsequently been excluded when plot re-allocation occurred during the Preliminary Phase of RESIS in 1999.

In 2005, farmers adopted livelihood strategies to capture income from land ceded to the NSK joint venture and allowances for cotton production labour. They sourced most or all of their labour requirements from within own households and effectively retained crop production

allowances. This resulted in household monthly income gains of between R600 and R900 per 5 ha plot. By comparison, in 2008, dividends from ceding the same sizes of plots to the AWC strategic partnership were approximately R6 750. Given that the majority (74.4 per cent) of farmers' plots were approximately 5 ha in size, income from the AWC strategic partnership effectively represented seven-fold (750 per cent) to ten-fold (1 125 per cent) increase in income for most of the farmers.

6.10.3 SOCIO-ECONOMIC DIFFERENTIATION

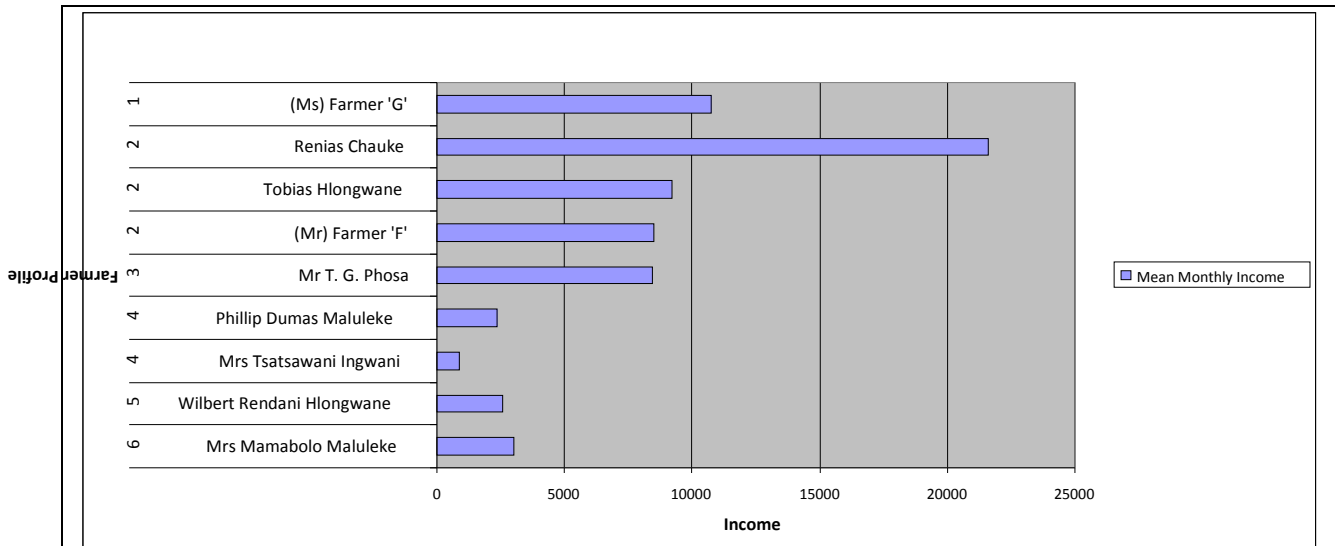
Figure 43 presents a summary of findings from a survey of purposively-selected small-scale irrigation farmers within a range of categories (see Section 6.9 for detailed findings). The survey indicated that contributions by incomes generated by the AWC strategic partnership had cast commercial plot holders into significantly higher income brackets than displaced food plot holders. The same incomes had also cast commercial plot holders into significantly higher levels than non-displaced, subsistence-orientated small-scale irrigators.

However, excluding income from other sources and crop losses due to environmental shocks such as drought, pests and disease, incomes gained by commercial plot holders from ceding 5 ha of land to the strategic partnership were lower than income from a non-state funded commercial irrigation farming enterprise privately owned by Mr T. G. Phosa. This Category 3 type of Makuleke farmer occupied a 5 ha portion of land in an area allocated to rain-fed cropping, which was the roughly the same size as that of most of the commercial plots in the irrigation scheme. Excluding income from other sources and environmental shocks, Mr Phosa's income from irrigated farming was almost equivalent to dividends from a 6 ha plot within the AWC strategic partnership. This was close to incomes of equity labourers like Tobias Hlongwane, who received dividends from a 6.5 ha plot.

The foregoing comparison excludes one example of an equity labourer within the irrigation scheme, whose income emerged to be significantly higher than incomes of Mr Phosa and all other equity labourers in Makuleke Irrigation Scheme (Figure 43). Equity labourer Renias Chauke is excluded from the comparison because his income from strategic partnership dividends was anomalous (Section 6.9.1). This farmer was one of a minority (7.7 per cent) of

farmers whose dual access to and ceding of commercial plots resulted in more or less double the gains of most other commercial plot holders. Renias Chauke's ceded plots, in particular, comprised 11.8 ha, which was more than twice the average size (5 ha) of most plots yielded to the strategic partnership.

With specific regard to equity labourers, a quantitative examination of total household incomes from all sources showed that contributions from the strategic partnership were significantly higher for male than female farmers such as Farmer G, for example. Strategic partnership dividends constituted more than three-quarters (75 per cent) of the total structure of household incomes for male farmers namely, Renias Chauke (78.3 per cent), Tobias Hlongwane (88.5 per cent) and Farmer F (79.4 per cent). By contrast, similar dividends contributed a significantly lower proportion of less than two-thirds (62.9 per cent) to the total household income of female Farmer G, while the remaining 37.1 per cent derived from other sources. Since Farmer G was the only woman in the detailed sample, there was a need to ascertain whether or not the observed gender difference could be extrapolated to the rest of the female equity labourers within the AWC strategic partnership. A qualitative examination of the structure of Farmer G's total household income revealed an exceptionally high reliance on social grants. Farmer G's household of seven (7) people received four old age pensions and one child support grant. Due to the strong anomalous influence of social grants in Farmer G's case, gender analysis discounts the results of this comparison. Instead, a rapid survey was conducted to cross check Farmer G's data with that of other female equity labourers. Data from other female equity labourers confirmed that the level of female Farmer F's reliance on social grants was anomalous. Households of five out of six (83.3 per cent) of the remainder of female equity labourers each received one old age pension and one child support grant, while one received a child support grant. Effectively, all the other female equity labourers had lower levels of reliance on social grants than Farmer G. It is possible therefore that without female Farmer G's exceptionally high access to social grants and without male Farmer F's access to irrigated land outside the irrigation scheme and a child support grant, income from their equal sizes (5 ha) of ceded plots as well as other local sources might have been exactly the same.



Small-scale Irrigation Farmer Category

- 1 - Emerging Commercial Farmer: AWC Equity Labourer (inside scheme)
- 2 - Emerging Commercial Farmer: Equity Labourer and Independent Enterprise (inside and outside scheme)
- 3 - Emerging Commercial Farmer: Own Private Enterprise (entirely outside scheme)
- 4 - Food Plot Holder: Displaced from scheme
- 5 - Rain-fed cropping/Micro-scale Gardening: Not displaced
- 6 - Landless/Micro-scale Home Gardening: Not displaced

FIGURE 43 MAKULEKE: EXAMPLES OF MEAN MONTHLY INCOME FOR CATEGORIES OF SMALL-SCALE IRRIGATION FARMERS, 2008

It was beyond the scope of this study to examine livelihoods of Makuleke people who were not directly involved in irrigation issues, particularly with respect to the irrigation scheme. For that reason, the study reserved comments from casual observations of people outside of the sample of six categories of small-scale irrigation farmers outlined in Figure 43 above.

Key findings were that while commercial plot holders had effectively become part of a small class of relatively affluent people within a largely impoverished community, food plot holders had become excluded from access to land within the irrigation scheme. In qualitative terms, the net result of agricultural commercialization had been an increase in the proportion of relatively more affluent households and a widening of the gap between the poorest and the most affluent households. The development had magnified differences in class interests and

exacerbated power dynamics, resulting in a greater visibility of socio-economic and political cleavages. Such developments had particular bearing on relationships among commercial plot holders and between commercial and food plot holders in the irrigation scheme. At a broader community-level, these farmers' gains in individual skills enhancement from various entrepreneurial and socio-economic development initiatives had yet to translate into tangible financial gains for the majority of Makuleke households.

6.10.4 LAND TENURE INSECURITY

Insecurity of land tenure was identified in 1995¹²⁹ and 1998¹³⁰ as a major concern for farmers within the Makuleke Irrigation Scheme. The problem of land tenure insecurity dated back to the establishment of the irrigation scheme in 1991. While a few subsistence farmers were displaced from their rain-fed crop fields when Makuleke Dam was constructed and later upgraded, many others lost their land to make way for irrigation scheme development. The study identified 6 women farmers who lost land rights when their rainfed crop fields were included in the irrigation scheme area (Figure 44).

An examination of how the women gained access to the lost land showed that when the Makuleke were resettled in 1969, the chief allowed residents of Mabiligwe village to acquire arable land to the west of the village (Figure 40; Appendix 1). The chief did not object to the location of the women's fields, but warned them about possible removal a few months before the irrigation scheme was established in 1991. By then, all arable land close to Mabiligwe village had been taken, and the women had no alternative but to either request to be allocated plots on the scheme or be landless. These women, who were all very poor and lacked formal education, were not compensated for their losses and did not receive compensatory allocation of plots of land in the scheme. Since these women lacked influence, their voices were not heard by traditional and elected leadership¹³¹. Their land rights became extinct as a result.

¹²⁹ LRG Report prepared in anticipation of the Makuleke land claim against the erstwhile National Parks Board, currently known as the South African National Parks (SANParks) Board.

¹³⁰ See Section 2.2.4 and Table 3 of this report.

¹³¹ Views expressed by Makuleke women in two focus group discussions (See Table 1 on page 15 of this report)



FIGURE 44 MAKULEKE: SOME OF THE WOMEN SUBSISTENCE FARMERS WHO LOST WITHOUT COMPENSATION ACCESS TO RAIN-FED CROP FIELDS DURING IRRIGATION SCHEME DEVELOPMENT IN THE LATE 1980S

By contrast, many other affected households were allocated compensatory food plots by the chief in 1989, in anticipation of irrigation scheme development. These households had effectively retained a portion of their land rights plus access to benefits of irrigation development. Such households were among the 273 food plot holders in Makuleke Irrigation Scheme. Although such smallholders had no title deeds, they perceived that the customary land allocation process provided them with a degree of tenure security. However, such security subsequently proved to be precarious against onslaught by RESIS Programme interventions in the Makuleke Irrigation Scheme.

Tenure insecurity was partially rooted in the fact that land in the smallholder irrigation scheme was considered to be state land as well as a resource for the whole Makuleke community. Smallholders could lease or obtain permission to occupy (PTO) plots of land from Chief Makuleke but had no title deeds to it. Tenure insecurity associated with lack of title deeds mainly affected those with access to the larger commercial plots rather than food plot holders. For all smallholders, the process of allocating irrigation scheme plots deviated from customary practice in that both the chief and the agricultural extension officer played roles in land allocation, whereas all other customary land allocations, depending on envisaged use, were either conducted by the chief in consultation with his Tribal Council or delegated to headmen of the three villages.

The involvement of both the chief and agricultural extension officer in plot allocations clearly indicated that jurisdiction over land in the irrigation scheme was jointly shared by government and local traditional leadership. Contrary to observations in Phetwane, PTOs in Makuleke prior to RESIS were not issued in perpetuity, and formal leasing applied to commercial plots. Such arrangements enabled the re-allocation of plots in 2002, when part-time and non-productive commercial plot holders lost access to land in the scheme to make way for revitalization under the Water Care Programme.

Despite good intentions to redistribute plots in favour of unemployed full-time aspirant commercial farmers and indigent food producers at the beginning of the RESIS Watercare Project in 2002, three eligible commercial farmers were excluded due to local political power dynamics. This reinforced perceptions of tenure insecurity among many emerging commercial farmers. The re-allocation of the three particular 5 ha plots resulted in a contested dual access by two of the favoured beneficiaries namely, the chairperson and treasurer of the farmers' management committee. By contrast, there was unanimous support for the decision to allocate two plots to the third recipient, Mr Renias Chauke (see Section 6.9.1), who was widely acknowledged to have demonstrated a good track record of being a keen commercial farmer outside of government assisted programmes and strategic partnerships¹³². It was not clear what attributes counted in favour of dual allocation to the chairman and treasurer of the management committee, but these beneficiaries were widely perceived to be active supporters of Chief Makuleke at a time when the community was fractured by internal power dynamics. The treasurer in question was later murdered in the evening of 17 October 2008 in what remained an unresolved mystery and police case¹³³.

In 2005, tenure insecurity re-emerged as a major concern. In a workshop that focused on petty commodity producers, these farmers stated that, following discontinuation by the RESIS project of rental payments to the provincial Department of Agriculture, Chief Makuleke had introduced

¹³² See individual case study of Renias Chauke in Section 6.9.1.

¹³³ In the morning of the same day, researcher held a meeting with Makuleke Irrigation Farmers' Committee, which the treasurer attended and strongly expressed some concerns regarding implementation of the RESIS Programme in Makuleke.

a requirement for all commercial plot holders to pay a form of royalty to him. This requirement was not accompanied by any formal arrangement for tenure security for plot holders, such as lease agreements. Farmers reported that tenure insecurity discouraged them from making private and collective investments within the scheme, and was therefore a major constraint in their efforts to become commercial farmers.¹³⁴ Dissent over tenure insecurity was exacerbated by speculation that the royal family was positioning itself to take over some of the plots.

Subsequent verification with a key resource person showed that petty commodity producers actually paid no rental fees to the chief for use of land within the scheme, but had misunderstood a requirement for them to pay application fees for PTO certificates. Such fees were payable to LDA, through the Tribal Authority. Perceptions of insecurity had arisen from conflation of land tenure issues within the irrigation scheme and political conflicts between Chiefs Makuleke and Mhinga, which dated back to the Makuleke land claim in the 1990s, in particular. Such conflicts were rooted in the resettlement in 1969 of Makuleke people in the Nthlaveni area along the western boundary of the Kruger National Park. Mhinga claimed that this area was part of his territory prior to the establishment of the Park in 1926 and was later excised from the park to accommodate the Makuleke following their removal from the Pafuri Area in 1969. According to historical records of Gazankulu homeland, Makuleke's chieftainship was formally acknowledged as a headmanship. Such designation, which was later proved to be illegitimate in court, was of lower status and effectively put Chief Makuleke in the same rank as the headmen of his three villages. One of these, the headman of Makahlule village¹³⁵, did not therefore recognize Makuleke's chieftainship and continued to contest the chieftainship even after the matter had been legally resolved. The headman instead gave his allegiance to Mhinga, who claimed seniority over Makuleke leadership and therefore purported to be the traditional leader of the Makuleke. Promulgation of CLRA in 2004 appeared to have re-awakened the conflict, with Mhinga re-invoking his challenge of Makuleke's chieftainship.

¹³⁴ Feedback workshop convened by the researcher in Thohoyandou on 09 May 2007.

¹³⁵ Makahlule village was included among villages under Chief Makuleke in the later stages of the land claim process due to disputes over chieftainship issues (Tapela & Omara-Ojungu, 1999:149).

The dissenting headman had garnered support from some among emerging commercial farmers, who felt disgruntled about various issues relating to the irrigation scheme. The three excluded emerging commercial farmers were among these. The effects of dissent were that Makuleke leadership became more visibly fractured into two factions and power politics at the leadership level created a dynamic pattern of cleavage and cohesion among farmers. This pattern seemed to depend on the manner in which Chief Makuleke and the Royal Family handled irrigation-related issues at given points in time.

The ranks of disgruntled petty commodity producers were swelled by the exclusion since 2007 of 273 subsistence food producers from the irrigation scheme. This followed the inception of the RESIS-Recharge strategic partnership with AWC, who produced maize and potatoes for national markets¹³⁶. The process of exclusion of food producers, whose land tenure had hitherto been relatively secure, was marked by controversy. It entailed subsistence food producers discovering one day that one section of a pipe supplying water to the food plots had been removed overnight, thus interrupting their access to water. No one claimed responsibility and the management committee denied stopping food producers from growing crops on the scheme. Food producers' exclusion also emanated directly from infrastructure development by the strategic partnership. This involved erection of strong fences for the exclusion of wild animals from the Kruger National Park and potential thieves from surrounding villages. The fence enclosed both commercial and food plots, and access gates located that were close to Makuleke villages were removed. This effectively made it difficult for the mostly elderly and frail food producers to gain access to their plots, since they had to walk longer distances to and from their plots.

While the management committee maintained that it never issued instructions to stop food plot holders from growing crops in the scheme, excluded subsistence farmers stated that a reason given by the management committee for cessation of subsistence production was that food producers were unable to pay the electricity tariff for running the pump that supplied

¹³⁶ Meetings with the private investor (Modimolle, 14 March 2008); LDA officials (Polokwane 12 March 2008); representatives of Makuleke Irrigation Management Committee and agricultural extension officer (14 March 2008); and entire Makuleke Irrigation Management Committee (17 October 2008).

water to plots in the irrigation scheme. There were separate electricity accounts for commercial and subsistence farmers on the scheme. The account for commercial production was paid by joint ventures or strategic partnerships while payment for the subsistence production account was the collective responsibility of food plot holders.

Following an earlier RESIS joint venture between commercial farmers and the tobacco firm, NSK, which ran from 2002 to 2005, food producers each contributed R20 over several months to cover their arrears for electricity. The total amount collected was purportedly around R21 000. Subsistence food producers were unhappy about the lack of accounting by the management committee for the money contributed by food producers towards defraying their water supply costs at the end of the joint venture. Food producers questioned their subsequent exclusion from the irrigation scheme on the basis of an assumption that they were incapable of paying the costs of water supply.

According to the agricultural extension officer, members of the farmers' management committee and joint venture documents, water tariffs for food producers were subsidized by the RESIS joint venture with NSK, but the subsequent RESIS-Recharge strategic partnership with AWC did not make similar provision. If such a view was correct, it remained unclear why, despite awareness of the Policy on the Financial Assistance to Resource Poor Irrigation Farmers administered by DWA¹³⁷, the management committee or LDA had made no attempt to apply for a subsidy to cover water supply costs for subsistence food producers.

It appears that tenure insecurity for subsistence food producers was directly linked to their marginalization by agricultural commercialization interventions during the RESIS-Recharge era. In particular, the source of their insecurity and exclusion was the strategic partnership contract between petty commodity producers and AWC. While the LDA-facilitated contract excluded water requirements for food plotters, LDA secured water access for emerging commercial

¹³⁷ Before the restructuring of ministries in May 2009, following re-election of the ANC-led government in April, the ministry was known as the Department of Water Affairs and Forestry (DWAF). Since restructuring, the ministry became Department of Water and Environmental Affairs (DWEA), and water related issues remained under administration by the Department of Water Affairs (DWA) while the other department in the ministry, Department of Environmental Affairs (DEA) continued to focus on environmental issues.

farmers through a negotiated agreement with the strategic partner. In conceding to this arrangement, farmers' management committee lost, in the eyes of subsistence food producers and the majority of members of Makuleke community, the legitimacy to represent all farmers in Makuleke Irrigation Scheme. As a result, the farmers' organization was split into two sub-groupings whereby subsistence food producers formed a splinter organization that they felt would represent their interests. This basically was the crux of concerns expressed by the deceased treasurer of Makuleke irrigation Farmers' Management Committee at a committee meeting held with the researcher on the morning of 17 October 2008.

The deceased treasurer and others in the management committee were gravely concerned that LDA interventions had placed them in a difficult position within the local community. According to the late treasurer, members of the committee were concerned that public perception within the community was that they, as a management committee that was wholly drawn from the group of 43 emerging commercial farmers, had brokered a deal that privileged their own self-interests at the expense of household food security for the indigent food plot holders, who were less influential. This perception was exacerbated by the fact that the only member elected to represent food plot holders had since recused herself from the management committee. The treasurer further alluded to 'some unfortunate incidents and misunderstandings' that had happened since the strategic partnership began. He emphatically expressed his intention to demand that LDA officials should come down to Makuleke to face the community and provide explanations for decisions made by the department regarding RESIS-Recharge interventions. The treasurer concluded by insisting that the researcher should take note of what he was saying, but vehemently refused to be photographed.

6.10.5 PROBLEMS OF SHARING WATER

Before revitalization of the irrigation scheme, problems of sharing scarce water resources were relatively minor, since many of the commercial plots were either under-utilized or unused. Consequently, food plot holders were able to produce a variety of crops, such as maize, pumpkins, groundnuts, cow-peas, beans, okra, sweet potatoes and sweet reed. Most of the produce was consumed within farmers' households and the surplus was sold to generate small

amounts of income, ranging from R10 to R500 depending on productivity, supply and demand factors.

With the onset of RESIS and its associated strategic partnerships, there was an upsurge in the amounts of water consumed by commercial plots. The impact of this increase on water availability within the scheme was not clear since different contract farming arrangements used different mechanisms for sharing water. For example, the NSK cotton joint venture subsidized water supply costs for food plot holders and required each subsistence farmer to pay nominal tariffs of between R10 and R20 per month. By contrast, the AWC strategic partnership for maize and potato production provided no such subsidy, and the inception of this partnership was accompanied by termination of food plot holders' access to water. Such development pointed to emerging inequalities in the sharing of water, and raised questions about the security of water access for non-commercially orientated water users. There were also questions about the formation of a WUA or farmers' organization that brought together users with varying interests in water, conditions of access and markedly different levels of consumption.

Many of the food plot holders began using water for irrigation more than two years before the promulgation of the NWA in 1998, which rendered their water use lawful. By contrast, the majority (60.5 per cent) of emerging commercial farmers began using water after 1998, which meant that in terms of the NWA many such farmers required a licence to be able to lawfully use water for commercially productive purposes. Although a possible assumption could be that subsistence food producers had rights of access to productive water use, under Schedule One on the NWA, it was not clear to what extent differences in perceived and actual entitlements affected access by these two groups of farmers. Within the Makuleke WUA, mechanisms for accommodating water access requirements of existing lawful users and users requiring a license remained unresolved and no evidence was available to show that the WUA was an officially registered entity.

Contrary to the commonly used narrow conceptions of 'commercial' and 'subsistence' farming practices, both groups of Makuleke farmers showed an overlapping interest to derive financial benefit from farming. However, food plot holders were primarily oriented towards own

consumption whereas emerging commercial producers were principally geared towards markets. Although there had been attempts by government officials to broaden definitions of commercial and subsistence and thereby remove the false dualism between the two farming systems, there remained practical questions about how to regulate access to water in instances where both groups of farmers shared not only the same source but also the same WUA structure. Difficulties arose from the fact that differences in production orientation and plot sizes resulted in differences in water consumption by emerging commercial and subsistence farmers.

While the use of water by contractual strategic partnerships exceeded Schedule One limits, it was not possible to quantify the amounts of water used by individual and collective subsistence food plot holders due to the fact that at the time of the study, crop production by all of these farmers was at a standstill. It was therefore not possible to determine whether such use would be within Schedule One limits or not. Prior to cessation of food production, individual water use by many of the subsistence farmers, who cultivated food plots of approximately 0.1 ha, was probably below Schedule One limits. Water account statements indicated that collectively, however, the large number (273) of farmers within this group resulted in their consuming water in quantities that were above Schedule One limits.

6.11 COPING STRATEGIES

During the course of empirical research, it emerged that both commercial and displaced food plot holders adopted various coping strategies in response to agricultural commercialization during the RESIS-Recharge phase. Although such strategies had previously been adopted in response to crop production and income failure by the NSK joint venture, the latter strategies were a more significant response to the wholesale exclusion of subsistence food producers by the strategic partnership with AWC, and associated reduction of active roles for emerging commercial farmers.

6.11.1 RELIANCE ON SOCIAL NETWORKS

6.11.1.1 Social Networks among Equity Labourers

With respect to contentious issues, such as the exit strategy within the strategic partnership contract, among others, the study found evidence that farmers' social networks became an important asset for sharing of information, knowledge and experiences. At a meeting held with the management committee of Makuleke Farmers Cooperative on 17 October 2008, representatives expressed their awareness that counterparts in other smallholder irrigation schemes, and Elandskraal in particular, were experiencing similar difficulties with AWC and Temong cc contractual arrangements¹³⁸. Explaining that they were under a lot of pressure from the community at large, committee members also voiced their intention to demand LDA officials to "come down to Makuleke to sort out the problems on the ground instead of requiring farmers to go up to Polokwane" (in the words of the treasurer, who was later gunned down in the evening of the same day).

The foregoing statement concurs with study findings in 2008 that the chairman of Elandskraal EBIS Trust¹³⁹, Mr Reuben Chauke, was involved in a litigation case against LDA¹⁴⁰. He also formally alleged that he had been threatened by some LDA officials in connection with a number of issues, including his role in defending the land rights of elderly women smallholders. These farmers' subsistence plots had been irregularly incorporated into land leased to the strategic partnership between Elandskraal Kgotlelelo, which represented 20 of the 38 smallholders, and Temong cc, which was the AWC-related empowerment company¹⁴¹. This and the lack of compensation of these Elandskraal subsistence farmers for the foregone use of their land resonated with similar alienation of land rights of the largely elderly, female and indigent

¹³⁹ Elandskraal/EBIS Trust represented 18 of the 38 Elandskraal smallholders in Upper Olifants/Lepelle. These smallholders had hitherto rejected LDA's post-pilot proposal for adoption - in the RESIS-Recharge phase - of an AgriBEE framework, which would, among other things, see the farmers partnering with a newly-formed business entity jointly owned by AWC and a former employee of LDA, and relinquishing much of their autonomy and control over the production enterprise (Section 3.8).

¹⁴⁰ This dispute was eventually settled out of court in November 2009.

¹⁴¹ See Section 3.8.

Makuleke food plotholders at the beginning of the RESIS-Recharge strategic partnership with AWC¹⁴².

The foregoing account does not purport to definitively link the tragic event that took place on 17 October in Makuleke to events surrounding the litigation case in Elandskraal, but serves to demonstrate the existence of shared concerns among affected smallholders within irrigation schemes in different parts of Limpopo Province. Indeed, there were several problematic issues that the deceased Makuleke farmer was embroiled in prior to and during that time, some of which had nothing to do with Elandskraal. One issue was the contested exclusion in 2000 of three smallholders who had legitimate expectation to be included in the reallocation of plots prior to the Water Care Programme (see Section 6.5.3). The second issue related to the contested decision to allocate two of the three plots to the deceased treasurer and the chairman of the farmers' executive committee, which in a community characterized by hunger for land and income was widely viewed as unacceptable (Ibid.). Thirdly, there was the issue of unresolved anger due to the alleged assault and subsequent arrest of three elderly women food plotholders, who were found gleaning potatoes left-over from the harvest (see Box 14 in Section 6.7.2.5). Fourthly, there was the deceased's involvement in a concomitant court case involving leadership contestation between Chiefs Makuleke and Mhinga, which on that fateful day the Makuleke leadership was reported to have won. Fifthly, the 17th of October 2008 was also a day on which the strategic partnership with AWC paid out dividends to the Makuleke equity labourers, who were widely perceived to be enjoying privileged access to benefits from a communal resource at the expense of the marginalised food plotholders, in particular.

It is beyond the scope of this study to unravel these events beyond surmising that the Makuleke commercial plotholders' social networks were embedded in a complex set of social, political, economic class dynamics involving a diversity of stakeholders with different interests and strategies. These dynamics were intricately linked due to the fact that they rode on the intricate social networks that traversed the boundaries of village and community.

¹⁴² See Sections 6.4.3.1 and 6.4.3.4.

Some of the social networks, such as links with Elandskraal's EBIS Trust farmers, were established by project implementation agencies, such as LVA, Golder and Associates and Ndzalo, during the Preliminary and Early Phases of the RESIS Programme. The networks were intended to promote exchanges of knowledge and experiences, and had endured the shifting milieu of the RESIS Programme in Limpopo Province. While Makuleke farmers had not been able to use cellphones donated in 2005 by Alcatel and Manobi's 'Bridging the Digital Divide' project to market their produce, these cellphones became critical instruments for communicating with other smallholders in similar circumstances elsewhere. The social networks were therefore an indication of achievement by earlier project implementation in strengthening organizational capacity among smallholders affected by RESIS Programme interventions in different sites in Limpopo Province. Since the study ended in 2009, which was before termination of the strategic partnership contract and associated RESIS-Recharge Phase, it was not possible to determine the effectiveness of these social networks in ensuring that institutional arrangements were adapted to take farmers' interests into account.

6.11.1.2 Social Networks among Displaced Subsistence Food Producers

Food plot holders responded by increasing their self-organization as a group and agency to make demands for their land and socio-economic rights to be restored. They appealed to traditional leadership and the CPA to intervene on their behalf. Such appeals were based on these farmers' awareness of social contracts between themselves and the representatives in these governance structures, as well as the fact that exclusions of subsistence food producers largely contradicted the Makuleke CPA constitution, community vision for socio-economic development and customary requirements for social integration, fairness and well-being. Customary responsibilities of the Makuleke chieftainship and Tribal Council revolved around custodianship of, among other things, livelihood interests of all community members. Constitutional responsibilities of the CPA included ensuring equity and fairness in access to communal property resources, with specific attention to women, the youth and poorest members of the association. Although the CPA had emerged in association with restituted land resources in Pafuri, the collective community vision for socio-economic development clearly linked the restituted land to communal land in present-day Makuleke. Within such vision,

tourism development in the Pafuri area of KNP and crop production in Makuleke Irrigation Scheme were both considered to be 'twin engines' for community development.

6.11.2 LIVELIHOOD DIVERSIFICATION: OVERVIEW OF INFORMAL IRRIGATION FARMING

6.11.2.1 Introduction

Beyond social networks, strategies to cope with changes to local crop production systems included livelihood diversification by commercial and subsistence plot holders. Principal among such strategies was an increase in subsistence and commercially-orientated riverside gardening and, to a lesser extent, home gardening.

Riverside gardening had been a component of diverse baskets of livelihoods for a small number of households in Makuleke community since the early 1980s (Figure 39 in Section 6.4). In Makuleke village, for example, three male farmers had practiced riverside gardening for several years prior to 2004. Land and water use surveys of Makuleke community showed that between 2004 and 2009, there was an increase in the number of informal food gardening activities alongside rivers, within homesteads and, to a lesser extent, in rain-fed croplands (Figure 39 in Section 6.4 and Appendix 1). The number of riverside gardens began to gradually increase in 2005. Since 2007, however, the number of riverside gardens increased dramatically.

At least sixteen riverside gardens were identified along Mphongolo River and its tributary, Mapangu River, at the beginning of 2009. A number people were observed clearing bush to make way for new gardens and to extend existing gardens. These gardens belonged to individuals and households residing in Makuleke village, which was closest to the rivers. A number of other gardens were also identified in a 3 ha area along the seasonal Dumbuzi River close to Makahlule village. Due to the break down of a borehole that provided water during the dry season, crop production on this site had become restricted to the wet season, when gardeners used a combination of rainwater and river water, the latter during dry spells. Since data collection by this study occurred in the dry season, it was not possible to determine the gender composition of Makahlule riverside gardeners.

It was possible that the burgeoning of gardens was due to factors unrelated to contract farming in Makuleke Irrigation Scheme. Such factors included nationwide food price increases, which were also concomitant with the revitalization of Makuleke Irrigation Scheme. However, the increase in food gardening also coincided with two critical milestones associated with the NSK joint venture of 2002 to 2005 and the AWC strategic partnership of 2007 to 2009. This required a closer examination to determine whether or not a causal relationship existed between gardens and factors pertaining to agricultural commercialization. A rapid appraisal of riverside gardeners was therefore conducted to determine their generalized profiles and durations of their gardening activities. This data was cross-referenced through focus group discussions with Makuleke men, women, emerging commercial farmers and food plot holders. Findings from such discussions were used as a basis for a rapid appraisal of purposively selected riverside gardeners.

6.11.2.2 Informal Commercial Irrigation in Riverside Gardens

The more enterprising among commercial plot holders within the irrigation scheme, such as Mr Renias Chauke (Section 6.9.1), Tobias Hlongwane (Section 6.9.4) and male Farmer F (6.9.3), were frustrated by the lack of provision by the strategic partnership for their active involvement of farming. These farmers, who were all male, also perceived that orientation by the AWC strategic partnership towards distant markets, such as 'Simba Chips' in the Western Cape, inadvertently created gaps and niches in the local food markets. Hence they quickly acted to capture the identified opportunities. They diversified their livelihoods by embarking on independent irrigated crop production along local rivers and, to a lesser extent, within their homesteads. Their responses varied in robustness and resonated with responses by irrigators in rain-fed cropping areas, such as Mr T. G. Phosa (Section 6.9.2). However, unlike Mr Phosa, who also subsisted on his pension as a former agricultural extension officer, these farmers had limited financial capital other than incomes from the AWC strategic partnership. Thus, financial gains from the partnership inured them to their unpalatable relegation to equity labourers and helped them to find expression of their commercial farming ambitions elsewhere within the community. Despite that these farmers earned relatively high gross incomes (approximately R80 000 to R190 000 per annum in 2007) from leasing their plots to the strategic partnership

with AWC, they still desired to be actively engaged in farming rather than be passive “armchair” farmers¹⁴³.

Mr Renias Chauke stood out among the commercially-orientated riverside gardeners as a particularly remarkable example of this spirit of enterprise. Chauke’s garden was located along Mphongolo River downstream of Makuleke Dam and upstream of the irrigation scheme. Renias Chauke’s history showed that he established a smaller 1 ha riverside garden in 1983, following his retirement from migrant labour in the Orange Free State (OFS) and prior to development of Makuleke Irrigation Scheme. Owing to his solid farming reputation within the community, he was allocated two commercial plots with a combined area of 11.8 ha in the irrigation scheme. Following production failure by the joint venture in the 2004 to 2005 season, the farmer took a decision to spread risk by giving greater attention to his garden, where at least he had full control of the production enterprise, while ceding his commercial plots to externally-driven commercialization initiatives. He increased the size of his garden to 4.1 ha and invested in a diesel powered water pump, drip irrigation system, jojo tank, perimeter fencing and a rudimentary pole and thatch hut that served as a store room. His income from the strategic partnership with AWC provided a significant portion of the requisite capital for these investments. Furthermore, Chauke persistently sought new opportunities to diversify his farming enterprise, and to improve his capability by learning from others with greater farming and marketing skills than himself and through experimentation. He also shared his knowledge with other farmers within Makuleke and elsewhere. Through such sharing, a visiting chief from Mozambique gave him a 10 ha plot in a village within the neighbouring country, in the hope that his people would also learn from Chauke. Thus, the farmer was able to increase his productive capacity towards meeting the local food demand, contribute to local food security and the resilience of other farmers, as well as pursue future plans to diversify into bee-keeping, mango production and the cultivation of a broader range of vegetables and fruit, both in Makuleke and in Mozambique.

¹⁴³ See cases of Renias Chauke, Farmer F and Tobias Hlongwane in Sections 6.9.1 and 6.9.4 for details.

Generally, the appraisal of commercially-orientated riverside gardeners showed that the more affluent and successful a farmer was, the greater the size of his garden and hydraulic infrastructure investments. The more affluent and enterprising individuals among riverside gardeners had invested in water lifting devices, such as portable petrol and diesel powered water pumps, water storage tanks (2500 to 5000 litre jo-jo tanks) and drip irrigation systems. However, the high rates of theft of infrastructure, particularly transformers, prevented the better-resourced farmers from investing in boreholes.

6.11.2.3 Informal Subsistence Irrigation in Riverside Gardens

Findings also showed that riverside gardens were an important source of food and nutrition for the poorest of Makuleke households. The gardens provided these households with a critical safety net against rising food prices. From 2008 to 2009, the informal subsistence riverside gardeners included food plot holders, who had been excluded from the irrigation scheme since the start of the RESIS-Recharge strategic partnership in 2007, and other gardeners, who had not been allocated plots in the irrigation scheme due to shortage of land but were interested in farming. The latter decried the fact that some among commercial plot holders had dual access to land in the irrigation scheme¹⁴⁴.

A fair proportion of riverside gardeners were pensioners, who reported that their household food security had been severely compromised by food price increases and lack of access to their small (0.1 ha) food plots within the irrigation scheme. Others were younger, unemployed and landless members of the community, who also cited deepening insecurity due to food price increases. While the main gardening objective for the younger unemployed youth was purportedly to enhance household food security, these youth also quietly nurtured a sense of hope that gardening activity might pave for them opportunities in commercially-orientated farming.

Lack of resources confined the poorest of riverside gardeners to investing in buckets and the construction of the most rudimentary of infrastructure, such as furrows to channel water to

¹⁴⁴ One of these three farmers was murdered on 17 October 2008 (See Section.

crops and earth platforms from which to safely draw water using buckets and pumps from riverine pools. Some of these platforms also doubled up as vantage points for subsistence fishing. The better resourced among subsistence gardeners made fewer investments in irrigation infrastructure than their commercially-orientated counterparts.

6.11.2.4 Homestead Gardens

Following the exclusion of food plot holders from the irrigation scheme in 2007, there was an increase in the prevalence of homestead food gardens in Mabiligwe village. The village had an exceptionally high assurance of domestic water supply, whereby all of the communal water taps provided sufficient water throughout the day every day (see Table 33 in Section 6.3.7; and Appendix 1). By contrast, a little more than half (56 per cent) of communal water taps functioned in Makahlule and a smaller proportion (13.9 per cent) in Makuleke village, and these provided water supply on a rotational basis for a few hours each day. Due to water shortage, there were fewer homestead gardens in the two latter villages and those that existed were established by the few households with private boreholes. What was notable, though, was that in all three villages, there were rules against indiscriminate use of communal water supply infrastructure for homestead garden irrigation. Rules restricting users to bucket irrigation rather than hopepipes were deliberately disobeyed in Mabiligwe village (Box 15).

Box 15 Voices on non-compliance with community rules against hose pipe connections to communal stand pipes

“The water point committee has rules, but some people flout them and waste water. The Mvula Trust project objective [in providing water services infrastructure] was to reduce poverty, not provide luxury. The intention was therefore for people to get water from stand pipes, not individual taps....No homestead should be more than 200m from a stand pipe. The problem became water wastage. People were watering banana trees and so on with hose pipes. Water is not paid for therefore there is wastage.” - Chairman of Mabiligwe Village Water Committee in a key respondent interview.

“We do it for food, not for commercial!” - Several participants of a focus group discussion in Mabiligwe, which involved 86 women participants, 8 of whom were food plotters.

“I have cattle at home. I am not alone. There are many others [who own livestock]. We have made tanks [within homesteads] for watering our livestock. It is not easy to fill these up with buckets!” - Mrs Mandeya, in the Mabiligwe women’s focus group discussion.

“I am within my rights to use water to grow food crops in my ‘yard’. Since there is no source of water within this yard I will connect a hose pipe to the communal stand pipe rather than be reduced to watering with a bucket.” – A male head of household responding to interview questions.

“Yes, hosepipes are not allowed, but many connect them nonetheless. We [water point committee members] cannot do anything about that. Those breaking the rules say ‘We bought the hose pipes with our own money, so we will use them!’” – Member of a water point committee at a women’s focus group discussion in Mabiligwe.

“The [acting] headman is not happy about the breaking of rules, but has not succeeded in stopping it...Part of the problem is that people were called by the headman and informed about the rule regarding hosepipes. There was no consultation...” – One participant in a women’s focus group discussion.

“Water point committees are there, but people do not listen to them. The ‘induna’ [acting headman] also does not listen and is probably part of the problem.” – Chairman of the over-arching Village Water Committee for Mabiligwe.

What emerged was also that Mabiligwe home gardeners were not necessarily food plot holders, who were excluded from the irrigation scheme, but included virtually any interested individuals or households. Apart from narratives about food price increases and abundance of piped water, there was evidence that the proliferation of home gardens in Mabiligwe village was linked to political dynamics within the broader Makuleke community as well as developments within the irrigation scheme. For example, many among female home gardeners expressed their frustration at the exclusion of food plot holders from access to the irrigation scheme. They sympathized with the excluded food plot holders. This seemed to be related to women’s self-mobilization as a distinct interest group within the broader Makuleke community

(Box 16). In a focus group discussion involving 86 women participants from Mabiligwe, the women insisted that they would continue disobeying water use restrictions that they considered to be unnecessarily oppressive. Effectively, therefore, home gardening in this case was not only a coping strategy related to agricultural commercialization and contract farming arrangements but was also conflated with a multiplicity other issues, including gender relations.

Box 16 Women's Voices on Gender Issues in Makuleke Community

“Women sometimes have potential, but when men are leaders, they act as if they are the sole owners and exclude or marginalize women. They keep telling us that we women are uneducated and do not know anything. Indeed many women in the community are uneducated...The educated women are working in the cities! Yet with basic knowledge or translation, we can be leaders...”

“Uneducated women work more easily and succeed whenever they get access to opportunities. They do so with their own initiative, without the assistance of men. Yet when opportunities arise, educated women are called up.”

Questioned about the Gender Equity principle in the vision for Makuleke community development that was drafted in 1998 as part of the Makuleke Conservation and Tourism Programme (MCTP), one woman's response was: “Gender equity has only been in name.... All women in Makuleke suffer from this [i.e. discrimination].”

6.12 DISCUSSION OF KEY ISSUES

6.12.1 REPRESENTATIVE PARTICIPATION: LEGITIMACY ISSUE

With progression from RESIS to RESIS-Recharge, it became evident that Preliminary Phase organizational development had not achieved the required degree of proficiency in governance skills among emerging commercial farmers. The hardest test for this related to responsibilities delegated by the strategic partnership contract to the farmers' management committee. Such responsibilities included engaging directly with the community regarding issues of labour, communication, theft and the distribution of benefits to the community, such as casual employment and surplus produce. Capture by some members of the management committee of benefits, specifically surplus produce intended for distribution to the broader community (Box 14 in Section 6.7.2), indicated the need to strengthen governance skills of emerging commercial farmers. Such skills mainly related to the capacity of emerging commercial plot holders to root out irregular practices from among representatives within the management

committee. Requisite skills also included capacities to hold representatives accountable for their decisions and actions.

Failure by commercial plot holders in the management committee to represent the interests of all smallholders in the irrigation scheme, particularly food plot holders, indicated two possibilities. Firstly, that within the institutional arrangement for the strategic partnership, farmers were the least powerful of the three contracting parties and therefore unable to influence decisions that led to the exclusion of food plot holders. Secondly, that these representatives were too preoccupied with their own self-interest as a group to the exclusion of interests of subsistence food producers. The two possibilities were not necessarily mutually exclusive.

Differences in degrees of power within the strategic partnership, however, did not account for failure by the farmers' management committee to effectively communicate and consult with food plot holders and community leadership about challenges experienced and possible ways of resolving difficulty. The committee missed an opportunity to mobilize support from a critical mass among food plot holders and the broader community. Despite significant degrees of freedom to take such action, as provisioned by the contract, the management committee did not use this prerogative. Such failures highlighted weaknesses in commercial plot holders' organizational skills and raised the question whether or not the institutional arrangements could secure the interests of the poor.

The above failures led to perceptions among food plot holders and the Makuleke community at large that those commercial plot holders who were in the management committee served their own selfish interests. From the perspective that community legitimacy derives from the extent to which community organizations sustain the functions of articulating and community goals (Stewart, 1998) questions regarding legitimacy of the farmers' management committee were perhaps justified. However, what seemed more fundamental was the fact that emerging commercial farmers and their management committee were in dire need of organizational strengthening, particularly in skills relating to governance, negotiation and stakeholder participation.

Failure to safeguard and secure the interests of food plot holders by the more powerful actors within the institutional arrangement combined with the failure of the more powerful actors within Makuleke community leadership to defend and secure interests of the same farmers. Voices of food plot holders, who were among the poorest, least influential and vulnerable people in the community, were not heard. This brought into question an assumption by the developmental logic of decentralization that local representation is most effective since it is closest and most aware of issues the grassroots level. The elected Ward Councillor and the Chief both did not intervene on behalf of food plotters, who constituted the majority (85.3 per cent) of irrigation farmers. Information about the crisis of governance that had developed in the irrigation scheme did not timeously filter to other key stakeholders at local, municipal, provincial and national levels.

In a hypothetical scenario, whereby such information did filter, the fact that Vhembe District Council was identified as an ISRDP poverty node in September 2003 but never formally gazetted effectively meant that there would not have been any dedicated 'political champion' to pursue the matter further, as was the case with ISRDP nodes such as Greater Sekhukhune. Such an ideal scenario, however, would assume that such champion would have been downwardly accountable. The problem of institutional failure in this case was largely one of gaps in the broader local, provincial and national institutional arrangements for managing power dynamics. For example, gaps included weaknesses in institutional coordination, monitoring and accountability. Gaps also included lack of an effective stakeholder participation strategy, which would have broadened the range of institutions involved in RESIS-Recharge interventions. Intermediary institutions, such as NGOs and Civic Society organizations (CSOs), might have played monitoring roles to ensure that voices and interests of the less powerful people within Makuleke community were taken on board in decision making within the strategic partnership.

The foregoing gaps presented an opportunity for powerful institutional actors within the strategic partnership to take decisions that compromised the democratic rights of the poorest and most vulnerable among the rural poor of Makuleke. Institutional failure during the RESIS-Recharge Phase was therefore less a problem of power dynamics within RESIS, RESIS-Recharge

and contract farming institutional arrangements, and even less a problem of poor governance skills and limited power of commercial plot holders. At a more basic level, the governance, skills and power issues were about gaps in the South African institutional arrangements for cooperative governance and democracy.

6.12.2 CAPACITY BUILDING

The targeted beneficiaries of skills development towards IMT and agricultural commercialization were commercial plot holders and, to a lesser extent, food plot holders. It was reasonable therefore to expect that gains and losses from such interventions would be largely felt by these groups of farmers and perhaps their households and workers. However, the study identified an instance whereby a joint venture that coincided with the Early RESIS Phase and NSK joint venture broadened access to capacity building far beyond confines of the irrigation scheme. This was a joint venture by Alcatel-Vodacom-Manobi, which distributed and trained farmers in the use of internet-enabled cellular phones to enable access to markets and market-related information. Farmers like Mr Phosa (Section 6.9.2), whose private enterprises were located outside the irrigation scheme, seemed to have benefited more from access and capacity to use such technology than commercial plotters, who were at the time hemmed in by the NSK joint venture contract and afterwards by the AWC strategic partnership. By contrast, emerging commercial farmers who diversified from equity labourer roles in the irrigation scheme to active pursuit of independent informal irrigation enterprises, like Renias Chauke, were similarly able to garner benefits from the cellular phones.

While the earlier RESIS Phase 1 interventions developed farmers' organizational and administrative skills, the study was not able to identify skills development initiatives that were associated with the RESIS-Recharge strategic partnership. What was evident was that skills gained by emerging commercial farmers from training in crop production and irrigation techniques during the preliminary and early RESIS phase were not required since farmers, as equity labourers, had surrendered wholesale their access to land, soil, water and infrastructure.

Although the strategic partnership's failure to use farmers' crop production and irrigation management skills seemed to constitute a waste of many farmers' human resources, possible negative impacts of this were lessened by the fact that a proportion of these farmers transferred these skills to their own private market gardening initiatives outside the scheme. To a limited extent, organizational skills remained relevant since the partnership contract delegated to the management committee responsibilities for dealing with outstanding social issues, such as compensation and benefit sharing, as well as the transaction costs of communicating and sharing information with the broader community.

6.12.3 GENDER AND DECISION-MAKING

Gender and age contributions towards crop production labour varied according to household-specific factors. In some households, both male and female adult able-bodied members worked in the food plots and gardens, irrespective of age. In other households, only the elderly male and female pensioners were actively involved in gardening. Within male-owned commercially-orientated gardens and (prior to revitalization) irrigation scheme plots, women contributed their labour while men had the prerogative to make production-related decisions. Some men consulted their wives before taking decisions, while others did not.

Decision making about the use of produce or income generated from produce sales varied. While male respondents reported that such decisions were taken either jointly or by their female spouses, many women who participated in a community-wide focus group discussion strongly voiced their dissatisfaction with the broader gender inequalities within their households and within the community. However, among women there were evident perceptions that although all women were discriminated against, the more educated among them fared better.

CHAPTER SEVEN

SYNTHESIS OF KEY FINDINGS AND ISSUES

7.1 INTRODUCTION

Proponents of agricultural commercialisation have argued that it contributes, through multiplier effects, to economic growth (Kirsten *et al*, 2005; Kirsten & Sartorius, 2002; Eaton & Shepherd, 2001) and rural development (Glover & Kusterer, 1990). Furthermore, agricultural commercialisation has been said to have a considerable potential to enhance rural development, reduce poverty and increase productivity, employment and incomes of small-scale farmers (Norton 2004). The study sought to determine whether or not agricultural commercialization, as articulated mainly through contractual joint ventures and strategic partnerships, provided an adequate construct for addressing rural livelihood security within selected smallholder irrigation scheme communities in Limpopo Province. In pursuing this aim, a key concern was whether or not institutional arrangements reflected interests of the poor and vulnerable in such communities. The study made detailed empirical examination of interactions between agricultural commercialization interventions and livelihoods in selected case study sites. The study also conducted in-depth research and rapid appraisals of institutional arrangements, specifically contracts of joint ventures and strategic partnerships that emerged during the earlier RESIS phases and latter RESIS-Recharge phase. Specific research questions were:

- Under what institutional and livelihood context has the resurgence of contract farming occurred in selected smallholder irrigation schemes in Limpopo Province?
- How have contracts for joint ventures and strategic partnerships been formulated and implemented in selected smallholder irrigation schemes in Limpopo Province?
- How have agricultural commercialization initiatives affected livelihoods of petty commodity producers, subsistence farmers and other people in smallholder irrigation scheme communities?

- What are the key policy and institutional issues for government interventions in smallholder irrigation schemes?

On the basis of the results presented in the preceding Chapters Two, Three, Four, Five and Six, this chapter (Chapter Seven) discusses key findings and issues that emerged from the study. The discussion first gives attention to selected key findings and issues from earlier RESIS phases in Hereford, Phetwane and Makuleke. This is followed by a discussion of selected key findings and issues from the latter RESIS-Recharge phase in Makuleke, Phetwane, Elandskraal (Elandskraal-Balemi/EBIS and Elandskraal-Kgotlelelo), Tswelelopele, Strydkraal A and Krokodilheuwel.

7.2 EARLIER RESIS PHASES: DISCUSSION OF SELECTED KEY FINDINGS FROM JOINT VENTURES IN HEREFORD, PHETWANE AND MAKULEKE

7.2.1 LIVELIHOOD CONTEXTS: OVERVIEW

In-depth research findings from Hereford, Phetwane and Makuleke suggested that agricultural commercialisation in smallholder irrigation schemes of Limpopo Province took place in contexts of generally low levels of formal education, employment, income and material asset ownership. Consequently, smallholders were often described as 'resource poor'. The study found that in all three schemes, social grants were a critical factor in the survival of many individuals and households. Phetwane community had the greatest reliance on state social grants, with 82.6 per cent of smallholders receiving old age pensions and 64 per cent of all households having no other source of monetary income than social grants. Poverty was linked to the fact that the majority of the labour force in irrigation scheme communities was unemployed. For example, the unemployment rate for Phetwane community was 75.3 per cent. By contrast, in Makuleke community the working age population with no paid employment in 2000 was 57.7 per cent (Tapela, 2002). Among emerging commercial farmers, the majority in Hereford (66.25 per cent) and Makuleke (82.4 per cent) considered themselves to be self-employed. Since inception of RESIS-Recharge, many of the latter had become equity labourers, who derived income from ceding their allocated plots of land to strategic partnerships, drew monetary incomes from

dividends, played little or no active roles in farming and had no alternative income sources other than social grants.

Individuals and households within farmers' groups and communities relied on a range of strategies to cope with problems relating to poverty, unemployment, shocks and vulnerability. Social grants and social networks are particularly critical to the survival of many households. Coping strategies included reliance on relatives and neighbours for moral and material support. Many households depended on loans from other community members, micro-lenders and burial societies. Others constantly obtained credit from formal retailers and informal traders. A number of households had personal savings accounts and insurance, particularly through membership of burial societies and church organizations. Some forms of insurance were less tangible. Examples included ownership of items such as catering utensils for use in funerals, weddings and similar events. Such events were an important part of social life in communities and extended families. Contributions in cash, kind and labour towards such events strengthened social relations and, through reciprocation, strengthened relations and ensured a broader array of future support for all involved.

In Phetwane and Makuleke, coping strategies also included symbiotic relationships involving shared access to arable land, including irrigated plots. Work and produce were shared through informal arrangements based on responsibility for relatives and indigent community members. For example, although irrigated plots in Phetwane were formally allocated to 49 farmers, in practice at least 56 households were identified by the study as having direct shared access to the land prior to RESIS Programme interventions. In Makuleke, although shared access was more prevalent in food plots, the study found three examples of shared access in the commercial plots. Such sharing, however, involved farmers using both their plots and plots registered in the names of relatives rather than shared crop production. Such arrangements were widely considered to be irregular and had elicited misgivings from landless people within the community. Besides shared access to irrigated land, a number of households in all three schemes gained access to irrigation scheme benefits through employment in casual, seasonal

and permanent employment in farm work. Such benefits, however, were limited to the duration of employment and were therefore often short-lived.

A peculiar feature of coping strategies in Hereford was 'straddling'. Farmers' households retained use of homestead sites in communal areas of Tafelkop or Motetema, which were located some ten to fifteen kilometres away, while occupying small-holdings within Hereford Irrigation Scheme. The dual occupation of homesteads was intended to optimize available livelihood generation opportunities in Hereford while simultaneously gaining access to social services in Tafelkop and Motetema. Such services were absent within the irrigation scheme area. The general trend was that many of the married women divided their time between working on the scheme and caring for children and elderly relatives in Tafelkop and Motetema. The more consistent presence of women on the scheme was often associated with polygamous households (6 per cent), in which one wife - often the younger - resided and worked in the scheme while the other - often the older - resided in Tafelkop or Motetema caring for younger children and elderly relatives. The more consistent presence of women in the scheme was also associated with elderly women with grown up children (42 per cent) and with women who either held land rights in their own capacity or who were the main breadwinners in their households (18 per cent). Such straddling was not observed in Makuleke or Phetwane, since the irrigation scheme and rural community were located within the same land space. Instead, the commonly observed phenomenon in these communities involved rural-urban linkages, whereby some household members migrated to work in urban industrial centres elsewhere and remitted incomes to their rural homes. A number of Hereford smallholder households exhibited the same phenomenon.

Evidence showed that there was a degree of socio-economic differentiation within and among farmer households in all three irrigation schemes (Figure 45). Such differentiation was evident in the diversity of livelihood strategies, aspirations and capabilities, such as production and marketing skills and household financial resources. While individual and household incomes were a useful measure of socio-economic differentiation, many respondents were unwilling to disclose incomes. For ethical reasons the researcher did not insist on income disclosure, but

instead used proxy indicators to qualitatively and quantitatively determine socio-economic differentiation. Proxy indicators included data on household material asset ownership, monthly expenditure and household nutrition.



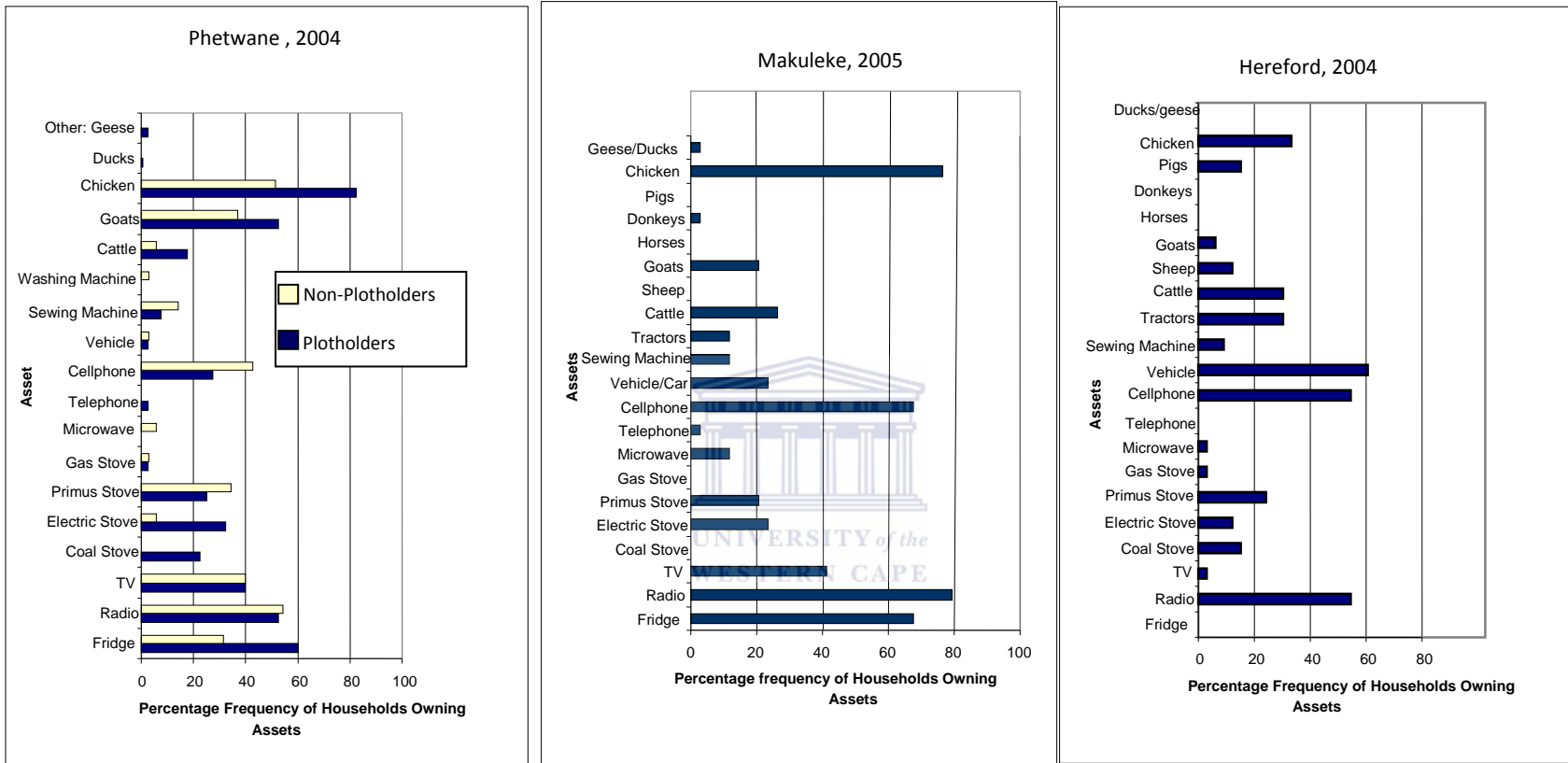


FIGURE 45 SOCIO-ECONOMIC DIFFERENTIATION OF SMALLHOLDER IRRIGATION SCHEMES: PERCENTAGE FREQUENCY OF OWNERSHIP OF MATERIAL ASSETS BY HOUSEHOLDS, 2004 TO 2005

Some of the findings were that Hereford farmers had the highest proportion of vehicle and tractor ownership while Phetwane farmers had the least. Asset material ownership also varied between households each scheme. Ownership of assets tended to be concentrated within particular households. In Hereford, while a significant proportion (57 per cent) of households did not own any gas, electric, coal or primus stoves and rely on wood fuel for cooking, some (15 per cent) owned two types of stove, sewing machines, tractors and small trucks (*bakkies*). In the case of Phetwane, differences between households that had direct access to irrigated plots and those without were less visible, although plotholding households owned significantly more livestock, fridges and electric stoves. Non-plotholding households had greater ownership of mobile phones and the less expensive primus (or kerosene) stoves. Mobile phone ownership was not always an indicator of affluence but of the existence of critical communication links with household members who work in more distant urban, industrial or mining areas and those domiciled in rural areas. The phones, however, could also double-up as status symbols. In Makuleke, the majority of subsistence food producers had much fewer assets than petty-commodity producers. However, a number of householders among subsistence food producers were found to own more of the expensive material assets, such as cars and electrical appliances, than petty-commodity producer households. This pointed to the fact that not all Makuleke food growers were indigent. The more affluent among food plot holders included households whose members were allocated food plots as compensation for displacement from rain-fed crop fields when the irrigation scheme was developed in the late 1980s.

In all the study sites, expenditure on food was relatively low. Average monthly expenditure on food by households ranged from R300 to R400. In both Makuleke and Phetwane, a narrow range of food items was consumed per household per week. The emphasis was on staple foods, such as mealie meal, and cheaper foods, such as cooking oil, bread and vegetables. Most households hardly ever consumed protein-rich foods, such as milk, meat, chicken, trotters, peanut butter and margarine. Protein-rich food, particularly meat, is relatively more expensive and might therefore be beyond the reach of many households in irrigation schemes. The study also found, however, that many Phetwane respondents to the questionnaire survey down-

played their consumption of fresh fish, due to widespread perceptions about the illegality of informal fishing activities. Follow-up interviews and field observations revealed that fresh fish constituted the main source of protein for most Phetwane households. This was linked to the fact that nearly all unemployed and landless Phetwane men and some of the poorest single women heads of households practiced informal fishing for livelihoods. There did not seem to be any significant difference in food consumption between irrigation plotholding and non-plotholding households in Phetwane, or between petty-commodity producers and subsistence food producers in Makuleke. Although Hereford households spent roughly the same amount money on food as those of Phetwane and Makuleke, a greater percentage of Hereford households consumed a wider range of vegetables and consumed milk and poultry more frequently. This was due to that these foods were produced by many smallholders in the scheme and were therefore more readily available and at relatively low prices. Hereford smallholders were also located close to commercial farms, from where they cheaply obtained additional food supplies.

7.2.2 OVERVIEW OF INTERACTIONS BETWEEN SMALLHOLDERS AND JOINT VENTURES

An overview of earlier RESIS joint ventures showed that smallholders in all three schemes received financial, material, technical and managerial support from government, private investors and, in the cases of Hereford and Makuleke, NGOs. Smallholders had complemented such support with own investments time, labour and other resources. During the earlier phases of RESIS, the greatest amount of financial support accrued to Hereford farmers, who received over R10 million since their occupation of the irrigation scheme in 1997. However, this was to change in the RESIS-Recharge phase, when smallholders in Makuleke, Phetwane and similar irrigation schemes received much greater financial investments.

Support from the various stakeholders enabled smallholders to engage in a series of joint ventures. Hereford smallholders engaged in tobacco and vegetable production for local and international markets, while Makuleke and Phetwane farmers were largely involved in cotton production. Hereford farmers had more freedom than Makuleke and Phetwane farmers to make decisions pertaining to choice of joint venture partners and produce. Although both

Makuleke and Phetwane farmers' acquiescence to decisions by government officials and private investors, Makuleke farmers were more assertive in negotiating for the kind of support they required. Despite that, their interests to produce food crops alongside cotton were contested by NSK and LDA, since such practice ran counter to provisions of the joint venture contract. Overall, joint ventures in the earlier phases of RESIS did not yield planned outputs, particularly incomes for farmers.

Direct results of joint venture failure in all three schemes included debts, food insecurity, job losses and mental stress. Ripple effects of joint venture failure included tensions and conflicts among farmers and between farmers and farm workers. In Makuleke and Phetwane, where irrigators lived within local communities, tensions and conflicts often spilled over into the broader community. This resulted in the escalation of antecedent tensions, social and political marginalization and a general reduction in quality of life for individuals and the community in general. In all three cases, joint venture failure and its attendant problems led smallholders to claim more active roles in production-related decision-making. However, a number of factors limited smallholders' agency to exercise freedoms to choose and/or decide.

Land tenure insecurity was a limiting factor for smallholders in Makuleke. In Makuleke, emerging commercial farmers were more constrained by tenure insecurity than subsistence food producers, whose interaction with RESIS joint ventures was minimal. The monthly rent that each emerging commercial farmer paid to the chief lacked the guarantees required to engage in commercial crop production. Farmers were therefore compelled to abide by collective decisions and actions for fear of losing access to land. Despite such limitations, Makuleke farmers became more proactive and successful in negotiating for the kind of support they required. The aftermath of NSK joint venture failure saw them moving beyond arguments for RESIS projects to accommodate both commercial and food security concerns, to include demands for farmers to determine the choice of crop and the contents of joint venture contracts. This response was driven by entrepreneurial aspirations of individual farmers and a shared vision that considered the Makuleke Irrigation Scheme to be part of a twin-engine for community development, the other being the 21 887 ha of restituted land in the northern

region of KNP. Makuleke farmers' increasingly proactive stance garnered positive responses from stakeholders, such as LDA, *Gesellschaft Technische Zusammenarbeit* (GTZ), local supermarkets and tourism operators in the restituted Makuleke Region of KNP.

In Phetwane, although PTOs gave farmers a greater sense of tenure security, smallholders perceived the state and corporate actors to have inordinately greater power than them. Such perceptions seemed to be strongly linked to many elderly farmers' historical experience with apartheid oppression, which undermined the farmers' confidence and limited their freedom to assertively voice dissent and negotiate on the same level as other parties to the joint venture contract of 2003/2004. Despite their earlier lack of confidence, Phetwane farmers subsequently emerged from joint venture failure with a keen awareness that although the irrigation scheme was owned by the government, their PTO certificates and their livelihood and food security interests entitled them to a stronger stake in production-related decision-making. They therefore wanted to see a different approach from RESIS Programme rehashes of pre-1994 contract farming practices that limited their participation in agricultural production to the provision of cheap labour while privileging public institutions and 'expatriates' in production-related decisions and activities. In this endeavour, the elderly smallholders mobilized socio-political support from their social networks. On the one hand, they obtained support from their own children, who adopted a more militant attitude against top-down impositions of decisions. On the other hand, smallholders also garnered support from *kgoshi* Matlala, who was the traditionally responsible for land allocation and social well-being of rural communities under his jurisdiction. In light of inter-generational contestations that emerged at the on-set of RESIS Programme interventions in Phetwane, such a double-pronged approach was an attempt by smallholders to guard against possible capture of land rights by the youth while ensuring a more even balance of power between themselves and external agencies of RESIS interventions.

In the Hereford case, the fact that farmers had yet to acquire ownership rights to individual plots did not limit their individual and collective freedoms to make decisions whether or not to join joint ventures. Such freedoms appeared to be linked to the individually demarcated and fenced smallholdings in Hereford, which were not as amenable to land consolidation as the

non-residential plots of Makuleke, Phetwane and similar irrigation schemes. Hereford smallholders' degrees of freedom were not limited by their awareness of the substantial support contributed by various stakeholders. Farmers seemed to draw strength from their socio-political networks with powerful and influential stakeholders, some of who were not clearly visible to the study. The main constraint for Hereford farmers was largely that of lack of capacity to make informed choices. Hence, although Hereford farmers generally had greater degrees of freedom than Phetwane and Makuleke farmers, their limited business acumen, organizational development, managerial expertise, information, technology, technical capacity and financial resources often limited their negotiation capacity and application of such strength towards making optimal decisions.

7.2.3 RISKS ASSOCIATED WITH CAPITAL INTENSIVE FARMING

Experiences with agricultural commercialisation in the three study sites revealed a pattern whereby joint ventures failed to make optimum use of available resources in order to generate planned outputs and outcomes for smallholders. The problem seemed to be related to risks associated with capital intensive farming.

Smallholders' production accounts showed that crops such as tobacco and cotton were capital-intensive. Production costs for cotton in 2003 accounted for 360 per cent of Makuleke farmers' net receipts after sales. Direct production costs accounted for between 89 and 320 per cent of Hereford farmers' net receipts from tobacco sales in 2004. In 1999, tobacco production costs per Hereford farmer ranged from 39 per cent of the receipts from sales for the more successful farmers to 128 per cent for the less successful. Insurance costs were relatively high, accounting for between 30 and 34 per cent of the total production costs, implying that tobacco is a risky crop. As studies by de Klerk (1996) suggest, adequate financial support is central to any programme to establish small-scale farmers, and the degree to which farming activities are funded by a small-scale farmer's own funds relative to finance through creditors' funds is critical to the viability of farming activity¹⁴⁵. In the case of Hereford, Makuleke and Phetwane, production costs often far exceeded 50 per cent of net earnings, with much of the costs

¹⁴⁵ See Section 4.10.3, Section 5.8.3 and Section 6.4.3.

financed through subsidy grants from private investors and government. In the event that such subsidies cease, farmers might resort to credit schemes to finance the production of capital intensive crops. With the rising costs of credit, the high ratio between possible debts and net earnings will render small-scale tobacco producers particularly vulnerable to downturns in market prices. The high risks involved, the requirement for substantial capital outlay and the losses experienced in successive joint ventures in Hereford, Makuleke and Phetwane raised questions on the ability of smallholders to sustain capital-intensive production without long term financial assistance.

Another source of risk related to decisions to produce capital intensive industrial crops based on insufficient analyses of perceived opportunities within regional and global production and market trends. For example, the decision by Hereford farmers to grow tobacco, despite that production of the crop had historically been unsuccessful in the Hereford area, appeared to have been influenced by the decline of tobacco production in Zimbabwe following the orchestrated “fast-track” land reform. What farmers did not realise was that Brazil had increased its output of prime tobacco, thereby claiming a significant share of the market. Farmers were also not aware that BAT-PLC, a major role-player in the world tobacco trade, had recently nominated Brazil, the United States and Zimbabwe as major sources of tobacco for the future. From the onset, therefore, entry by Hereford farmers into the established tobacco sector was not assured. With regard to Phetwane and Makuleke, decisions to grow cotton seemed to have been informed more by a convergence of interests of the private investor and the LDA than the existence of real opportunities in the world markets. The private investor’s needs to increase supplies to a newly-built ginnery and simultaneously demonstrate corporate social responsibility resonated strongly with the RESIS programmes objectives, and possible downturns in cotton prices were ignored.

7.2.4 DEBT

Joint ventures in all three schemes experienced financial losses. Although subsidies cushioned Hereford and Makuleke farmers from effects of debt, farmers were increasingly reluctant to accept joint venture propositions from stakeholders based outside irrigation schemes. Their

reluctance emanated from observations that some smallholder households descended into livelihood insecurity and vulnerability as a result of debt from earlier contractual arrangements. An example identified by the study was that of a Hereford plotholder who lost most of his productive assets when the Land Bank repossessed these in lieu of a debt that he incurred with respect to a joint production venture. Since 2004 the plotholder had not been able to grow any crops as he waited to recover from asset loss. The vulnerability of the household seemed likely to be of longer term than anticipated, given that the total household income came from intermittent casual employment of the smallholder, social grants totalling R340 for two of his daughter's children and informal 'employment' of the daughter, who assisted an informal trader in exchange for food and soap.

Subsidies did not sufficiently cushion Phetwane smallholders from the less visible debts that remained long after private investors had gone. Such debts emanated from disparities between budgeted and actual cotton picking labour costs. The Phetwane joint venture budget allowed for cotton picking costs at a rate of R0.40 per kilogram. However, many farmers were compelled to pay workers R20 per day. No mechanisms were put in place to ensure that workers' rates of pay did not exceed budgeted labour costs, or to amend the joint venture budget to reflect actual labour costs. Although the Phetwane farmers' management committee and the RESIS project implementation agent anticipated problems with labour arrangements that farmers were individually entering into, they were unable to intervene effectively. Many farmers were not fully aware of the risks involved. Even if they were, they had no choice but to accept labour fees determined by workers or face prospects of losing much of their cotton crop. Many farmers therefore rejected advice and adopted various strategies to cover costs of hired labour. Some attempted to manage risk by working together with their workers on the plots and paying them amounts lower than the average daily rate of twenty rand. That way, they managed to reduce their labour costs. Others used their entire remuneration for picking cotton to pay hired workers the rate of R20 per day, but still owed workers by the end of the cotton picking season. Most Phetwane farmers were pensioners, who were thereby forced to use their pension pay-outs to pay off labour-related debts. Financial and food security for the elderly

farmers became critically low, and insecurity was further exacerbated by debts incurred through buying food on credit.

7.2.5 FARM WORKER WAGES

Labour-related debt issues of Phetwane, which are described in the foregoing section above, showed that wage-setting mechanisms of contract farming arrangements needed to safeguard the interests of workers employed within smallholder irrigation schemes. Phetwane's pre-project consultations over wages evidently did not sufficiently take into labour requirements of the enterprise and, in particular, the interests of farm workers. The crux of the problem was that a farm worker wage of R0.40 per kilogram of picked cotton, which the joint venture offered to Phetwane labourers, translated to an average total income of R489 per ha for the three-month long cotton picking season, which would be shared among two to three labourers. Effectively, the mean monthly income per worker for the three months would have ranged from R54.33 to R81.50, which was less than 10 per cent of the minimum wage for farm workers at the time. It was not surprising therefore workers rejected the wages stipulated by the joint venture.

Joint venture budgets for cotton production labour costs in Makuleke were R300 per worker per month. Such wages were not attractive to unemployed Makuleke women, who had historically relied on employment within the scheme for relatively low incomes (Tapela & Omara-Ojungu, 1999). Since government broadened access to social grants, many Makuleke women of working age gained access child grants, which reduced both their dependence on irrigation scheme employment and their vulnerability to exploitative wages. Makuleke women farm workers had been replaced mostly by male and female refugees from neighbouring Zimbabwe and Mozambique. The illegal status and desperation of such workers made them particularly vulnerable to exploitation and compelled them to survive on the margins of society and the economy. A number of emerging commercial farmers were observed to retain a part of joint venture allowances for labour for household use while employing two to three workers on the remaining fraction of the allowance.

In Hereford, the tobacco joint venture budget allowed for higher minimum wages of approximately R550 per worker per month. The study was not able to find any workers who had been paid below the prescribed rate. However, lack of evidence did not necessarily mean that all smallholders complied with joint venture labour payment rates. Such employment was generally insecure and tended to terminate with the end of each joint venture contract. Only one farmer was observed to have retained most of his workers over an entire three year period. Hence, it was also possible therefore that lack of evidence of contraventions of labour arrangements might have been due to absence from the irrigation scheme of workers who were underpaid.

7.2.6 SOCIAL AND POLITICAL CONFLICT AND MARGINALIZATION

Joint venture inception and failure in all three schemes had various effects on local social and political dynamics. In Makuleke, failure of the cotton joint venture in 2004 led to tensions among farmers over differences of opinion regarding continuation or discontinuation of the joint venture. Tensions spread into the broader community and cast people into two main political camps. Farmers who had voiced dissatisfaction were then marginalized from mainstream political life within the community. Among Hereford farmers, joint venture issues did not erupt into open conflict but remained as low-key but persistent tensions. While farmers were evidently kept in check by fear of their leader, the source of this leader's power was not clear. It seemed possible, though, that the leader was connected to socio-politically powerful and influential stakeholders elsewhere.

In Phetwane, contestation revolved around expectations that the NSK joint venture would generate incomes for the largely elderly population of smallholders, thereby by-passing the younger, landless and unemployed members of the community. Although smallholders firmly believed that their rights to irrigated land were secure, arguments by the landless youth for land reallocation remained an ongoing source of tension within the community. Unemployed youth, who constituted 57 per cent of the adult population and 59 per cent of the unemployed in Phetwane, invoked the Freedom Charter of the African National Congress (ANC) to argue that "The Land Shall be Shared Among Those Who Work It!" and called for a reallocation of irrigated

land away from elderly plottolders, who constituted 83 per cent of Phetwane smallholders. While CLRA provisions for PTOs to be upgraded into 'new order rights' seemed to give the elderly smallholders security of land rights, which was their main concern, the legislation was new and untested such that smallholders opted to invoke traditional land tenure institutions and thus fend off calls by the youth for land redistribution. Arguments for land redistribution also needed to be balanced against obligations to avoid undermining the livelihood security of households presently holding PTOs as well as those with informal and/or shared access to land on the scheme.

A peculiar form of social marginalization emerged in the aftermath of the cotton joint venture in Phetwane, which was markedly absent from Hereford and Makuleke. Such marginalization related to allegations of witchcraft and became rife as elderly smallholders grappled with hardships resulting from income failure in 2004. Vulnerability from witchcraft was best understood in the context of Sekhukhuneland's historical reputation as the 1980s epicentre of witch burnings in South Africa, which is documented by Delius (1996). While witch burnings in Sekhukhuneland had historically been linked to rural resistance to colonial and apartheid repression, the observed wave of allegations seemed to be driven by widespread failure of coping strategies following the shocks on livelihood and food security. The fact that such allegations tended to single out those elderly women who managed to cope against odds that many could not overcome was in itself indicative of problems of class and gender power dynamics in smallholder irrigation scheme communities.

Research on joint venture of the earlier RESIS phase suggested that the challenge for livelihood security in smallholder irrigation schemes was not about the presence or absence of political and social dynamics within communities, but rather about implications of unequal political power relations on the interests of the less powerful people within communities and within institutional arrangements for contract farming. There seemed to be a need therefore for institutional actors tasked with implementing agricultural commercialization initiatives in smallholder irrigation scheme to guard against reinforcing the 'voicelessness' of such people. It also seemed important for all key stakeholders and, in particular, LDA and local community

leadership to ensure that all valid local community interests were fore-grounded in the crafting of desired interventions in irrigation schemes.

7.3 RESIS-RECHARGE PHASE: DISCUSSION OF KEY FINDINGS FROM STRATEGIC PARTNERSHIPS IN LIMPOPO PROVINCE

7.3.1 GENERAL APPROACH

Implementation of RESIS-Recharge strategic partnerships varied from one irrigation scheme to another. However, a common approach was to engage with smallholders formally constituted as cooperatives or trusts, consolidate smallholders' small parcels of land, use sophisticated technologies of land preparation and irrigation, introduce high levels of mechanization in crop production and drastically reduce reliance on human labour. Strategic partnerships had also delegated to smallholders' management committees responsibilities over externalized and socially-embedded issues, such as transaction costs of hiring labour, communicating with the broader local community, addressing problems of theft and distributing surplus produce. While a few of the strategic partnerships had retained the use of conventional sprinkler irrigation systems, many had benefited from major financial investments in centre pivots and floppy sprinkler irrigation systems. Such infrastructure was shared and therefore required consolidation of plots and collective action, which accounted for the grouping of smallholders into cooperatives and trusts.

Implementation of strategic partnerships had also effectively relegated smallholders to roles of 'equity labourers' or "arm-chair farmers". Smallholders ceded their access to land, water and infrastructure within irrigation schemes, played little or no active roles in farming, obtained little or no skills in enterprise management, crop production and produce marketing, but drew dividends from strategic partnerships. Conversely, roles of private sector partners in overall enterprise management had increased so significantly that smallholders had become virtually invisible from irrigation schemes except during times for collecting dividends.

According to business plans of the RESIS Programme in Limpopo Province, the rationale for involving private sector institutions in partnerships with smallholders was that such institutions

would enable farmers to gain access to finance capital, technology, production skills and markets. In return, private sector institutions would gain access to land, water and infrastructure within smallholder irrigation schemes in order to generate profits while empowering smallholders. Arm-chair farming or equity labour arrangements raised the question: What is the rationale for RESIS-Recharge strategic partnerships in the context of South Africa's Agricultural Sector Strategy objectives for support to black farmers?

7.3.2 PROJECT INCEPTION

The introduction of RESIS-Recharge strategic partnerships varied among irrigation schemes. Some of the smallholders, such as those of Strydkraal A, welcomed the inception of RESIS-Recharge strategic partnerships. These smallholders perceived as successful a prevailing cotton joint venture between their traditional leader and NSK and were therefore optimistic. However, such optimism was not shared by the majority of other smallholders. For smallholders of Makuleke, Phetwane, Krokodilheuwel, Elandskraal and Tswelelopele, RESIS-Recharge strategic partnerships were preceded by unpopular cotton joint ventures between smallholders and an agri-business entity, NSK. Such ventures failed to generate expected incomes between 2002 and 2005.

Against this background, smallholders were wary of entering into new contracts with private commercial agricultural enterprises. In best case scenarios, such as Makuleke and Tswelelopele, officials of the provincial department of agriculture allayed smallholders' concerns over possible debt and encouraged them to place their land, water and infrastructure resources at the disposal of AWC. In worst case scenarios, such as Phetwane, officials avoided direct engagement with smallholders. Rather, Temong by-passed smallholders and actively engaged with the traditional leader, *Kgoshi* (chief) Matlala, in order to get smallholders to agree to the strategic partnership. Since the empowerment partner within Temong formerly worked in Upper Arabie as an agricultural extension officer, he was aware of local power dynamics. In particular, he was aware that elderly smallholders, who were in the majority, had a stronger allegiance to the chief than the younger smallholders, who were fewer but more militant.

According to the youth among smallholders, the chairperson of Phetwane Farmers Association was compelled to sign the contract before reading it and in the presence of the chief. In the chairperson's words, he literally "signed under the barrel of a gun", meaning that he had had no choice but to obey the chief's command and also abide by elderly smallholders' acquiescence. While such strong-arm tactics had been a source of grievance for Phetwane youth, it had yet to be seen whether objections would persist if dividends began to flow.

An examination of processes of inception showed that in all cases, government officials either did not make a concerted effort to engage with farmers on the exact implications of contracts or assumed that smallholders would somehow have the technical savvy to understand the import of contract clauses. There was also an assumption among officials that farmers would invariably agree with departmental views about the content of contracts and, in particular, issues of power and empowerment within institutional arrangements.

Apart from findings that chairpersons of some of the schemes signed contracts under duress, as illustrated by the Phetwane case, most of the smallholders voiced discontent about the RESIS-Recharge empowerment model and the inordinate degree of power vested in government officials relative to the disempowerment of smallholders. In particular, there was unhappiness about inequalities fostered by clauses requiring strategic partners to account only to LDA and not to smallholders. For example, strategic partners were obliged to send all written communication and information to the departmental address, which raised questions about secretarial functions within smallholder entities. Such concerns echoed views expressed earlier by smallholders of Elandskraal. The foregoing findings indicated that when RESIS-Recharge strategic partnerships were established, there was generally a limited degree of shared understanding and consensus on the terms of contracts.

7.3.3 CROP PRODUCTION

In all cases, strategic partners had assumed full control over crop production, with smallholders playing little or no active roles. As equity labourers, smallholders ceded their access to land, water and irrigation infrastructure and proceeded to play passive roles until they were called to

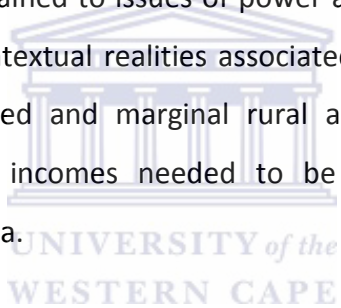
come and collect dividends. Smallholders also obtained few or no additional skills in commercial farming. Despite this, an important positive aspect of contract implementation had been consistent crop production. Successive crops of potatoes and maize were harvested in two seasons per year. However, smallholders' satisfaction with the consistency of production was closely linked to realization of incomes from strategic partnerships.

7.3.4 INCOME AND 'SUCCESS'

Compared to many unsuccessful joint ventures of the earlier RESIS era, RESIS-Recharge strategic partnerships invariably generated desired incomes for smallholders and avoided exposing them to debts. For example, Makuleke smallholders' earnings per hectare of potatoes ranged from R9000 in 2007 to R1400 in 2009, while income per hectare of maize ranged from R7000 in 2007 to R2800 in 2009. While the progressive reductions in incomes were ascribed to a number of risk factors, the study had no access to financial records to enable a more rigorous analysis of how the financial structure of enterprises managed the issue of debt. What was apparent was that, in generating desired incomes and avoiding debt for smallholders, RESIS-Recharge strategic partnerships satisfied contractual obligations to ensure that enterprises were profitable and did not get bogged down by debt.

Incomes contributed to dispelling the despondency that followed RESIS joint ventures and rebuilding smallholders' confidence in RESIS Programme interventions. Optimism was evident in the persistence of perceptions of success despite progressive declines in earnings in some of the irrigation schemes. The significance of RESIS-Recharge earnings was related to smallholders' prolonged hunger for incomes since the withdrawal of state subsidies after 1994 and since termination of earlier RESIS-era joint ventures. On the basis of incomes alone, smallholders were unanimously happy about earnings that were significantly higher than their previous incomes from a variety of *ad hoc* farm-based and off-farm livelihood strategies. Although RESIS-Recharge partnerships succeeded in meeting smallholders' objectives to earn incomes and avoid debts, there was a need to broaden criteria for gauging success beyond income and debt.

Perceptions of success were often tempered by dissatisfaction over exclusions of food plot holders from irrigation schemes, many of who were among the poorest and most vulnerable members of local communities. For example, incomes of forty-three (43) commercial plot holders in Makuleke Irrigation Scheme had been gained at the expense of livelihoods and food security of two hundred and seventy-three (273) food plot holders, who had been excluded from the scheme. A similar trend was observed in Elandskraal Irrigation Scheme. In irrigation schemes where smallholders did not have PTOs or formal leases to what were perceived to be communal resources, such as Makuleke, there were questions about cost and benefit sharing arrangements. Landless community members, particularly the youth, questioned the rationale for beneficiation of a few individuals, who did not compensate the broader community for foregone use or pay rentals for exclusive benefit from usufruct rights ceded to strategic partnerships. Other concerns pertained to issues of power and governance and lack of farmer skills development. In light of contextual realities associated with the location of smallholder irrigation schemes in impoverished and marginal rural areas, 'success' of RESIS-Recharge partnerships in enhancing local incomes needed to be measured in terms of a more appropriately broader set of criteria.



In light of the diversity of farming interests and in the absence of a clear alignment between interests of individual smallholders and targeting by strategic partnership projects, it was difficult to determine to what extent smallholders' incomes represented actual 'success' of RESIS-Recharge projects. It was also not easy to determine to what extent the apparent 'success' had or had not been due to grants by LDA and the benevolence of AWC. The latter would imply that farmers' financial gains in the three years of the strategic partnerships had been heavily subsidized by the private investor and/or government.

7.3.5 SKILLS DEVELOPMENT AND TRAINING

Clause 1.2 of the contracts listed the second objective of agreements as being to train "the farmers" and transfer the required skills to empower them to be able to operate the irrigation scheme themselves, in the long term. Such training covered knowledge of finance, quality control, marketing, management, operational, technical and business administration. Clause

11.1 placed an obligation upon the strategic partner to provide smallholders with technical advice and training in the operation of the business enterprise of the irrigation scheme and ensure a transfer of skills in this regard. Despite clear allocation of this responsibility, strategic partners had provided very little or no skills development to smallholders. For example, in the case of Upper Arabie Balemi Trust area, which included Phetwane and Krokodilheuwel, only one training session had been conducted to train five (5) people from each of the four (4) constituent irrigation schemes. From each irrigation scheme, two people were trained as pump operators, two were trained in health and safety issues and one person got training in operating the floppy irrigation system. Although such training imparted important skills to some among the local labour force, there remained a need to provide requisite skills to those smallholders who aspired to become more actively involved in commercial farming.

7.3.6 LOCAL EMPLOYMENT OPPORTUNITIES

Strategic partnerships had created relatively few full time jobs and many short-term employment opportunities for local communities living in the vicinity of smallholder irrigation schemes. The former types of jobs related to security services and operation of pumps and irrigation systems while the latter included harvesting of potatoes and maize. Although such jobs made relatively little net impact on pervasive unemployment within the province, they contributed to coping strategies of the rural poor. The degree to which strategic partnerships could absorb local labour was limited, however, by heavy reliance on mechanization.

7.3.7 DISPOSAL OF SURPLUS CROP

Although contracts were silent on the disposal of surplus and sub-standard produce, decisions were taken to distribute such produce freely within local communities. Free access to surplus food resources provided brief respite from the constant challenge to ensure household food security. While decisions about surplus and sub-standard crops were laudable, there had been instances, such as in the case of Makuleke, where such decisions were evidently not shared by some among the smallholders' management committee. While the Makuleke management committees was responsible for distributing surplus and sub-standard produce, some of the committee members appropriated such produce and sold it for private gain. Effects of such self-

interest exacerbated community-wide tensions relating to benefits from land reform. There seemed to be a need to strengthen accountability of representatives within management committees, such as Makuleke's.

7.3.8 EXCLUSION OF INDIVIDUALS AND GROUPS

Some of the examined case studies showed that the on-set of RESIS and RESIS-Recharge had been accompanied by exclusions of certain individuals and groups among smallholders. Such exclusions were linked to local political and power dynamics, and not to the unsuitability of plots of land. Indeed, in instances where plots had been excised due to proneness to flooding, poor soils or other factors, holders of those plots had often been included in cooperatives and trusts and were therefore entitled to shares of dividends from strategic partnerships.

It was also worth noting that in some instances, such as Makuleke, RESIS and RESIS-Recharge era exclusions had been superimposed upon a historical context of losses of land rights to make way for the establishment of irrigation schemes. While some of the displaced farmers had been compensated, often through allocation of plots in schemes, others had neither received compensation nor shared in the benefits from irrigation. Such outstanding social issues constituted potential threats, not only to strategic partnerships, but more importantly to objectives of the agricultural sector strategy to support black small-scale farmers. There was a need therefore for effective monitoring of RESIS Programme institutional arrangements regarding issues of exclusion and inclusion.

7.3.9 GOVERNANCE ISSUES

Findings showed that there were challenges pertaining to the governance of relationships between strategic partners and smallholders, on the one hand, within smallholders' cooperatives and trusts, on the other hand. Such challenges related mainly to issues of power, accountability, transparency, equity and sustainability. With the exception of the AWC – EBIS Trust partnership, relationships between smallholders and strategic partners were technically determined by contracts, which left little space for organic growth of mutual interactions. The generic contract model prescribed that AWC and Temong should be accountable to the LDA

and made no provisions for accountability to smallholders. This had affected the implementation of contracts and reduced relationships between strategic partners and smallholders to minimal technical interactions. For example, strategic partners were obliged to submit copies of written records to LDA but not to smallholders. Consequently, smallholders had often not seen records of financial transactions and were therefore unable to determine whether their dividends were fair or not. Similarly, smallholders had had suspicions concerning the management by Temong of government grant funding deposited into trust accounts opened in the names of cooperatives or trusts. Poor handling of the accountability issue and lack of transparency had resulted in a widespread erosion of trust among smallholders.

Governance problems were partly due to strategic partners' appointment of 'middle men' or project managers, who interfaced with smallholder entities. The roles of such agents were not stated in contracts and smallholders perceived them to be accountable to strategic partners and not to strategic partnerships, which were the contracted business enterprises. Middle men conducted their roles without accounting to smallholders, who were dissatisfied with the perceived inequalities within institutional arrangements and, in particular, with their own limited powers. Some among smallholders felt that some of the inequalities could be resolved through the strengthening of management committees' capacities to negotiate fair contracts and to monitor and enforce compliance.

There were also governance problems within smallholder groups. These were largely due to lack of capacity by the management committee to manage common property institutions. The consolidation of plots of land, formation of grouped smallholder entities and ceding of land, water and irrigation infrastructure to strategic partnerships effectively meant that these resources became common property resources (CPR) while smallholder entities became common property institutions. Literature (Ostrom, 1990, Oakerson, 1992; Symes, 1997) shows that such resources and institutions require collective action and therefore effective co-management strategies and sound governance principles. For example, basic requirements include resources and procedures for sound organizational administration, management of multiple interests and power relations, communications and information management,

transparency, accountability and equity. Although some of the committees had undergone training in the earlier RESIS phase, there was still a significant shortfall in requisite skills.

7.3.10 EMPOWERMENT FRAMEWORK

Findings were that RESIS-Recharge provisions for an ‘empowerment partner’ within strategic partnerships involving Temong cc had been problematic. Such provisions introduced a ‘historically disadvantaged individual’ (HDI) from outside the ranks of smallholders, who individually commanded a quarter (25 per cent) of proceeds from strategic partnerships. Meanwhile, dividends for smallholder entities collectively constituted half (50 per cent) of strategic partnership profits, and these translated into smaller individual fractional gains. Smallholders in several irrigation schemes questioned the perceived inequalities within the empowerment model on the basis that such arrangements privileged elites among HDIs. Disparities in economic empowerment were exacerbated by lack of clear provisions within exit strategies for the empowerment of smallholders.

Exit strategies, according to Clause 13 of contracts, envisaged that upon expiry of strategic partnership agreements, AWC would relinquish his shares in the partnership, at no cost, in favour of smallholders’ cooperatives or such shareholders that may be nominated for this purpose by the Limpopo Department of Agriculture. In view of the absence of clearly demonstrated – as distinct from rhetorical – commitment to developing capacities of smallholders, exit strategies were viewed as providing leeway for the enrichment of an elite of more affluent HDIs based outside smallholder irrigation schemes. Clause 13 was therefore a major bone of contention for smallholders in Makuleke, Elandsdraal, Phetwane and Tswelelopele. However, not all groups of smallholders were unhappy with exit strategies. For example, smallholders of Strydkraal A, who collectively commanded a relatively small portion (5 ha) of land, perceived benefits from the contractual arrangement as significantly outweighing any potential disadvantages. Krokodilheuwel smallholders, who had recently entered into a strategic partnership, were more concerned about breaking the post-NSK joint venture cycle of non-productivity and lack of incomes than about empowerment issues.

To a certain extent, the empowerment problem was about the perceived dual beneficiation of the same empowerment individual, Mr Lazarus Mosená. Farmers stated that this empowerment partner of AWC in Temong cc was a former employee of LDA and had hitherto worked within RESIS Cluster 11 irrigation schemes as an agricultural extension officer. They further stated that prior to his involvement with the RESIS Programme the partner had been involved with SAFM, which was a discredited empowerment enterprise in land reform projects in Limpopo Province. Furthermore, the empowerment partner was a shareholder and director of Floppy Sprinkler (Pty) Ltd, which was the company that LDA had awarded multi-million rand contracts for developing floppy sprinkler irrigation infrastructure. While a proportion of the R248 million allocated towards funding RESIS-Recharge between 2005 and 2007 had gone towards installation of centre pivots and various other expenditure items, a significant proportion of the funding had also gone towards development of floppy sprinkler irrigation systems. The overlap of decisions to commit significant expenditure on floppy sprinkler infrastructure development and to select Temong cc as preferred empowerment partner raised suspicions about the roles of senior officials of LDA.

These allegations were due to the fact that LDA officials were responsible for implementing RESIS-Recharge and the department's Empowerment Framework. They were therefore seen to have promoted Temong cc as preferred strategic partner and the floppy sprinkler irrigation system as the technology of choice in some of the smallholder irrigation schemes. The department's twin preference for Temong cc and Floppy Sprinkler (Pty) Ltd had given rise to allegations about possible links between the empowerment partner in Temong cc, who was a former employee of LDA, and senior officials then employed by the same department. Many smallholders believed that the empowerment framework of the predominant strategic partnership model was part of a ploy to siphon off benefits from land and water resources ceded by smallholders and to accrue such benefits to external HDI parties through processes which lacked transparency. Voiced allegations, however, were not fully substantiated. The allegations also persisted despite a general consensus that LDA needed to facilitate a break away from failure by many erstwhile earlier RESIS-era joint ventures. There seemed to be an

urgent need for such allegations to be addressed in a transparent manner in order to restore trust within RESIS Programme interventions.

7.3.11 MONITORING

In terms of RESIS-Recharge institutional arrangements, LDA assumed a monitoring role over strategic partnerships. However, while LDA seemed to have monitored strategic partners' performance with regard to income generation, productivity, avoidance of debt and compliance with the Empowerment Framework, the department did not appear to have monitored compliance with developing skills of smallholders.

LDA had not ensured that the strategic partner complied with contractual obligations to develop the skills of smallholders, as required by Clause 1.2 of contracts. Under this clause, the strategic partner was required to train smallholders and transfer required skills to empower them to be able to operate the irrigation scheme themselves, in the long term. Such skills development included training in the areas of finance, quality control, marketing, management, operational, technical and business administration. Although smallholders had raised concerns over the lack of compliance by the strategic partner, such concerns remained unaddressed.

While RESIS-Recharge projects were mostly implemented in impoverished and marginalized rural communities, the department had not used its oversight role to ensure that interventions did not exacerbate the poverty and vulnerability of local people. LDA appeared to sanction rather than guard against the exclusion of many smallholders, particularly the poorest and most vulnerable, without any compensation for foregone use of plots of land. No efforts were made to mitigate hardships due to deepening food insecurity and loss of livelihoods. Such issues raised questions about the accountability of LDA.

7.4 KEY ISSUES IN INTERACTIONS BETWEEN AGRICULTURAL COMMERCIALIZATION AND RURAL LIVELIHOODS IN SMALLHOLDER IRRIGATION SCHEMES IN LIMPOPO PROVINCE: DISCUSSION

This section discusses selected key issues relating to interactions between agricultural commercialization and rural livelihoods in smallholder irrigation schemes in Limpopo Province. Particular attention is given to issues around joint venture and strategic partnership contracts, as institutional arrangements governing relationships in RESIS Programme implementation. Within such contracts, key issues discussed include power, viability, empowerment, subsidized privatisation, co-management and livelihood security.

7.4.1 ISSUE OF POWER

Given that strategic partnerships brought together institutions and actors with different degrees of power and influence, it was reasonable to expect government-facilitated contracts to provide adequate measures for regulating relationships. It was also reasonable to expect that institutions vested with oversight responsibilities would safeguard these measures and ensure compliance and avoidance of undue harm. However, while contracts played a critical role in regulating production relationships among various parties, such institutional arrangements also existed within contextual realities of different stakeholder interests, capacities, entitlements, endowments, roles and relationships, degrees of power and livelihood strategies.

The effectiveness with which contracts played their regulatory role seemed to be closely related to how the interplay of power among different parties was managed. Some of the power dynamics were more overtly couched within contract clauses and formal decisions and actions. Others often took place 'off-stage' in the form of undeclared interests, informal arrangements and other 'hidden transcripts' (according to Scott, 1995). This thesis suggests that the locus for understanding workings of joint ventures and strategic partnerships is not restricted to formal contracts, but extends into the off-stage domain of interests and interactions among institutional actors.

The latter domain was particularly evident in the case of Hereford, where ISRDP, RESIS Programme and other processes for support to small-scale black farmers seemed to be influenced by off-stage stakeholders and processes. Similarly, resistance by the seemingly powerless elderly smallholders of Phetwane to perceived threats from ‘outsiders’ was largely mobilized off-stage of formal communications with LDA and involved socio-political networks both within Phetwane community and in other Upper Olifants/Lepelle irrigation scheme communities. In Makuleke, resistance by excluded subsistence food producers and disgruntled emerging commercial farmers drew from both formal and off-stage socio-political networks with leadership structures and influential members of the community, some of who were dispersed as far afield as Gauteng and elsewhere. Through such hidden transcripts, the less powerful smallholders garnered sufficient clout to influence decisions by institutional actors.

Compared to RESIS Phase joint venture contracts and the RESIS-Recharge pilot phase contract, a key instrument that changed the balance of power in the RESIS-Recharge Phase was captured in Clause 11 that stated, “Upon establishment and implementation of this agreement, the Partnership will form an integral part of the Limpopo Department of Agriculture and will interact with other entities of Limpopo Department of Agriculture, especially the farmers”. Effectively, the clause removed the separation between the strategic partnership, smallholders and LDA. The clause conflated strategic partnerships with the provincial department of agriculture and considered smallholders to be entities of the department. Such conflation was confusing in that Clause 11 fell within the section that stipulated strategic partners’ rights, duties and obligations in respect of smallholders, whereas the clause suggested that the department ‘owned’ both the strategic partnership and smallholders. Such conflation also assumed that LDA and smallholders shared the same interests and objectives. In the event that there was variance of interests and objectives, the conflation significantly reduced smallholders’ degrees of freedom to make decisions or play more active roles in management, production and marketing.

The department’s claim to ownership over both strategic partnerships and smallholder entities seemed to emanate from perceptions that smallholders were vulnerable in their interactions

with the more powerful corporate entities. Such view was borne out by Clause 18 on Notices and Domicilium, for example. Clause 18 indicated that smallholder cooperative entities, as co-signing parties, “choose as their *domicilium et executandi*” the physical address of the Limpopo Department of Agriculture. Effectively therefore, all smallholder cooperatives entering into strategic partnerships with either AWC and Temong cc received all written communications, including notices and court processes, through LDA. No obligations were placed upon AWC to give written communications to smallholders, who were legally constituted as cooperatives and parties to partnership contracts. This omission appears to have been a major source of grievance for smallholders. All key respondents from smallholder entities expressed concerns that AWC was not giving them written records of transactions, such as copies of purchase orders and invoices. The only financial records they received pertained to payments of dividends and wages for casually and full-time employed labourers. Centralization of power within LDA as well as the empowerment frameworks of RESIS-Recharge contracts both meant that requirements for smallholders to co-sign strategic partnership contracts constituted a semblance of power rather than real empowerment.

Although an oversight role by the provincial department of agriculture seemed to address the need for monitoring, in effect many of the RESIS-Recharge contracts transferred much of the decision making power to LDA. Agricultural commercialization of smallholder irrigation schemes had thus re-invoked elements of centrally managed project farming approaches that, according to Vink *et al* (1998), characterized agricultural development in homeland areas from the 1970s to the late 1980s. Re-invocation of apartheid era paternalism by RESIS-Recharge practitioners was linked to a need to avoid repeating problems of RESIS era joint ventures, which exposed smallholders to risks of capital intensive farming and largely resulted in income failure and debts. However, in upholding views that LDA, as the institution responsible for the RESIS Programme, should retain power and control over strategic partnerships, practitioners failed to recognize that unequal power relations within institutional arrangements were among key concerns for smallholders.

By centralizing power and control within LDA while giving strategic partners a “free hand to manage the business” (Clause 9.2), RESIS-Recharge institutional arrangement left smallholders with very little power. Although Clause 9.2 required strategic partners to consult smallholder entities in their management of enterprises operating within irrigation schemes, the term ‘consultation’ denoted a relatively low level of participation for farmers. By definition, consultation means that although strategic partners might solicit smallholders’ views, the former were not obliged to take on board views of the latter.

By introducing an ‘empowerment partner’ from outside the ranks of smallholders while failing to enhance enterprise management skills of interested and potentially capable smallholders, a perpetual cycle of disempowerment and dependency was created for smallholders. In the final analysis, the RESIS-Recharge construct for balancing power relations did not resolve power issues within institutional arrangements for agricultural commercialization of smallholder irrigation schemes.

Despite significantly reduced powers, management committees of smallholder entities had retained a small but critical degree of power to hire local labour, distribute surplus produce to local communities, deal with issues of theft in the irrigation scheme and represent the strategic partnership in communications with local communities. Delegation of such power, however, seemed tantamount to externalization by strategic partners of transaction costs associated with ‘outstanding social issues’. Since delegation was often not accompanied by rigorous organizational capacity development and monitoring, many committees lacked good governance principles, particularly transparency and accountability, and were inadequately funded. Where decisions and actions of committees lacked accountability, transparency and fairness, such as in the case of Makuleke (Box 17), such structures were regarded with suspicion and considered by the majority of community-level stakeholders to be illegitimate. All in all, however, the power exercised by management committees seemed miniscule compared to the power commanded by strategic partners. While government support to smallholders significantly raised their equity relative to that of private investors, the latter wielded more decision making power.

Box 17 Governance and Local Power Dynamics in Makuleke

In the case of Makuleke, the management committee's failure to manage communication and information dissemination led to widespread perceptions within the local community that this structure served narrow interests of commercial plot holders. The committee was blamed for excluding food plot holders from the scheme, misappropriating surplus produce, using discriminatory practices in allocating jobs and abusing elderly female food plot holders for 'stealing' surplus produce which was earmarked for free access by the community at large. The resulting conflicts intersected with pre-existing political power dynamics and further deepened cleavages within the community. Members of the management committee bore the costs of socio-political conflicts. Some of the problems could have been resolved through accountability, transparency, effective communication, consultation and awareness of existing home-grown governance principles underpinning the Makuleke vision for community development. A greater proportion of the problems, however, required effective responses from LDA. Although both the committee and excluded food ploholders repeatedly voiced needs for intervention, LDA's responses to the increasingly fractious scenario were either unsatisfactory or non-existent.

In light of the different 'bundles of resources', 'bundles of rights' and 'bundles of interests' that each party brings into strategic partnerships, it was not feasible that an equitable distribution of power could be achieved. It was also not feasible that any one party could command complete power and control over any given strategic partnership. An ideal distribution of contractual power would ensure that partnerships contributed to access by interested and capable smallholders to strategic resources for effective participation in commercial agriculture, without undermining opportunities for less commercially-inclined smallholders to sustain livelihoods from irrigation farming. Such an ideal, however, was countered by a number of factors. Firstly, it was debatable whether smallholders can establish a niche within highly competitive and globalized agricultural commodity sectors. Secondly, models of strategic partnerships seemed to be geared towards self-perpetuation rather than progression by commercially-inclined farmers away from dependent equity labourers into fully-fledged commercial farmers. Thirdly, indications were that prevailing approaches to agricultural commercialization conceived viability in narrowly economic and technical terms, which excluded the non-monetary, aesthetic and cultural values. This added to poor people's livelihoods and food security.

7.4.3 ISSUE OF VIABILITY

Findings suggested that 'viability' in the RESIS-Recharge phase was seen principally and narrowly in terms of efficiency of the production system and irrigation technology. For example, preference for floppy sprinkler irrigation technology was informed by scientific observations of relatively higher water use efficiency while the predominant strategic partnership model was consistent with a policy of reducing transaction costs and optimizing economic returns. A problem with such an approach was that the strategic partner, who aimed to optimize profit and avoid debt, was vested with a relatively high degree of power and was legally accountable only to the provincial department of agriculture, which in turn was hard-pressed to justify the massive financial investments in irrigation technology and infrastructure. Consequently, when the strategic partner was found to be putting less effort into training smallholders than required by contracts, and when LDA was found to be renegeing on its monitoring responsibility, smallholders had no legal power to insist on compliance.

The narrow notions of viability, however, resonated with smallholders' interests in earning incomes from agricultural enterprises. A major dilemma for smallholders was that they were caught between a hunger for incomes, on the one hand, and aspirations to become fully-fledged farmers, on the other hand. Earning dividends from assuming equity labourer roles became an easier option for livelihoods generation and many smallholders put aside their commercial farming aspirations. Other smallholders, however, appreciated the incomes but retained focus on playing more active roles in farming. The divergence of smallholder interests militated against efforts to present a unified argument for LDA to ensure strategic partners' compliance with obligations to develop commercial farming skills. While the resonance between smallholders' needs for incomes and emphasis by RESIS-Recharge on profitability of enterprises seemed to represent achievement of a common objective, underlying power issues had implications that went beyond interests of smallholder entities.

Prevailing notions of viability pointed to a dominance by certain powerful interests over discourses on requisite interventions in smallholder irrigation schemes. Such interests appeared to have influenced narratives about viability and, in particular, promoted the dominance of

narrow economic and technological criteria for gauging viability. The result was a drive towards accelerating agricultural commercialization and irrigation technology developed in the RESIS-Recharge era. Economic viability criteria seemed to favour the creation of an elite group of black equity labourers and agri-business entrepreneurs while ignoring interests of the poorest and most vulnerable among socio-economically differentiated smallholders. By contrast, irrigation technology development was reminiscent of colonial and apartheid eras of “heroic engineering” (Platt 1999 in Turton & Ohlsson, 1999) or the “hydraulic mission” (Reisner 1993 in Turton & Ohlsson, 1999) and added pressure for LDA to justify fiscal expenditure. Often justification was couched in terms of technological efficiency and economic viability, reinforced emphasis on commercial rather than subsistence farming interests.

7.4.4 DIVERSITY OF SMALLHOLDER INTERESTS

Perceptions that empowerment within RESIS-Recharge reinforced inequalities between included and excluded smallholders, on the one hand, and between equity labourers and empowerment partners, on the other hand, pointed to a need for an adaptation of programme design. Given that many smallholder irrigation schemes were located in impoverished and socio-economically marginal areas, implementation of the RESIS Programme targeting approach needed to be simultaneously multi-pronged rather than singularly focused upon commercial interests of equity labourers and black economic empowerment (BEE) partners from outside the ranks of smallholders.

Denison & Manona (2007) identified four categories of smallholder namely, the business farmer, the equity labourer, the smallholder and the food producer. For commercially-oriented smallholders, RESIS-Recharge needed to shift away from a one-size-fits-all equity labourer approach to an approach that included empowerment and support for potential business farmers among existing equity labourers.

The RESIS-Recharge phase also needed to bring interests of subsistence food producers to the fore, alongside commercial farming interests. For subsistence-oriented smallholders, such as ‘smallholder farmers’ and ‘food producers’ (according to Denison & Manona), critical decisions

needed to be made about subsidizing these farmers' livelihoods, informal economic activities and/or safety nets as a means to achieving macro-economic policy objectives regarding poverty and social integration. Such decisions required a broadening of viability criteria beyond narrow economic and technical variables. Such decisions also meant that access to government subsidies, such as the DWA Policy on the Financial Assistance to Resource Poor Irrigation Farmers, needed to be extended to subsistence farmers, thereby removing a major constraint to affordability of productive water access and use. Concerns about farmer exclusions and inequalities in cost and benefit sharing could be addressed by adjusting mechanisms for targeting.

7.4.5 EMPOWERMENT ISSUES

A major problem in the RESIS-Recharge phase related to the Empowerment Framework of LDA. In its application, empowerment tended to focus on the technicalities of meeting the requirements of AgriBEE and, by extension, LDA's Empowerment Framework. Allegations of possible covert relationships between Mr Lazarus Mosena and decision makers within LDA could not be substantiated. However, there was a definite pattern of preference by LDA officials for procuring services from enterprises linked to Mr Mosena (see Section 7.3.10). While LDA was preoccupied with ensuring the empowerment of this particular HDI, who hailed from outside the ranks of smallholders, the irony that no similar effort was made to empower HDI farmers seemed to have been lost to decision-makers of the RESIS Programme. Issues such as this eroded smallholders' trust in RESIS-Recharge interventions.

During the RESIS-Recharge era, contracts effectively usurped whatever vestige of power smallholders had during the earlier RESIS phases and centralised it within LDA. Apart from the inexplicit exit strategies, it was not clear whether or not such arrangements were permanent and, if not, what time frames and capacity building strategies were envisaged towards the empowerment of smallholders. This lack of clarity created uncertainty and dissatisfaction among the more enterprising smallholders. As Laker (2004) had earlier observed, the lack of production capital and agribusiness management skills among many emerging farmers necessitated the decision to employ joint venture and strategic partnership strategies.

However, in implementation, RESIS contractual arrangements ran counter to views by scholars such as Laker (Ibid.), who stated that project facilitation should ensure that such arrangements were not perpetuated *ad infinitum* but that 'human capital' building was promoted so as to ensure that within reasonable time a lot of land will not only be in the hands of Blacks, but that there will actually be Black commercial farmers managing that land.

Coupled with lack of demonstrated commitment by LDA and private investors to the development of commercial farming skills for interested smallholders and the ambivalence of exit strategies, the issue of the empowerment partner posed a threat to the legitimacy and acceptance of the RESIS-Recharge phase of the RESIS Programme. Although the intention of centralizing decision-making in LDA was purportedly to protect smallholders in transactions with powerful corporate institutions, the effect was an institutionalized disempowerment of smallholders without guarantees of LDA's oversight role and without adequate provisions alternative recourse. Even if such guarantees might have been given, the capacity of LDA to play an effective monitoring role remained subject to question.

A number of factors suggest that the LDA Empowerment Framework might have been too hastily drafted. Firstly, LDA was under pressure to ensure that the significant financial investments that went into the RESIS Programme were worthwhile expenditure. Secondly, the department was pressurized to demonstrate that RESIS-Recharge constituted a better construct than earlier RESIS joint ventures in increasing productivity, generating incomes, avoiding debt and meeting empowerment objectives of promoting equity and participation by HDIs in commercial agricultural enterprises. Thirdly, pressure also emanated from expectations that RESIS Programme interventions would contribute to reducing poverty, unemployment and livelihood insecurity that characterized localities of most of the smallholder irrigation schemes. Against the backdrop of such demands, it is possible that institutional actors within LDA acted under duress to demonstrate success of the RESIS Programme at all costs. One such cost was the exclusion of many subsistence food producers, who had their land rights alienated without adequate compensation or benefit sharing. These farmers were among the poorest and most vulnerable people within local communities.

Institutional arrangements that placed LDA in both implementation and monitoring roles created an ethical dilemma whereby some institutional actors who were expected to serve the interests of prioritized farmers might have been responsible for creating the governance problems. Absence of alternative mechanisms for recourse within institutional arrangements created 'safe' spaces within which problems of non-compliance, corruption or other derelictions of responsibility remained cocooned and therefore unaddressed.

The diversity of interests surrounding RESIS-Recharge interventions meant that the locus of oversight roles needed to be dispersed rather than centralized within LDA. Such decentralization would need to take into account the diverse interests of multiple stakeholders including RESIS-Recharge equity labourers, smallholders in general, private sector partners, municipalities, sector departments, non-governmental organizations (NGOs), civil society organizations (CSOs), Community Based Organizations (CBOs), Faith Based Organizations (FBOs), and traditional and elected leadership at grassroots levels. What seemed requisite were oversight roles at a higher level than LDA, such as provided by the national Department of Agriculture, Fisheries and Forestry (DAFF), Coordination Committees for Agricultural Water Use (CCAWS) and multi-stakeholder platforms and/or governance forums. There was a need to identify requisite institutional structures, roles, responsibilities, resources and interfaces, and the means to ensure effective monitoring while reducing transaction costs associated with such rationalization.

7.4.6 CHALLENGES OF CO-MANAGEMENT

To an extent, the RESIS Programme drew from international best practice in IMT, which involved the decentralization of management responsibilities within smallholder irrigation schemes to include contractual arrangements between private investors and farmers, as well as the devolution of day-to-day operational responsibilities to smallholders constituted as cooperatives, WUAs and other farmer organizations. In many ways, therefore, the problem of RESIS-Recharge strategic partnerships was about co-management challenges.

These challenges were not likely to be resolved by simply enabling projects to ‘efficiently’ use water to generate incomes and agri-business skills for smallholders while contributing somehow to food security and economic growth and development. Such an approach narrowly viewed viability in economic and technical terms and thus overlooked and/or undervalued the embedded values that people attach to agricultural resources like land and water. From this perspective, therefore, RESIS-Recharge strategic partnership contracts discounted the complexity, diversity, dynamics and resilience of the social, economic, political, cultural and ecological ‘systems-to-be-governed’¹⁴⁶, which traversed the boundaries of the contracting entities and smallholder irrigation schemes.

A consequence of this misalignment was that LDA efforts to dispense with the conventional one-size-fits-all approach and, instead, appropriately target specific categories of farmers¹⁴⁷ resulted in a singular focus on the equity labourer type of smallholder, to the exclusion of all other categories. Another consequence was that efforts to improve irrigation technology and technical efficiency of water use inadvertently led to prolonged non-productivity without concomitant efforts to help mitigate the hardships experienced by smallholders and other members of local communities.

Although pre-requisite factors for RESIS Programme implementation were earlier identified to include an enabling policy and institutional environment, the identification of innovative best practice in IMT and the learning of lessons from the past (Shaker, 2005), the RESIS Phase (i.e. Phase 2 from 2001 to 2004) did not assimilate as much of the critical lessons as intended by implementing agencies (De Lange, 2006: 21, 22)¹⁴⁸. Despite an attempt in this phase to shift away from the Pilot Phase emphasis on infrastructure rehabilitation towards a more balanced emphasis on preparatory planning, farmer training, organizational development and the establishment of institutions (Shaker, 2005: 20), the contract farming arrangements remained basically re-hashes of pre-1994 models.

¹⁴⁶ According to Kooiman (2008). See Figure 3 in Section 1.4.7.

¹⁴⁷ Refer to Table 7 in Section 3.7 for the Typology put forward by Denison & Manona (2007).

¹⁴⁸ See Section 3.5.2 and 3.5.3.

In examining possible reasons for the continuation of apartheid era models, it is perhaps not sufficient to ascribe this particular phenomenon solely to the rise of neo-liberalism and the attendant agri-food systems and global value chains, or “new agricultures” (according to Little & Watts, 1994)¹⁴⁹. The continuance of pre-1994 formulations might be linked to the conflation of at least two overlaid factors. Firstly, the persistence of the social, economic and political structures created during the period of white supremacy (e.g. Terreblanche, 1998; Du Toit, 2005), whose ‘extreme nature’ resulted in a legacy that tenaciously continues to underpin post-1994 transformation efforts and impede the achievement of post-apartheid macro-economic policy objectives. The second factor, which builds upon this background, relates to post-apartheid institutional inertia whereby post-1994 institutional structures, systems and actors lacked sufficient capacity to effectively redress the results of racial capitalism within the realm of resource-poor smallholder irrigation schemes of Limpopo Province. These two related factors seem to explain why the RESIS Programme lacked robust institutional arrangements, despite the semblance of an enabling policy and institutional environment, and efforts by senior LDA officials’ to ensure that the programme drew from international best practice, past experiences with LDA programmes, such as LADEP and PEA) (De Lange, 2004) as well as lessons from the pilot phase and Phase 1 or Watercare Programme (Shaker, 2005)¹⁵⁰.

The need for robust institutional arrangements for the governance of RESIS-Recharge strategic partnerships partly emanated from the fact that the significant capital investments in shared irrigation infrastructure, such as floppy sprinkler systems and centre pivots, within smallholder schemes characterized by relatively small parcels of land inevitably compelled many farmers to consolidate land and work together to achieve economies of scale. This modification of pre-existing CPR scenarios required sound co-management institutions (according to Ostrom, 1992) and an effectively facilitated participatory process to ensure that all stakeholder interests, particularly those of resource-poor and vulnerable smallholders, were taken into account and well-articulated in all aspects of agricultural commercialization. Also requisite was a more balanced emphasis on the diverse interests of all the resource-poor irrigation farmers, who

¹⁴⁹ See Section 8.2.

¹⁵⁰ See Section 3.5.2 and 3.5.3.

included (according to Denison & Manona, 2007) 'The Business Farmer', 'The Equity Labourer', 'The Smallholder' and 'The Food Producer' types of farmer. Drawing from Cousins's (2010) class-analytic typology, which identifies six categories of small-scale producers in South Africa¹⁵¹, a greater degree of flexibility in accommodating the more nuanced diversity of needs could have led to better programme instruments and project results.

In the absence of robust institutional arrangements for co-management within RESIS-Recharge programme implementation, there emerged the risks associated with unequal power relations and self-interested behaviour. The livelihood impacts of these factors varied according to farmer type and context. For example, the more enterprising among Makuleke equity labourers demonstrated a remarkable degree of agency in pursuing alternative strategies to diversify their livelihoods and thereby take advantage of opportunities created by the RESIS-Recharge interventions within local food markets. No similar agency was shown by Phetwane equity labourers. Furthermore, while the Makuleke traditional leadership supported or did not object to riverside gardening within pastoral land, Phetwane leadership forbade the use of rangelands for crop production because of possible conflicts between livestock and crop farmers¹⁵². Another example is that subsistence food producers in the Makuleke Irrigation Scheme suffered a greater degree of hardship than equity labourers, owing to their exclusion from access to land in the scheme and their antecedent condition of poverty and vulnerability. The poorest and most vulnerable among smallholders were most severely affected by the marginalization and hardships, which further deepened their vulnerability to the livelihood shocks instigated by the strategic partnerships. The lack of a clearly articulated monitoring role for the RESIS Programme further entrenched the voicelessness of these people.

¹⁵¹ See the last paragraph of Section 3.7.

¹⁵² PROLOGUE: Ultimately, in the post-study phase (2010), many Makuleke riverside gardeners were compelled to discontinue their rangeland farming activities owing to conflicts with livestock farmers. They were allocated 0.1 ha food plots in an extension of the irrigation scheme. Among these farmers were young people who had nurtured the hope of entry into the irrigation scheme. Farmers like Chauke (Section 6.9.3), whose land was formally allocated by the traditional leadership, continued to ply their commercially-orientated enterprises undisturbed, as did similar farmers practising on land formally designated as rain-fed cropland.

Hereford farmers, who individually occupied sub-divided allotments of land with homesteads within each plot, were not affected by the RESIS-Recharge land consolidation and the attendant development of shared infrastructure. Nonetheless, in their own context, these farmers shared their water allocation and irrigation infrastructure, and they recognized that they needed to work together in achieving equitable sharing of water and economies of scale in crop production and marketing. Many of the RESIS era co-management problems that emerged in Hereford were similar to those of Phetwane and Makuleke. Such problems included poor governance of farmers' organizations, free-riding within group settings, unequal power relations among smallholders and between these and private investors, among others. The management of these problems required clearly articulated co-management frameworks and well-funded extension, mentoring and monitoring roles, to bolster the capacity of existing agricultural extension services.

The case of Hereford demonstrated that municipalities were not necessarily the most appropriate locus for articulating co-management, mentoring and monitoring of RESIS Programme interventions in Limpopo Province. Various scholars (Bene et al, 2009; Pomeroy, 1995; Ostrom, 1990; Berkes, 1989) have pointed out that while participation is requisite, accountability is perhaps more important in co-management scenarios, such as irrigation schemes (Ostrom, 1992). The Hereford case study indeed showed that, without clearly defined and allocated roles and responsibilities for participatory decision-making, the involvement of municipal actors could result in unintended negative impacts on the livelihoods of farmers and the productivity of smallholder irrigation schemes. Although municipal actors could have contributed, under different circumstances, to enhancing accountability within RESIS Programme initiatives, the involvement of some of these actors resulted in a perversion of farming issues to serve political self-interest, and unequal power relations resulted in sub-optimal decisions. Ultimately, governability problems arose as Hereford smallholders refused to be governed by municipal stakeholder platforms. Governability problems also emerged in the cases of Phetwane and Makuleke, but without the involvement of municipalities. Inattention to the embedded political context, among other embedded social, cultural, economic and ecological systems among smallholders and within local communities associated with

smallholder irrigation schemes also contributed to the reduced governability of strategic partnerships and joint ventures in Phetwane, Makuleke and Hereford.

Drawing from CPR theory, it would seem that the involvement of smallholders, as the end-users of smallholder irrigation scheme development, in decision-making is critical. Such involvement could possibly increase the smallholders' sense of responsibility and ownership, and with appropriate support from the state, civil society organisations and markets, thereby facilitate the self-enforcement of the management system within contract farming arrangements and, in principle, the 'sustainability' and equity of production systems in smallholder irrigation schemes.

Given the complexity of livelihood and institutional contexts associated with smallholder irrigation schemes in Limpopo Province, as well as the broader global agri-food systems and value chains, it is reasonable to say that civil society could have played useful roles in mediating relationships within RESIS-Recharge strategic partnerships in Limpopo Province and ensuring that 'participation' did not impact negatively on local people's livelihoods. By foregrounding the roles of the state and markets as 'governance institutions' while largely ignoring civil society, RESIS and RESIS-Recharge institutional arrangements remained sub-optimal in governing interactions between smallholders, private firms and other stakeholders. Meanwhile, the requisite policies, strategies and funding were in place to ensure greater participation by black smallholders in commercial agriculture.

The foregoing discussion highlights the need for RESIS Programme implementation and joint venture and strategic partnership facilitators in particular, such as LDA, to recognize the political economy of co-management reforms in the smallholder irrigation sector in Limpopo Province. In recognizing this fact, institutional actors would perhaps strive towards putting in place institutional arrangements that ensure that governance systems and governing interactions achieve the intended governability of systems-to-be-governed (according to Kooiman, 2008)¹⁵³. This thesis surmises that governability becomes possible when institutional

¹⁵³ See Section 1.4.7.

arrangements meaningfully contribute to enhancing livelihoods and livelihood systems associated with smallholder irrigation schemes. As Bene et al's (2009) succinctly observes:

“It is crucial to recognize that decentralization is never introduced in a ‘power vacuum at a local level’ (Nijenhuis, 2003, p. 88). The socio-institutional landscape where governance reforms in general and co-management in particular are implemented is in fact the result of a constantly evolving political game which reflects the current distribution of power between different local actors and their struggle to control the natural, institutional, financial, and political resources. In this context the introduction of co-management more often than not turns out to be a catalyst for political conflict and frequently turned out to intensify the battle for power among local people. In this continuous (open or more subtle) battle, the poorest and most marginalized of the [farming] community have generally been the losers.”

7.4.7 ISSUE OF SUBSIDIZED PRIVATIZATION

RESIS-Recharge partnerships raised questions around the privatization of extension services. Privatization of agricultural commercialization in smallholder irrigation schemes also seemed to be subsidized by the state. By vesting private sector strategic partners with contractual obligations to train smallholders, the RESIS-Recharge strategic partnership model effectively privatizes the provision of extension services without explicitly defining how this will be done and how it will be monitored. A question that must be asked is: What is the long term vision for sustainable extension services provision for South African smallholders?

The strategic partnership model has many of the attributes of subsidized privatization with minimal return for the public sector. Government-owned irrigation infrastructure, public water resources and state or community land, the last of which is either allocated through PTOs or formal and informal lease arrangements, are effectively handed over to the private sector on short-term contracts of mostly three years. None of the contracts examined required strategic partnerships to provide for re-capitalization of major investments by the state in irrigation infrastructure. Since the life span of such infrastructure is typically ten to fifteen years, government would need to infuse further funding to replace or refurbish infrastructure to

levels of functionality that would be attractive to subsequent strategic partners (Denison & Tapela, 2009). Institutional arrangements that focus on benefit accrual within enterprises to the exclusion of re-capitalization from financial models create untenable conditions for state subsidization of private enterprise. This is irrespective of whether the private actors are strategic partners, empowerment partners or equity labourers. Such arrangements raise questions on the justification for subsidizing privatization while withholding government subsidies from subsistence producers, who are often the poorest and most vulnerable among smallholders.

A second form of subsidized privatization pertains to the lack of contractual provisions for strategic partnerships to ensure that the integrity of the natural resource base is maintained and negative impacts are avoided or mitigated. Environmental legislation, such as the National Environmental Management Act (NEMA) of 1998 and the Conservation of Agricultural Resources Act (CARA) of 1983, imposes such duties on owners, people in control and people who have rights to use land, thus uncoupling such responsibility from ownership of land. There are however, problems with the enforcement of environmental law, particularly in former homeland areas where most smallholder irrigation schemes are located. Lack of capacity in responsible departments and local institutions means that unless RESIS-Recharge institutional arrangements clearly specify obligations for conservation and rehabilitation of agricultural resources, the price of environmental degradation will be paid either by smallholders and local communities or by government long after strategic partnerships have ended.

The combined effect of aging infrastructure, declining soil potential and disease prevalence suggest that the end of strategic partnership contracts will leave behind legacies in which smallholder irrigation schemes collapse and become less viable or attractive for possible future commercial agricultural ventures. In such event, government might be compelled to use tax payers' contributions to public revenues to subsidize private investors and equity labourers, bail out stakeholder rural communities and resuscitate productivity. From a developmental perspective, such issues raise fundamental questions about the sustainability, efficiency and equity of RESIS Programme interventions and contract farming arrangements.

CHAPTER EIGHT

AGRICULTURAL COMMERCIALIZATION AND RURAL LIVELIHOODS IN SMALLHOLDER IRRIGATION SCHEMES IN LIMPOPO: DISCUSSION AND CONCLUSION

This chapter presents concluding remarks on agricultural commercialization under the RESIS Programme in Limpopo Province. Particular attention is given to joint venture and strategic partnership contracts, and how these intersected with livelihoods of smallholders and other members of smallholder irrigation scheme communities in Limpopo Province. Ultimately, a key question addressed by the chapter is whether or not agricultural commercialization, as articulated mainly through contractual joint ventures and strategic partnerships, provided an adequate construct for achieving rural livelihood security within impoverished smallholder irrigation scheme communities in Limpopo Province.

8.1 INTRODUCTION

The adoption by government of contractual arrangements for linking smallholders in irrigation schemes to mainstream commercial agriculture was informed by “evidence that some sub-sectors of agriculture and value-adding activities are uncompetitive in the local and international markets” (South Africa, 2001). Hence, the South Africa’s Agricultural Sector Strategy listed core objectives for support to emerging farmers as being to enhance equitable access and participation in the agricultural sector, improve global competitiveness and profitability, ensure sustainable resource management and ensure food security. The merits of agricultural commercialization and contract farming for smallholders and other members of impoverished rural communities, however, have remained subject to debate.

A key question for this thesis is whether or not agricultural commercialization by the RESIS Programme, which was articulated mainly through contractual joint ventures and strategic partnerships, provided an adequate construct for achieving rural livelihood security within

impoverished smallholder irrigation schemes in Limpopo Province. Subsumed within this overarching question are four broad sets of questions relating to institutional and livelihood contexts; institutional arrangements; livelihood assets, strategies, impact factors, outcomes and vulnerability to shocks and trends; and policy and institutional issues. Specific questions are:

- Under what institutional and livelihood context has the resurgence of contract farming occurred in selected smallholder irrigation schemes in Limpopo Province?
- How have contracts for joint ventures and strategic partnerships been formulated and implemented in selected smallholder irrigation schemes in Limpopo Province?
- How have agricultural commercialization initiatives affected livelihoods of petty commodity producers, subsistence farmers and other people in smallholder irrigation scheme communities?
- What are the key policy and institutional issues for government interventions in smallholder irrigation schemes?

The above research questions have been addressed in the preceding chapters. This chapter summarizes selected research findings and draws overarching conclusions on key issues, challenges and options for nurturing rural livelihood security within a hybrid neo-liberal and social development policy context. The chapter concludes by addressing the key question for the thesis, which is whether or not agricultural commercialization by the RESIS Programme, through contractual joint ventures and strategic partnerships, provided an adequate construct for achieving rural livelihood security within impoverished smallholder irrigation schemes in Limpopo Province.

8.2 INSTITUTIONAL AND LIVELIHOOD CONTEXTS FOR RESURGENCE OF CONTRACT FARMING IN LIMPOPO PROVINCE: SUMMARY

Study findings suggest that the livelihood contexts within which RESIS Programme interventions were implemented in Limpopo Province were generally characterized by pervasive poverty and low levels of formal education, employment, income, material asset ownership, social services and infrastructure. While the apartheid-era interventions in smallholder irrigation schemes had

not been economically viable, they provided a social safety net that was severely affected by the sudden withdrawal of state subsidies after 1994, which halted productivity and exacerbated livelihood and food insecurity as well as the marginalization of many smallholder irrigation scheme communities. With the inception of moves to revitalize productivity of such schemes, smallholders became commonly described as 'resource poor'. Their broader local geographical contexts were identified to be 'poverty nodes'. The RESIS Programme at national, provincial and local level necessarily had to contend with the gap between livelihood conditions prevailing in such contexts and trends in the broader regional and global arena.

While the sustainable development paradigm brought MDGs to the fore, agricultural commercialization in smallholder irrigation schemes in Limpopo Province was also foreshadowed by emergence since the 1980s of "new agricultures" (according to Little & Watts, 1994). These were geared towards high-value crops, an increasing involvement of small-scale farmers in contract farming in developing countries and a reduction of state roles in farmer support as private sector roles increased (Da Silva, 2005:4). Among regional institutional frameworks, NEPAD's CAADP provided an important framework for promoting black small-scale farmers' entry into mainstream commercial agriculture. International institutions that supported the integration of small-scale farmers into mainstream commercial agriculture included, among others, the UN's FAO, World Bank Group's IFC, CGIAR and FANRPAN. From such perspective, the RESIS Programme was a response to an international drive to reduce transaction costs of operating state-sponsored irrigation schemes and enhance efficiency in agricultural water use, productivity and marketing. Global and regional influences were complemented by national institutional imperatives.

A pertinent aspect of national imperatives, such as the Agricultural Sector Strategy, was that the RESIS Programme emerged against a milieu of national macro-economic policy shifts away from the focused anti-poverty strategies of the RDP towards a dual emphasis on both poverty reduction and national economic goals espoused by the GEAR Strategy. The RESIS Programme also emerged in tandem with the erstwhile government-led ISRDP, which similarly blended social and economic objectives, as well as environmental goals. While objectives of the

Agricultural Sector Strategy resonated, in rhetoric, with the hybrid macro-economic objectives espoused in GEAR and the ISRDP, articulation of AgriBEE particularly in the RESIS-Recharge phase was accompanied by an abrupt shift away from such blended emphasis towards a brazenly neo-liberal pursuit of economic objectives. Such shift was couched in narratives about economic viability and technical efficiency of agricultural water use. Such narratives not only echoed neo-liberal arguments for global economic restructuring but were also used to justify significant fiscal expenditure on hydraulic infrastructure and technology development in smallholder irrigation schemes.

When the ISRDP was launched in 2000, it embodied much of core-periphery development thinking. For example, smallholder irrigation schemes were included among 'anchor' projects from which rural LED was envisaged to spread. Similarly, the RESIS Programme viewed smallholder irrigation schemes to be 'nodes' from which economic growth would spread outwards to uplift rural communities and contribute to social integration. The discordant reality, however, was that smallholder irrigation schemes in South Africa and former homelands of Limpopo Province, in particular, had historically functioned as a social safety nets or labour buffers, which served to absorb rural surplus labour during colonial and apartheid eras rather than generate resource rents. After 1994, this orientation prevailed until irrigation infrastructure broke down following the withdrawal of subsidies. By introducing drastically replacing production systems that smallholders and local communities were familiar with with aggressively market-orientated approaches therefore, agricultural commercialization in the RESIS-Recharge phase brutally disturbed antecedent livelihood functions of smallholder irrigation schemes. This deepened hardship and insecurity for many vulnerable and poor rural people.

In 2009 when the CRDP replaced the ISRDP as a 'comprehensive' approach to effectively resolve the persisting challenge of rural poverty and inequality, there were shifts towards engendering a broad-ranging approach to addressing needs of the majority of landless rural people and targeting vulnerable groups. In the agricultural sector, these shifts were evident in the re-focusing of government policy towards, for example, exploration of options to to

enhance rural livelihoods. Within the broader South African national context and in impoverished rural and urban localities in particular, the emergence of the CRDP was preceded by a general sense of disillusionment about the prospects for amelioration of deprivation. While such disillusionment pervaded much of the 'silent rural backdrops' of South African society, grievances were largely amplified in urban centres (Tapela et al, 2011a). Pressure on government seems to have come partly from the widespread contestations and national waves of violent social protests that gripped mostly urban informal settlements since 2004¹⁵⁴ and exponentially increased in frequency since 2009¹⁵⁵. The increasing ungovernability of impoverished and marginalized contexts seems to have contributed, in the run up to 2009, to influencing the tempering of a brazenly neo-liberal RESIS-Recharge phase with efforts to accommodate the livelihood interests of resource-poor irrigation farmers¹⁵⁶.

It seems possible therefore that with the crystallization in 2009 of the urgent need to effectively and comprehensively address rural poverty and inequality, interest by agricultural scholars in small-scale farmers and the 'smallholder' model continued to influence the way resource-poor black farmers were perceived in relation to rural development programmes, but there was an emerging shift towards enhancing the formulation and articulation rural development interventions and the RESIS Programme.

8.3 CONTRACT FARMING AND RURAL LIVELIHOOD SECURITY

Research findings showed that agricultural commercialization during the earlier phases of the RESIS Programme had varying effects in different contexts. With the exception of Makuleke, interventions did not take into account the socio-economic differentiation of farmers, but tended to replicate many features of the pre-1994 models of agricultural commercialization. A

¹⁵⁴ See Atkinson 2007, Johnston & Bernstein 2007, Botes et al 2007a; b; Bond & Dugard, 2008; Allen & Heese, 2009 and Heese & Allen, 2009.

¹⁵⁵ See Allan & Heese, 2009; Gouws et al, 2009; Sinwell et al, 2009; Tapela et al, 2011a, Nleya et al, 2011 and Nleya, 2011.

¹⁵⁶ PROLOGUE: For example, the displaced subsistence food producers of Makuleke were reinstated, while the landless riverside gardeners were removed from the rangelands and allocated food plots within a new extension of the irrigation scheme. In Phetwane, LDA embarked on efforts to support livelihood diversification by promoting aquaculture projects for smallholders and the landless.

“one-size-fits-all” approach also characterized ways in which joint venture projects involved farmers. Concerns voiced by less influential stakeholders, such as the elderly and illiterate farmers of Phetwane and Makuleke, particularly the women and vulnerable men among these, were not readily accommodated in decision-making. This raised questions about the integrity of decision-making processes within RESIS interventions and associated joint ventures.

In Makuleke, earlier RESIS phase interventions and the joint cotton production venture enhanced access to water for both subsistence food producers and emerging commercial farmers. Many subsistence food producers increased their productivity. By contrast, monetary incomes from the cotton production joint venture fell short of expectations and exacerbated insecurity for many within the latter group of farmers, who did not produce food crops alongside cotton.

In Phetwane, implementation of a similar joint cotton production venture made no attempt to distinguish between different types of smallholders. Hence, enhanced water access not only failed to yield expected monetary incomes but also eroded the meagre livelihood assets that smallholders possessed, with critical outcomes on their livelihood and food security. Prior to that, inception of the joint venture was accompanied by physical exclusion from the irrigation scheme of informal subsistence farmers, who maintained informal food gardens in open spaces alongside the mail irrigation canal. This contrasted with the absence of such exclusions from Krokodilheuwel, where local traditional leadership defended the right of informal gardeners to utilize surplus space and water within the irrigation scheme.

Although Hereford smallholders had greater degrees of freedom to choose their pathways to market entry, their experiences with joint ventures since the pilot phase of the national RESIS Programme invariably failed to yield expected monetary incomes and, in a few cases, exacerbated vulnerability. However, the provision of extension and other support services by DALA, NGOs and private investors left Hereford farmers with relatively greater albeit insufficient capacity to engage in specific commodity sectors.

While the earlier phase of RESIS sought to “train and capacitate the smallholder farmers to run their scheme profitably and sustainably” (De Lange, 2004: 107; Shaker, 2005: 19), the RESIS-Recharge phase saw a relegation of many smallholders to equity labourer status. While such an intervention enhanced livelihood assets, strategies and outcomes for a relatively small proportion of smallholders, such as Renias Chauke of Makuleke (Section 6.9.1), the majority of subsistence food producers were marginalized and excluded from the scheme without compensation. By contrast, undifferentiated smallholders in other contexts, such as Phetwane and Krokodilheuwel, were compelled to wait for several years while floppy sprinkler irrigation infrastructure and technology was developed, and no effort was made mitigate the negative effects of displacement. Consequently, many smallholder households in Phetwane became more vulnerable and insecure, and coping strategies broadened to include rampant informal fishing activities.

It seems likely that, when the NDA and LDA took the decision to concede to requirements by trade liberalization policies for governments to increase private sector roles while rolling back state support services, institutional actors were aware of the constraints to effective participation by black farmers in the globalised commodity sectors (Kirsten & Sartorius, 2002; Madonsela 2001 in Jacobs, 2001; Jacobs, 2001)¹⁵⁷. It was too early, however, for the study to determine the impacts of smallholder involvement in value chains as equity labourers. A shadow-side that loomed though was that while trade liberalization policies, such as the World Trade Organization’s Agreement on Agriculture, compelled developing countries to phase out subsidies, exchange controls and trade barriers, they did not impose the same conditions in countries in the north (Jacobs, 2001). Effectively, the global market arena remained an uneven playing field for smallholders. Assumptions that contractual joint ventures and strategic partnerships would contribute to enabling black small-scale irrigation farmers to participate effectively in the highly competitive and globalised commodity sectors therefore needed to be tempered with realization of possible risks associated with capital intensive farming.

¹⁵⁷ See Section 2.3.3.

8.4 JOINT VENTURE AND STRATEGIC PARTNERSHIP CONTRACTS

Watts (1994:25) states that the notion of 'contract' is central to any understanding of the social integration of peasants into corporate relations of production. Contracts were used in the RESIS Programme to reduce 'transaction costs', coordinate links between farmers and agribusiness firms and integrate small-scale farmers into mainstream agricultural market chains. Effectively, they were the institutional mechanisms for minimizing the costs of market exchange and ensuring compliance, thus reducing supply-side uncertainty that is detrimental to the workings of industrialized agricultural market chains (according to Da Silva, 2005; Glover & Kusterer, 1996; Little & Watts, 1994). Within the RESIS-Recharge phase in Limpopo Province, integration of smallholders into mainstream commercial farming entailed land consolidation, infrastructure development and formation of cooperatives and trusts that contract with private investors in multi-partite strategic partnerships.

Findings from in-depth research in Hereford, Phetwane and Makuleke showed that in the earlier RESIS phases, smallholders in all three schemes received financial, material, technical and managerial support from government, private investors and, in the cases of Hereford and Makuleke, NGOs. Smallholder complemented such support with own investments time, labour and other resources. Findings also showed that these case studies were characterized by variations in the manner in which contracts were formulated and implemented. To an extent, variations were due to the positioning of contracts within different programmatic phases and geographical contexts.

Hereford fell under auspices of the national pilot phase of the RESIS Programme, a cross-border district municipality designated an ISRDP poverty node, the LRAD Programme, Africare's REAP Programme and an activist CSO for landless black farmers. Consequently, Hereford farmers enjoyed both broad-ranging support from a diversity of stakeholders and relatively high degrees of freedom regarding entry into joint venture contracts. Such freedom, in the absence of robust negotiation capacity and against a background of multi-stakeholder power dynamics, led to sub-optimal decisions and choices. Some of the contracts were unwritten, while others were predicated upon grossly distorted business plan projections. While all joint ventures

showed tangible increases in agricultural productivity, income failure became a persistent refrain in all but one instance. As problems of poor governance unfolded in project implementation, smallholders realized that it was not easy to sanction non-compliance and lack of accountability on the basis of unwritten contracts or verbal 'understandings'.

By contrast, Makuleke and Phetwane had similar contracts for joint cotton production with NSK, which were facilitated by project implementation agents acting on behalf of LDA under auspices of the Limpopo Provincial RESIS Programme. Makuleke's joint venture fell under the the RESIS Phase 1 or 'Water Care Programme' and Phetwane's was under the early RESIS Phase 2. Both study sites were located in rural poverty nodes in impoverished former homeland areas, whereas Hereford was located in a former white commercial farming area within a district broadly designated a poverty node. Such context accounted for the variations between institutional arrangements for Makuleke and Phetwane, on the one hand, and arrangements for Hereford.

Despite greater common background between Makuleke and Phetwane, there were some nuanced differences. Makuleke had stronger leadership and a greater degree of social organization and cohesion than Phetwane. These affected patterns of engagements with outsiders and private investors. Makuleke leadership managed to broker what seemed to be a more favourable three-year contract that accommodated subsistence food producers while targeting emerging commercial farmers (or petty commodity producers). Phetwane leadership did not veto the exclusion of similar informal farmers, and LDA allowed the private investor to use a one-size-fits-all approach. However, the elderly smallholders insisted on a precautionary approach and entered into a one-year renewable contract that was subject to successful financial performance in the first year. Consequently, when cotton joint ventures in both cases failed to yield expected incomes and petty commodity producers in both irrigation schemes became more vulnerable, Phetwane smallholders 'walked away' from the joint venture while Makuleke petty commodity producers remained hamstrung until the contract had run its course. Despite their greater degree of freedom, Phetwane smallholders subsequently became hamstrung for five years by LDA's decision to halt production while development of floppy

irrigation infrastructure under RESIS-Recharge took place on all irrigation schemes in the Upper Arabie Balemi Trust area.

With the emergence of RESIS-Recharge, LDA adopted a generic 'strategic' partnership contract that engaged petty commodity producers mostly to private investor AWC and/or AWC's 'empowerment' company, Temong cc. Makuleke, Phetwane and other appraised case studies were subject to similar contractual arrangements, while Hereford had come under jurisdiction of LDA but had not been included in such arrangements. The generic contracts invariably reinforced petty commodity producers' equity labourer status and excluded subsistence farmers with no compensation for displacement as means to reduce transaction costs and maximize productivity. Transaction costs were also reduced through externalization of outstanding social and environmental issues. Although equity labourers' management committees were delegated the task of dealing with social issues, such as theft and distribution of surplus produce, environmental issues, such as water pollution, were ignored. Benefit sharing schemes were inadequate and suggestions to prioritize displaced farmers went unheeded. Although the state-funded irrigation schemes were regarded to be community resources, of which a minority of petty commodity producers were allocated use rights, contracts made no provisions for compensatory benefit sharing for foregone resource use by communities.

While financial performance largely met expectations, problems of non-compliance were not monitored and sanctioned. Problems of governance went unattended, leading to dissatisfaction and conflicts. RESIS-Recharge contracts did not address sustainability issues. Contracts showed that the strategic partnership model, like the earlier joint venture model, effectively privatized extension services. However, contractual provisions for exit strategies were not matched with implementation of provisions to train and capacitate farmers to enable them to eventually run their commercial enterprises. Contracts also made no provisions for post-project rehabilitation of the agricultural resource base and recapitalization of infrastructure.

Although private investors committed their own resources to joint ventures and partnerships these were far lower than the significant state funding that went into irrigation scheme

development. In light of lack of provisions for rehabilitation and recapitalization, private investor contributions might ultimately be further exceeded by future state expenditure towards restoring and enabling irrigation schemes to maintain productivity and perhaps attract other investors. Effectively, what emerged from the study was that RESIS Programme contracts embodied a form of subsidized privatization.

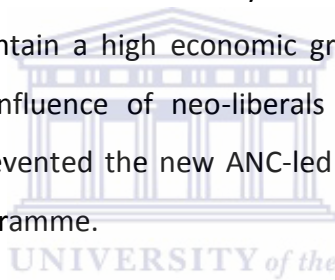
8.5 NURTURING RURAL LIVELIHOOD SECURITY WITHIN A HYBRID NEO-LIBERAL AND SOCIAL DEVELOPMENT POLICY CONTEXT: DISCUSSION

Alongside rural development and poverty focused programmes such as the ISRDP, adoption of RESIS Programme interventions was greeted with optimism in certain circles. Among agricultural economics scholars, contract farming was viewed as “a tool for empowering smallholder farmers in Southern Africa” (Kirsten *et al*, 2005). Contract farming was also seen as having a “considerable potential to integrate small-scale farmers in developing countries into export and processing markets and into the modern economy” (Kirsten & Sartorius, 2002). The study found, however, that contract farming arrangements, as formulated and implemented under auspices of the RESIS Programme in Limpopo Province, were limited in the extent to which they could enhance rural livelihoods.

Study findings showed that the resurgence of contract farming in smallholder irrigation schemes in Limpopo Province created an elite group of black equity labourers and entrepreneurs while mostly ignoring livelihood interests of the poorest and most vulnerable among socio-economically differentiated smallholders. This confirmed Cousins’s (2003) perspective that ‘integrated rural development’, as conceived by neo-liberal economists, emphasizes the inclusion of petty commodity producers into the mainstream capitalist economy as a means of achieving ‘equity’ and ‘empowerment’ of HDIs, but in the process creates an elite class of petty commodity producers from among the ranks of the impoverished. The study found that such inequalities and marginalization were linked to predication of institutional arrangements upon a viewpoint by agricultural economics scholars (e.g. Kirsten &

Sartorius, 2002) that it is often only the well-endowed and skilled who have the ability to be part of the coordinated chains and alliances.

A survey of literature on the South African institutional context within which the RESIS Programme emerged (Chapter Two) showed that a diversity of agricultural economists, such as Van Zyl (1996), Terreblanche (1998) and Kirsten et al (1998) among others, were instrumental in shaping the agenda of transforming and integrating South African agriculture into rural development planning and, in particular, promoting black farmers' empowerment and participation in commercial agriculture. Social science and political economy scholars strongly argued for a comprehensive poverty relief programme (e.g. Levin & Weiner, 1996; Delius, 1996; May et al, 1998). However, in the absence of practicable poverty-focused options (according to Terreblanche, 1998:49), the argument of the wealthy middle class that the only way to solve the poverty problem was to maintain a high economic growth rate prevailed. Terreblanche (Ibid.) ascribes the hegemonic influence of neo-liberals to fiscal constraints and lack of organizational capacity, which prevented the new ANC-led government from implementing a comprehensive poverty relief programme.



8.6 TOWARD ENHANCED DECISION MAKING IN SMALLHOLDER IRRIGATION SCHEME INTERVENTIONS: EXPLORATORY POLICY OPTIONS

Revitalization of small-scale irrigation schemes in Limpopo Province has left a chequered trail of livelihood outcomes and strategies. Without detracting from achievements by RESIS-Recharge strategic partnerships in generating desired incomes for equity labourers, the RESIS Programme had yet to become robust in overcoming the preponderance of neo-liberal criteria for gauging 'viability' and 'efficiency' of agricultural water use. There was a need for agricultural interventions to respond positively not only to broader national, regional and international trade liberalization policies and market-orientated approaches to productivity but also to the diversity and dynamism of local context-specific on-farm and off-farm livelihood interests and strategies.

It is easier perhaps to suggest in retrospect that the RESIS Programme interventions should have adopted more innovative ways of defining viability to include a broader set of criteria to ensure livelihood security. On the one hand, institutional actors had to grapple with an institutional context that was in a state of flux and beset with political and ideological power dynamics among stakeholders involved in defining options for post-apartheid policy and practice. On the other hand, institutional actors had to re-orient their practice from top-down centre-driven approaches to participatory approaches that placed rural people's diverse, complex and dynamic livelihood interests at par with economic growth objectives. Within such milieu, scholarly debates revolved around whether 'rural development' or 'agrarian reform' constituted a more effective approach to resolving challenges of rural poverty and inequality (Cousins, 2003). Furthermore, national, provincial and local imperatives for RESIS interventions had to intersect with a diversity of global and regional influences. Grappling with such complexity to formulate adequate constructs for interventions in smallholder irrigation schemes was therefore a daunting task for institutional actors tasked with ensuring effectiveness of interventions to support black farmers in smallholder irrigation schemes.

By stating the above, however, this thesis does not seek to make an apology for shortcomings in the manner in which institutional actors handled revitalization interventions in smallholder irrigation schemes. Rather, the point put forward here is that, amid such contextual difficulties, institutional actors at policy and decision making levels should have considered certain fundamental factors, which would have provided guidance and principles.

Firstly, the historical background of losses of livelihoods due to forced removals and the dispossession of land and other resources, which Platzky & Walker (1985) describe, placed an ethical imperative upon government and other intermediaries to ensure that agrarian reforms and rural development interventions did not lead to further erosion of livelihood assets for the historically disadvantaged and resource-poor in rural communities. Secondly, observations were that more than a decade since the advent of majority rule, South Africa retained the historical legacy of a highly polarized space economy. The spectre of poverty, inequality and uncertainty therefore persisted in contemporary South African rural settings (van Rooyen et al,

2001; May, 2000; May et al, 1998) as sector reforms, development interventions and poverty reduction strategies continued to fall short of resolving rural macro-economic policy challenges (DBSA 1999 in Everatt, 2004: 9; Goldman et al, 2002; Cousins, 2003; IDT, 2000).

The second fundamental factor related to the National Constitution, which provides an overarching institutional framework and a common point of reference over meanings of what 'stability' entails and therefore defines the social contract between government and citizenry. Section 25: 8 of the National Constitution's Bill of Rights expresses a commitment by the state to take legislative and other measures to achieve land, water and related reforms in order to "redress the results of past racial discrimination" (South Africa, 1996). Implicitly, therefore, institutional actors were obliged to strike a balance between pursuit of economic growth and development objectives and securing rural livelihoods in smallholder irrigation schemes.

In the drive to liberalize the economy and integrate smallholders into globalized agri-food systems while simultaneously addressing challenges of rural poverty and inequality, however, institutional actors adopted core-periphery models for economic growth and development. RESIS Programme practitioners sought to provide incentives to persuade the private sector to locate productive enterprises in marginal rural areas in the hope that multiplier effects would spread to rural hinterlands. A crucial point missed was that optimism about the "efficacy of spread effects from a planned growth centre to override backwash effects and promote meaningful development in the periphery" (according to Tapela, 1985) had long since been countered by evidence pointing to the existence of structural limitations inherent in Third World economies.

On the basis of core-periphery conceptualizations for integrated rural development, the RESIS Programme emerged in tandem with ISRDP and, among others, smallholder irrigation schemes were identified to be 'anchor' projects for LED within rural poverty nodes. While government made significant investment towards rehabilitating irrigation infrastructure in the earlier phases of RESIS, the latter RESIS-Recharge phase saw a massive up-scaling of fiscal expenditure on developing floppy sprinkler and centre pivot irrigation infrastructure and technology. Such investments were intended to make smallholder irrigation schemes more attractive to private

investors and consequently more productive. The corollary, however, was that LDA became hard-pressed to justify the huge financial investments. As von Braun *et al* (1989) observes, technological change rarely occurs without commercialization. Infrastructure and technology development increasingly became drivers of agricultural commercialization. Realizing that black farmers faced significant constraints to effective participation in highly competitive global commodity markets, institutional actors chose contract farming to be a vehicle towards achieving both successful market-entry by smallholders and productivity-induced growth in rural areas.

As joint ventures and strategic partnerships mushroomed in various smallholder irrigation schemes, the downside of neo-liberal approaches to reducing transaction costs and increasing productivity came to the fore. Both in infrastructure and technology development projects as well as joint ventures and strategic partnerships, institutional actors and private investors divested themselves of responsibilities to deal with social and environmental costs of infrastructure projects and commercially-orientated cropping regimes. Subsistence food producers were displaced and excluded without compensation from various irrigation schemes. Development of floppy sprinkler and centre pivot irrigation infrastructure and technology halted smallholder productivity for periods ranging from a few months to several years, without any mitigation of hardships or compensation to smallholders and local communities for foregone use of resources. Water pollution in at least one case resulted in fish deaths and destruction of food crops in riverside gardens downstream but contract farming enterprises failed to take ownership of the problem.

Research findings suggested that RESIS Programme institutional actors did not acknowledge an internationally recognized need to institute and implement support measures for compensation, benefit sharing, resettlement and development of local and regional communities that are negatively affected by hydraulic infrastructure development and use (Van Wiclin & Warren, 1999; WCD, 2000; Cernea & Kanbur, 2002; Koenig, 2002; UNEP, 2007, 2006; World Bank, 2004, 1998,; World Bank Group, 2007). International best practice in hydraulic infrastructure development, which includes smallholder irrigation schemes, considers such

measures to be fundamental commitments and responsibilities of the state and investor towards affected people. Implementation of such measures is considered to be important in gaining public acceptance and ensuring that rights and risks of affected people and communities were appropriately recognized. Affected rural communities and displaced people therefore needed to be compensated for foregone use of agricultural resources. Contract farming enterprises should have contributed towards fair and equitable benefit sharing and post-contract rehabilitation of agricultural land and water resources and the recapitalization of infrastructure. Such measures could have contributed to eliminating state-subsidized privatization and reducing livelihood insecurity.

8.7 CONCLUSION

The study showed that agricultural commercialization, which was articulated mainly through contractual joint ventures and strategic partnerships, did not provide an adequate construct for addressing rural livelihood security within selected smallholder irrigation scheme communities in Limpopo Province. Given the pervasive poverty and vulnerability of people living in smallholder irrigation scheme contexts and macro-economic policy imperatives for addressing poverty and inequality, institutional arrangements for infrastructure and contract farming projects did not sufficiently reflect interests of poor and vulnerable people in such communities.

Evidence from inception of joint ventures showed that risk was often downplayed as government officials and private investors selected crops and production arrangements that justified the high levels of fiscal investment in infrastructure and technology. Such decisions converged with farmers' anticipation of high incomes, and any voices of caution were silenced. Gaps in institutional arrangements for project monitoring and accountability meant that problems were often detected too late, and mechanisms to avert similar pitfalls in future projects were either ineffective or non-existent. A robust framework for monitoring decision-making processes was clearly requisite, both within site-specific joint venture projects and wider-ranging agricultural commercialization programmes.

Insights from project implementation revealed a general pattern whereby incomes from earlier RESIS joint ventures fell far short of expectations and institutional arrangements were not sufficiently structured to include social, environmental and recapitalization costs and benefits to local communities. With subsequent restructuring of latter RESIS-Recharge partnerships, most smallholders - except those of Hereford - were relegated to equity labourer status, in which they played little or no active roles in farming but drew significantly higher incomes from dividend shares in strategic partnerships. However, such gains were achieved at the expense of livelihood security for the majority of subsistence-orientated farmers and local community members at large. In Makuleke, for example, many (273) subsistence food producers were displaced and excluded from smallholder irrigation schemes without compensation¹⁵⁸.

Although joint ventures and strategic partnerships were considered to be mechanisms by which smallholders would be assisted to enter mainstream commodity markets, constraints to effective participation by smallholders in highly competitive and globalized agri-food systems did not seem likely to be resolved by contract farming arrangements. Non-compliance by private investors with contractual provisions for smallholder capacity building and relegation of emerging commercial farmers to equity labourer status, in particular, seemed to reinforce and perpetuate dependency, with the possible result that such farmers would not be likely to establish their own niches within mainstream commodity markets.

A number of commercially-orientated smallholders seemed to have realized this and therefore adopted livelihood diversification strategies, whereby they established their own market gardening enterprises outside the irrigation scheme and targeted local informal markets. Some of these farmers had successfully established niches within such markets, and were linking up with similarly orientated farmers, forming cooperatives and sharing information and strategies. Such strategies yielded desired incomes for the farmers concerned. Beyond RESIS-Recharge strategic partnerships, therefore, enhanced incomes also accrued directly and indirectly to

¹⁵⁸ Epilogue: In the aftermath of the study in 2010, demands by displaced Makuleke subsistence food producers to be allowed access to land within the irrigation scheme were heeded. These farmers and other landless people who had established informal riverside gardens were re-allocated 0.1 ha plots in the irrigation scheme. For the latter group, such a move sought both to resolve conflicts that had erupted between riverside gardeners and livestock owners and to recognize these farmers need for livelihood and food security.

minorities of commercially-orientated smallholders with access to land within and/or outside state-funded irrigation schemes. The majority of equity labourers, however, were either constrained by landlessness or content with playing 'arm-chair' farming roles while earning dividends from yielding their land allocations to strategic partnerships.

The significance of constraints that smallholders face in trying to enter and establish niches in global commodity production sectors seem to leave very little scope for black small-scale farmers but to resort to orienting their activities towards local informal markets. However, the survival of these farmers within the margins of mainstream economy is not assured. Economies of scale are in favour of supermarket chains, which are already making rapid in-roads into places and markets that have historically been domains of local petty-commodity producers, informal traders and formal retailers.

Agricultural commercialization interventions will need to guard against marginalizing the majority of black farmers, who are less commercially-orientated than neo-liberal rent-seeking interventions would want them to be. For subsistence-orientated and survivalist farmers in smallholder irrigation schemes, access to agricultural resources within the schemes remains a critical safety net and component of a diverse and dynamic basket of farm-based and off-farm livelihoods. It seems possible that, under optimal RESIS Programme institutional arrangements, smallholder irrigation schemes can critically function as assets for rural livelihoods generation, diversification, adaptation, coping and survival and thereby enable enhancement of livelihood security for a broader set of farm-based and off-farm livelihoods than those of the narrow group of equity labourers so far targeted.

With respect to the issue of livelihood sustainability, it is requisite that RESIS Programme practitioners should review the prevailing structure of institutional arrangements in order to take into account recent developments in international best practice for operationalizing sustainable MWID, which includes infrastructure development associated with smallholder irrigation schemes. 'State-of-the-art' in operational policy frameworks for dealing with macro-economic aspects of MWID provides useful insights for the RESIS Programme. Such frameworks should be assessed for compatibility with South African constitutional imperatives and macro-

economic policy frameworks, and innovative adaptations developed in alignment to local context-specific requirements for livelihood security.

In the face of constraints that militate against black small-scale farmers' entry into the highly competitive and globalised commodity sectors, it is perhaps worth re-thinking the prevailing preoccupation with economic viability in agricultural commercialization. Negative effects of joint venture failure on livelihoods of people residing in small-scale irrigation schemes point to a need for alternative approaches to addressing South Africa's challenges of rural poverty and inequality. Cousins (2003) observes that, although it is clear that the deep poverty in rural areas requires radical measures, not least a redistribution of resources including land, a sustainable livelihoods approach that builds on the land-based livelihoods which rural people currently practice and enhances their economic value might be more appropriate than attempting to replace these livelihoods with fully market-orientated or commercialised approaches.

Stephen Friedman's observation that attempts to deal with poverty are ineffective because they do not reflect what the poor want (Friedman 2005) suggests a need for greater and more effective participation by the poor in shaping decisions that affect their lives. However, there are no guarantees that such measures will result in farmers taking decisions most appropriate to their interest. The reason is that, although farmers have limited powers to determine decisions pertaining to commercialization approaches, they nonetheless possess degrees of freedom to make choices. Such freedoms can unwittingly be used to make sub-optimal decisions, to the farmers' own detriment. A case in point is that of farmers' own preoccupations with earning incomes, demonstrated in all examined irrigations schemes. Farmers' hunger for incomes has resonated with arguments by government officials and private investors to produce capital intensive high value crops, thus contributing to farmers' exposure to risks associated with capital intensive farming. A possible way forward could therefore be for various stakeholders, particularly locally-based CSOs, to engage with farmers in defining the most appropriate approaches to enhancing livelihoods and well-being.

Research findings showed that although the inception of RESIS joint ventures was greeted with optimism and renewed hope in certain circles within government, non-governmental

organizations (NGOs), the private sector and smallholder irrigation scheme communities, the performance of joint ventures and strategic partnerships largely fell short of expectations. The promise of higher incomes and improved livelihoods often remained elusive, while debts and potential losses of meagre household assets often loomed large, threatening to erode existing livelihoods and undermine government interventions. This was mainly because 'viability' in both the RESIS and RESIS-Recharge phases was narrowly seen in economic and technical terms. The need to justify fiscal expenditure progressively led to the replacement of subsistence production with commercially-orientated farming, and the replacement of affordable irrigation technologies with high-tech hydraulic infrastructure. Weaknesses in the monitoring of contract formulation and implementation meant that voices of the marginalized, poor and vulnerable, particularly the women and the elderly, were not heard.

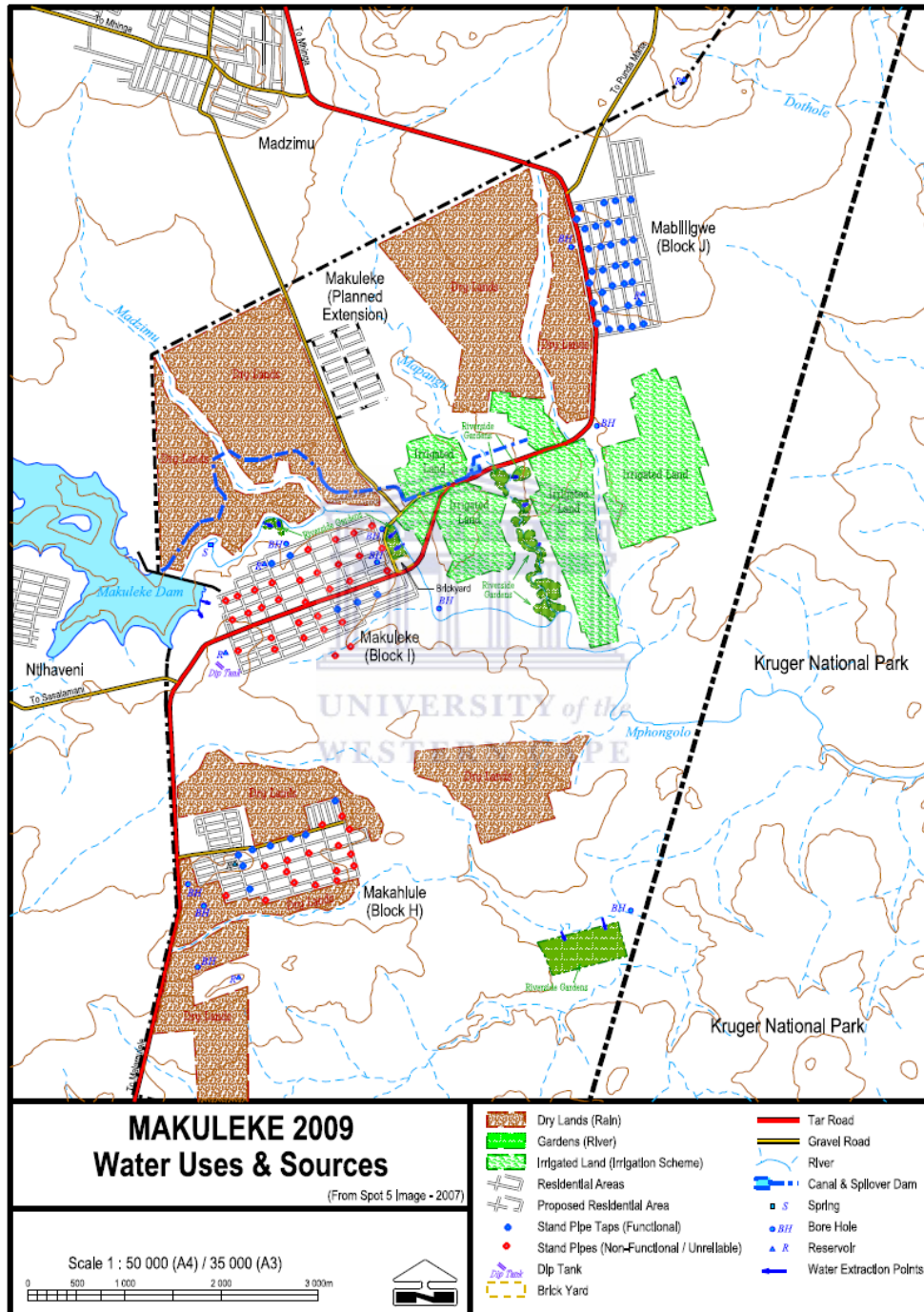
Research findings further revealed that RESIS-Recharge strategic partnerships did not meaningfully enhance the productive, managerial and marketing capacities of smallholders to ensure their effective participation in agriculture and the sustainability of local livelihoods. This thesis surmises that the emergence of the RESIS Programme amid neo-liberal macro-economic policy shifts meant that agricultural commercialization, as articulated through contractual joint ventures and strategic partnerships, created a small class of black 'arm-chair' farmers, who played little or no active roles and obtained few or no skills in commercial farming but perpetually depended upon and drew incomes from agri-business initiatives run by externally-based agents. The thesis therefore raises the question: What was the rationale for joint ventures and strategic partnerships in the context of South Africa's Agricultural Sector Strategy objectives for support to black farmers?

Beyond livelihoods, the sustainability of RESIS interventions was precarious, given that contracts lacked provisions for the recapitalization of infrastructure and the rehabilitation of degraded land. Contracts also lacked mechanisms for equitable distribution of costs and benefits between direct beneficiaries namely, the contracted private partners and targeted smallholders, and indirect beneficiaries, who included the rest of members of local communities. Many of the smallholder irrigation schemes were located in communal lands

characterized by outstanding social issues associated with historical displacements of people and alienation of land, often with inadequate or no compensation and little or no access to benefits from infrastructure development. There was a need for RESIS Programme contracts to give attention to distributional issues, which posed a possible threat to the sustainability of LDA interventions.

The conclusion is that the challenge of reducing rural poverty and inequality might not be resolved through existing institutional approaches to agricultural commercialization. These facilitate an integration of resource poor irrigation farmers into the globalized mainstream commercial production sector, but this might reinforce socio-economic disparities and undermine the livelihoods of the poorest and most vulnerable members of the irrigation schemes. The thesis proposes a re-examination of the current conceptualisation, implementation and monitoring of joint venture and strategic partnership contracts. Context-sensitive approaches are needed to avert possible losses of livelihoods and assets by resource poor smallholders and non-smallholding members of irrigation scheme communities. An improvement in the administration of joint venture contracts is particularly important. Although rural people in poverty nodes of Limpopo Province generally have yet to realize their capacity to hold local political representatives accountable, a more proactive and robust role by municipalities is required in order to ensure that local people's interests are not subdued by the interests of private capital.

APPENDIX 1 MAP SHOWING MAKULEKE WATER SOURCES AND USES, 2009



Source: Fieldwork, 2008 to 2009.

CITED REFERENCES AND BIBLIOGRAPHY

- Aliber, M. 2001. **A study of the incidence and nature of chronic poverty and development policy in South Africa: An Overview**. Chronic Poverty and Development Series.
- Allen, K. & Heese, K. 2009. **Understanding why service delivery protests take place and who is to blame**. In Municipal IQ Internet [www.municipaliq.co.za] Accessed: 15 October 2009.
- African Development Bank (AfDB). 2003. *Involuntary Resettlement Policy*. Available online at www.afdb.org.
- Ashley, C. & Carney, D. 1999. **Sustainable Livelihoods: Lessons from Early Experience**. London: Department for International Development (DFID).
- Atkinson, D. 2007. **Municipal Governance and Service Delivery: Case studies from the Free State**. In Buhlungu, S, Daniel, J, Southall,R, & Lutchman, J.(eds) State of the Nation: South Africa 2007. HSRC Press: Cape Town.
- ARDC. 2004. List of ARDC Irrigation Schemes in the Limpopo Province. In a **Report on the Status of ARDC Development Projects in the Limpopo Province**. Agricultural and Rural Development Corporation Report prepared for the Limpopo Provincial Department of Agriculture.
- Andrew, M. *et al* (Ainslie, A. & Shackleton, C. M.). 2003. **Evaluating Land and Agrarian Reform in South Africa: Land Use Practices**. Paper commissioned by the Programme for Land and Agrarian Studies (PLAAS), University of the Western Cape, and the European Union Foundation for Human Rights.
- AWARD. 2005. **Understanding Water Service Gaps Between the Most Vulnerable in Local Communities and the Policy Response at the Municipal Level**. CARE Austria Research Report.
- Backeberg, G. & Sanewe, A. 2010. **Towards Productive Water Use and Household Food Security in South Africa**. Paper presented at the 6th Asian Regional Conference of ICID held in Indonesia, 10-16 October.
Internet [http://www.rid.go.th/thaicid/_6_activity/Technical-Session/SubTheme2/2.08-Gerhard_RB-Andrew_JS.pdf] 30 August 2012.
- Backeberg, G. R. *et al* (Bembridge, T. J., Bennie A. T. P., Groenewald, J. A., Hammes, P. S., Pullen, R. A. & Thompson, H. 1996. **Policy Proposal for Irrigated Agriculture in South Africa: A Discussion Paper**. WRC Report KV96/96. Rietfontein (Pretoria): Water Research Commission.
- Bastidas, E. P. 1999. **Gender Issues and Women's Participation in Irrigated Agriculture: The Case of Two Private Irrigation Canals in Carchi, Ecuador**. IWMI Research Report 31. Colombo: IWMI.
- Baulch, Bob, 1996. **Neglected Trade-Offs in Poverty Measurement**. IDS Bulletin, 27: 1, 36 - 42.
- Blaikie, P. 1985. **The Political Economy of Soil Erosion in Developing Countries**. London: Longman.
- Bembridge, T. J. 2000. **Guidelines for Rehabilitation of Small-scale Farmer Irrigation Schemes in South Africa**. Report No. 891/1/00, Water Research Commission, Pretoria.
- Bembridge, T. J. 1988. The Role of Women in Agricultural development in Transkei. In **Journal of Contemporary African Studies**, 7:2, 140 – 82.
- Béné, C. *et al* (Hersoug, B. & Allisson, E. H.). 2010. **Not by Rent Alone: Analyzing the Pro-Poor Functions of Small-scale Fisheries in Developing Countries**. Development Policy Review, 28: 3. 325 - 358.
- Bernstein, H. *et al* (Crow, B. & Johnson, H.)(Eds.).1992). **Rural Livelihoods: Crises and Responses**. Oxford: Oxford University Press for the Open University.
- Bessant, K. C. 2007. **Multiple Discourses on Crisis: Farm, Agricultural, and Rural Policy Implications**. Canadian Journal of Agricultural Economics 55, 443 – 457.
- Bond, P. & Dugard, J. 2008. **Water, Human Rights and Social Conflict: South African Experiences**. Law, Social Justice & Global Development Journal (LGD). Internet [http://go.warwick.ac.uk/elj/lgd/2008_1/bond_dugard/] Accessed: 18 October 2009.

- Borras, S. M. 2003. Questioning Market-led Agrarian Reform: Experiences from Brazil, Colombia and South Africa. **Journal of Agrarian Change**, 3: 3, 367 - 394, July.
- Botes, L. et al (Lenka, M; Marais, L; Matebesi, Z and Sigenu, K.). 2007a. **The Cauldron of local protests: reasons, impacts and lessons learned**. Centre for Development Support, University of the Free State: Bloemfontein.
- Botes, L. et al (Lenka, M; Marais, L; Matebesi, Z and Sigenu, K.). 2007b. **The new struggle: service delivery-related unrest in South Africa – Two case studies**. Centre for Development Support, University of the Free State: Bloemfontein.
- Bourdieu, P. 1990. **The Logic of Practice**. Stanford, CA: Stanford University Press.
- Bourdieu, P. 1985. Social Space and the Genesis of Groups. **Theory and Society**, 14: 6, 723 - 744.
- Boykoff, M. 2003. Entitlements and Development: Critical Analyses of Intersections with Inequality and the Environment. **Political Ecology Working Group**, Spring.
- Bryson, J. M. 2004. **What to do When Stakeholders Matter: Stakeholder Identification and Analysis Techniques**. *Public Management Review*, 6: 1, 21 – 53.
- Business Report. 2005. Farmers welcome state's R1bn shot in the arm. Article by Vynck, D. de & Salgado, I. Internet (<http://www.busrep.co.za>), 24 February.
- Budlender, D & Dube, N. 1998. **Starting with What We Have: Basing Development Activities on Local Realities: A Critical Review of Recent Experience**. Johannesburg: Community Agency for Social Enquiry.
- Butler, E. C. 1994. **The Re-Development of the Hereford Scheme Farms (Groblersdal) for the Resettlement of Irrigation Farmers**. Final Draft Proposal to the DLA.
- Carney, J. A. 1994. Contracting a Food Staple in the Gambia. In Little, P. d. & Watts, J. M. (Eds.).1994. **Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa**, 167 - 187. Madison: University of Wisconsin.
- Carruthers, J. 1995. **The Kruger National Park: A Social and Political History**. Scottsville: Natal University Press.
- Carswell, G. 1997. **Agricultural Intensification and Rural Sustainable Livelihoods: A Think Piece**. Institute for Development Studies (IDS) Working Paper 64. Brighton: IDS.
- Cernea, M.M. & Kanbur, R. (Eds). 2002. *An exchange on the Compensation Principle in Resettlement*. WP 202-33. Department of Applied Economics, Cornell Univ., Ithaca (USA).
- Cernea, M. (Ed.). 1985. **Putting People First: Sociological Variables in Rural Development**. New York: Oxford University Press.
- Chambers, R. & Scoones, I. 2009. Sustainable Livelihoods: id21 Viewpoints. Sussex: Institute of Development Studies (IDS).
- Chambers, R. 1998. **Us and Them: Finding a New Paradigm for Professionals in Sustainable Development**. In: Warburton, D. (Ed.), *Community and Sustainable Development: Participation in the Future*, 117 - 147. London: Earthscan Publications Ltd.
- Chambers, R. 1997. **Whose Reality Counts? Putting the First Last**. London: Intermediate Technology Publications.
- Chambers R. & Conway, G. 1992. **Sustainable Rural Livelihoods: Practical Concepts for the 21st Century**. Discussion Document 296. Brighton: IDS.
- Chambers, R. 1989. **Vulnerability, Coping and Policy**. *IDS Bulletin*, 20: 2, 1 – 8.
- Chambers, R. 1983. **Rural Development: Putting the Last First**. New York: Longman Inc.
- Chapman, R. & Tripp, R. 2004. **Background Paper on Rural Livelihoods Diversity and Agriculture**. Paper prepared for the 2004 AgREN [Overseas Development Institute Agricultural Research and Extension Network]. Electronic Conference on the Implications of Rural Livelihood Diversity for Pro-poor Agricultural Initiatives.

- Chatterjee, P. & Finger, M. 1994. **The Earth Brokers: Power, Politics and World Development**. London: Routledge.
- Chizarura, L. 2007. Cotton Contract Farming in Southern Africa. In the Southern and Eastern African Trade, Information and Negotiations Institute - **SEATINI Bulletin**. 10:7, 6 -11. 15 July.
- Chuenpagdee, R. & Jentoft, S. 2009. Governability Assessment for Fisheries and Coastal Systems: A Reality Check. **Human Ecology**, 37: 1, 109 - 120.
- Claassens, A. & Cousins, B. 2008. Land, Power and Custom: Controversies Generated by South Africa's Communal Land Rights Act. Cape Town: UCT Press.
- Claassens, A. 2001. **'It is not easy to challenge a chief': Lessons from Rakgwadi**. PLAAS Research Report No. 9. Cape Town: PLAAS, University of the Western Cape.
- Clapp, R. A. 1994. The Moral Economy of the Contract. In Little, P. D. & Watts, M. J. (Ed.), **Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa**, 78 - 94. Madison: The University of Wisconsin Press.
- Cole, K. 1994. Ideologies of Sustainable Development. In: Cole, K. (Ed.), **Sustainable Development for a Democratic South Africa**, 227 - 237. London: Earthscan.
- Coleman, J. S. (1988). **Social Capital in the Creation of Human Capital**. The American Journal of Sociology, 94, 95 - 120.
- Collier, P. & Dercon, S. 2009. **African Agriculture in 50 Years: Smallholders in a Rapidly Changing World**. Paper presented at an FAO Expert Meeting on How to Feed the World in 2050, held in Rome from 24 to 26 June.
- Cousins, B. 2010. **What is a 'smallholder'?** Working Paper 16, January 2010. PLAAS, University of the Western Cape, Working Paper 16.
- Cousins, B. & Scoones, I. 2010. **Contested Paradigms of 'Viability' in Redistributive land Reform: Perspectives from Southern Africa**. In The Journal of Peasant Studies, 37:1, 31-66.
- Cousins, B. et al (Cousins, T, Hornby, D, Kingwill, R, Royston, L & Smit, W.). 2005a. **Will formalising property rights reduce poverty in South Africa's 'second economy'? Questioning the mythologies of Hernando de Soto**. PLAAS Policy Brief No. 18 (PB18).
- Cousins, B. et al (Lahiff, E. & Hall, R.). 2005b. "The land shall be shared among those who work it!" In **New Agenda**, Second Quarter. Special Issue on the Freedom Charter: the next fifty years.
- Cousins, B. 2005a. **Agrarian Reform and the "Two Economies": Transforming South Africa's Countryside**. Paper presented at the SARPN Seminar held in Pretoria on 24 October and subsequently published in Hall, R. & Ntsebeza, L. (Eds.), **The Land Question in South Africa: The challenge of transformation and redistribution**.
- Cousins, B. 2005b. Potential impacts of the Communal Land Rights Act. In **Land Tenure Systems in the Communal Areas of South Africa and the Potential Impact of the Communal Land Rights Act (2004)**. Commissioned paper for the Legal Resources Centre, for purposes of preparing evidence and litigation in the Communal Land Rights Act (CLRA) case.
- Cousins, B. & Claassens, A. 2005. 'Communal land rights and democracy in post-apartheid South Africa', in: P. Jones and K Stokke (eds) **Democratising Development. The Politics of Socio-Economic Rights in South Africa**, Chapter 10, 245 – 270. Leiden and Boston: Martinus Nijhoff, 2005.
- Cousins, B. 2003. Not Rural Development, but Agrarian Reform: Beyond the Neo-liberal Agenda. **New Agenda**, 11: 3, 40 - 47.
- Cousins, T. *et al* (Smits, S. & Chauke, T.). 2007. **Access to water and poor peoples' livelihoods: the case of Ward 16 of Bushbuckridge Local Municipality**. MUS Project Report to the CGIAR Challenge Programme on Water and Food, March.
- Daddieh, C. K. 1994. Contract Farming and Palm Oil Production in Côte d' Ivoire. In Little, P. d. & Watts, J. M. (Eds.).1994. **Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa**, 188 - 215. Madison: University of Wisconsin.

- Da Silva, C. A. B. 2005. **The Growing Role of Contract Farming in Agri-Food Systems Development: Drivers, Theory and Practice**. Rome: FAO.
- Dalal-Clayton, B. 1997. **Southern Africa Beyond the Millennium: Environmental Trends and Scenarios to 2015**. Environmental Planning Issues No. 13. London: IIED.
- Darkoh, M. B. K. 1996. Towards an Adaptive and Community-based Approach to the Management of Natural Resources in the Drylands of Sub-Saharan Africa. In Hjort-af-Ornas, A. (Ed.), **Approaching Nature from Local Communities: Security Perceived and Achieved**, 73 – 99. EPOS Institute of Tema Research, Motala (Sweden), University of Linköping.
- Daviron, B. & Gibbon, P. 2002. Global Commodity Chains and African Export Agriculture. **Journal of Agrarian Change**, 2: 2, 137 - 161, April. Special Issue (Ed. Daviron, B & Gibbon, P.).
- De Klerk, M. 1996. The Sustainable Livelihood Creation Potential of Small-scale Horticulture in the Western Cape. In Lipton, M. et al (de Klerk, M. & Lipton, M.) (Ed.), **Land, Labour and Livelihoods in Rural South Africa**. Durban: Indicator Press (University of Natal), 201 – 244.
- De Lange, M. 2004. **Limpopo Province Revitalization of Smallholder Irrigation Schemes**. Paper presented at an International Water Management Institute (IWMI) workshop held at Silverton, Pretoria, on 7 May.
- Delius, P. 1996. **A Lion amongst the Cattle: Reconstruction and Resistance in Northern Transvaal**. New Hampshire: Heinemann.
- Denison J. & Manona S. 2007. The Rough Guide to Irrigation Revitalization. Document prepared for the Water Research Commission (WRC).
- Derman, B. *et al* (Van Koppen, B. & Tapela, B.). 2011. **Water Rights and Water Wrongs: In the Shadow of the right to Water? Reflections on Livelihood Rights and Water Access and Use**. In Langford, M., Cousins, B., Dugard, J. & Madlingozi, T. (Eds.), *Symbols or Substance? Socio-Economic Rights Strategies in South Africa* (Cambridge: Cambridge University Press, 2011).
- De Swart, C. 2004. **Chronic Poverty and the Basic Income Grant**. Chronic Poverty and Development Series.
- Dietz, T. 1996. **Entitlements to Natural Resources: Contours of Political Environment Geography**. Utrecht: International Books.
- Dolan, C. S. 2005. Benevolent Intent? The Development Encounter in Kenya's Horticulture Industry. In **Journal of Asian and African Studies**, 40:6, 411 – 437. London, Thousand Oaks & New Delhi: Sage Publications.
- Du Toit, A. & Ziervogel, G. 2005. **Chronic and Structural Poverty in South Africa: Challenges for Action and Research**. CPRC Working Paper 56, PLAAS Chronic Poverty and Development Policy Series No. 6, CCSR Working Paper 121, July.
- Dugard, J. 2009. **Constitutional Water Rights Judgment Gets It Wrong. The South African Civil Society Information Service**. <http://www.sacsis.org.za/site/article/373.1> Accessed 4/01/2010
- Drummond, I. & Marsden, T. 1999. **The Condition of Sustainability**. London: Routledge.
- Du Toit, A. & Ziervogel, G. 2005. **Chronic and Structural Poverty in South Africa: Challenges for Action and Research**. CPRC Working Paper 56, PLAAS Chronic Poverty and Development Policy Series No. 6, CCSR Working Paper 121, July.
- Du Toit, A. 2004. **Forgotten by the highway: Globalization, adverse Incorporation and chronic poverty in a commercial farming district**. Chronic Poverty and Development Series.
- Du Toit, A. & Ziervogel G. 2004. **Vulnerability and Food Insecurity: Background concepts for informing the development of a national FIVIMS for South Africa**. <http://www.agis.agric.za/agisweb/agis.html>
- Eaton C. & Shepherd, A. 2001. **Contract Farming: Partnerships for Growth: A Guide**. FAO: Rome.

- Ellis F. & Biggs S. 2001. Evolving Themes in Rural Development 1950s to 2000s. **Development Policy Review** Special Issue: Rethinking Rural Development, 19: 4. 437–448, December.
- Ellis, F. 1998. Survey article: Household Strategies and Rural Livelihood Diversification'. *The Journal of Development Studies*, 35: 1, 1 – 38.
- Everatt, D. 2004. **Self-critical Governance: The Evolution of the Integrated Sustainable Rural Development Strategy**.
Internet (<http://www.sarpn.org.za/documents/d0000640/index.php>), 02/02/2004.
- Everatt, D. *et al* (Dube, N. & Ntsime, M.). 2004. **Integrated Sustainable Rural Development Programme Phase 1 Evaluation: Nodal Review**. Strategies and Tactics Research Report for the IDT, June.
Internet (<http://www.sarpn.org.za/documents/d0000920/index.php>), 16/09/2004.
- Farolfi, S. & Perret, S. 2002. **Intersectoral Competition for Water Allocation in Rural South Africa: Analysing a case study through a standard environmental economics approach**. Paper presented at the 39th SIDEA Convention held in Firenze, 12 - 14 September.
- Farrington, J. *et al* (Carney, D., Ashley, C. & Turton, C.). 1999. **Sustainable Livelihoods in Practice: Early Appreciations of Concepts in Rural Areas**. Natural Resource Perspectives No.42. London: Overseas Development Institute (ODI).
- Faysse, N. & Gumbo, J. 2004. **Transformation of Irrigation Boards into Water User Associations: Case Studies of the Umlaas, Komati, Lomati and Hereford Irrigation Boards**. IWMI Working Paper 73: 2. Colombo, Sri Lanka: IWMI.
- FAO. 2001. *Agribusiness and Small Farmers*. Rome: FAO.
- FAO. 2006. **The State of Agricultural Markets**. Part 1 Developing Countries: Agricultural Trade and the Doha Round. Rome: FAO.
- Friedman, S. 2005. Government cares about poor but does not hear their plea. **Business Day**, 2 March.
- Friedmann, J. 1992. **Empowerment: The Politics of Alternative Development**. Cambridge (Massachusetts): Blackwell Publishers.
- Gasper, D. 2006. What is the Capability Approach? It's Core, Rationale, Partners and Dangers. Working Paper Series No. 428, Institute of Social Studies, The Hague.
- Giddens, A. 1979. **Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis**. MacMillan: London.
- Gilfillan, D. 1997. **The Right to Restitution and the Right to the Promotion of Conservation**. Submission by the Regional Land Claims Commissioner for the Northern Province and Mpumalanga to the National Land Reform Mediation Panel, Department of Land Affairs, Pretoria.
- Glover, D & Kusterer, K. 1990. *Small Farmers, Big Business: Contract Farming and Rural Development*. London, Macmillan Press.
- Grasso, M. 2002. **A dynamic operationalization of Sen's capability approach**. Paper prepared for the 14th Conference of the Italian Society for Public Economics SIEP, Pavia, 4 - 5 October.
- Greater Sekhukhune Cross-Border District Municipality (CBDM). 2002. **Greater Sekhukhune District Integrated Development Plan**. Groblersdal: Sekhukhune CBDM.
- Greater Sekhukhune CBDM. 2005. **Introduction to Greater Sekhukhune District**. Internet (<http://www.sekhukhune.gov.za>).
- Greenberg, S. 2010. **Status Report on Land and Agricultural Policy in South Africa, 2010**. PLAAS Research Report 40, March.
- Goldman, I. *et al* (Marumo, J. M. & Toner, A.). 2002. **Goodbye to Projects? The Institutional Impacts of a Livelihood Approach on Development Interventions**. An Appraisal of Livelihoods Approaches in South Africa. DFID Working Paper No. 2. Research Project No. R7908, February.
- Gore, C. 2000. The Rise and Fall of the Washington Consensus as a Paradigm for Developing Countries. **World Development**, 28: 5, 789 – 804.

- Gore, C. 1996. **Social Exclusion and the Design of Anti-Poverty Strategy in Developing Countries**. Mimeo. Geneva: International Institute of Labour Studies.
- Hall, M. C. 2000. **Tourism Planning: Policies, Processes and Relationships**. Harlow: Prentice Hall.
- Harries, P. 1984. **A Forgotten Corner of the Transvaal: Reconstructing the History of a Relocated Community through Oral Testimony and Song**. Paper presented in the History Workshop on Class, Community and Conflict: Local Perspectives, held at the University of the Witwatersrand from 31 January to 4 February.
- Hamber, B. 1998. **Who Pays for Peace? Implications of the Negotiated Settlement for Reconciliation, Transformation and Violence in a post-apartheid South Africa**. Public lecture presented at the Annual General Meeting of the Catholic Institute for International Relations, held at the London Voluntary Sector Resource Centre on 30 October.
- Harries, P. 1984. **A Forgotten Corner of the Transvaal: Reconstructing the History of a Relocated Community through Oral Testimony and Song**. Paper presented in the History Workshop on Class, Community and Conflict: Local Perspectives, held at the University of the Witwatersrand from 31 January to 4 February.
- Harris, J. 2001. **Depoliticizing Development: The World Bank and Social Capital**. London: Anthem Press.
- Hart, G. 2008. The Provocations of Neoliberalism: Contesting the Nation and Liberation after Apartheid. **Antipode**, 40: 4, 678-705.
- Hart, T. 2009. Exploring definitions of food insecurity and vulnerability: Time to refocus assessments. In **Agrekon**, 48: 4 (December), 362 – 383.
- Heese, K. & Allen, K. 2009. Data Management for Improved Service Delivery in South African Local Government. Paper presented by Municipal IQ to DBSA Knowledge Week, 01 November. Internet [www.municipaliq.co.za] Accessed: 15 October 2009.
- Hirschman, A. O. 1958. **A Theory of Unbalanced Growth in the World Economy: The Strategy of Economic Development**. New Haven: Yale University Press.
- Hoff, M. D. 1998. Sustainable Community Development: Origins and Essential Elements of a New Approach. In Hoff, M. D. (Ed.), **Sustainable Community Development: Studies in Economic, Environmental and Cultural Revitalisation**, 1 - . Boca Raton (Florida): Lewis Publishers.
- Hussain, I. & Hanjra, M. A. 2004. Irrigation and Poverty Alleviation: Review of Empirical Evidence. In **Irrigation and Drainage**, Special Issue on 'Managing Water for Sustainable development' 53:1, 1 – 15, March.
- Hussein, K. 2002. **Livelihoods Approaches Compared: A Multi-Agency Review of Current Practice**. London: DFID/ODI, October.
- Hussein, K. & Nelson, J. 1998. **Sustainable Livelihoods and Livelihoods Diversification**. IDS Working Paper 69, Brighton: IDS.
- Independent Development Trust (IDT). 2000. **The Integrated Sustainable Rural Development Strategy**. Unpublished Report.
- Independent Development Trust (IDT). 2002. **Integrated Sustainable Rural Development Programme in its Current Form**. (Internet: <http://www.IDT.org.za>), 9 August 2003.
- IIED. 1994. **Whose Eden?: An Overview of Community Approaches in Wildlife Management**. London: IIED.
- International Finance Corporation (IFC). 2006a. **Performance Standards on Social and Environmental Sustainability**. Available online at www.ifc.org.
- International Finance Corporation (2006b). **Performance Standard 5: Land Acquisition and Involuntary Resettlement**. Available online at www.ifc.org.

- International Water Management Institute (IWMI). 2005. **Pro-poor Intervention Strategies in Irrigated Agriculture in Asia: Poverty in Irrigated Agriculture – Issues, Lessons, Options and Guidelines.** Final Synthesis Report by IWMI, in collaboration with the Asian Development Bank (ADB), May.
- Jackson, J. C. & Cheater A. P. 1994. Contract Farming in Zimbabwe: Case Studies of Sugar, Tea and Cotton. In Little, P. d. & Watts, J. M. (Eds.). 1994. **Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa**, 140 - 166. Madison: University of Wisconsin.
- Jacobs, P. 2003. Support for Agricultural Development. In Hall, R. (Ed.), **Evaluating Land and Agrarian Reform in South Africa** Series, No. 4, September. Cape Town: PLAAS, University of the Western Cape.
- Jacobs, P. *et al* (Lahiff, E. & Hall, R.). 2003. Land Redistribution. In Hall, R. (Ed.), **Evaluating Land and Agrarian Reform in South Africa** Series, No. 1, September. Cape Town: PLAAS, University of the Western Cape.
- Jacobs, R. 2001. **Joint Ventures and Partnership Schemes in Agriculture: Some International Experiences.** A Surplus People Project Research Report funded by the National Land Committee as part of the National Research Programme, November.
- Jaffe, S. M. 1994. Contract Farming in the Shadow of Competitive Markets: The Experience of Kenyan Horticulture. In Little, P. d. & Watts, J. M. (Eds.). 1994. **Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa**, 97 - 139. Madison: University of Wisconsin.
- Johnston, S & Bernstein, A. 2007. Voices of Anger: Protest and conflict in two municipalities. Centre for Development Enterprise: Johannesburg.
http://cage.dcis.gov.za/documents/pdf/Voices_of_Anger_26_4_07.pdf (Accessed 3/01/2010)
- Kamara, A. B. *et al* (van Koppen, B. & Magxingxa, L.). 2002. **Economic Viability of Small-scale Irrigation Systems in the Context of State Withdrawal: The Arabie Scheme in the Northern Province of South Africa.** Contributed Paper Presented at the 41st Annual Conference of the Agricultural Economic Association of South Africa (AEASA), October 2-3, 2003, Pretoria, South Africa
- Kepe, T. & Cousins, B. 2002. **Radical Land Reform is Key to Sustainable Rural Development in South Africa.** PLAAS Policy Brief Series: Debating Land Reform, Natural Resources and Poverty.
- Kirsten, J. F. *et al* (Sartorius, K., Kamwendo, I. Madola, M. & Likulunga, L.). 2005. **Policy issues for exploiting contract farming as a tool for empowering smallholder farmers in Southern Africa.** FANRPAN Policy Brief Series 04/05. August.
- Kirsten, J. & Sartorius, K. 2002a. Linking Agribusiness and Small-scale Farmers in Developing Countries: Is there a New Role for Contract Farming? In **Development Southern Africa**, 17: 4, October.
- Kirsten J. F. & Sartorius K. 2002b. **Farm-Agribusiness Linkages in South Africa: Empowering Disadvantaged Communities through Links with Agribusiness.** A Report prepared for the FAO, Rome. 31 August (Revised 4 November).
- Kirsten J. *et al* (Van Zyl, J. & Vink, N.). 1998. The Agricultural Democratisation of South Africa (Eds.). 1998. Introduction. In Kirsten J. *et al* (Van Zyl, J. & Vink, N.), **The Agricultural Democratisation of South Africa** (Eds.), 1 – 10. Cape Town: AIPA/Francolin Publishers.
- Kloezen, W. H. *et al* (Garcés-Restrepo, C. & Johnson, S. H.). 1997. **Impact Assessment of Irrigation Management Transfer in the Alto Rio Lerma Irrigation District, Mexico.** IWMI Research Report 15. Colombo: IWMI.
- Koenig, D. 2002. **Toward Local Development and Mitigating Impoverishment in Development Induced Displacement and Resettlement Projects.** Refugee Studies Centre, Working Paper 8.
- Kooiman, J. & Jentoft, S. 2009. Meta-Governance: Values, Norms and Principles, and the Making of Hard Choices. In *Public Administration*, 87: 4, 818 – 836.
- Kooiman, J. 2008. Exploring the Concept of Governability. *Journal of Comparative Policy Analysis Research and Practice*, 10: 2, 171 – 190.

- Krishna, A. *et al* (Kristjanson, P., Radeny, M. and Nindo, W.). 2004. Escaping Poverty and Becoming Poor: in twenty Kenya villages. **Journal of Human Development**, 5: 2, 211 – 226.
- Kruger, F. 2001. A river of politics runs through it. **Sunday Times Insight**, 07 January. Article on the need to dismantle apartheid irrigation along the Olifants River. Internet (<http://www.suntimes.co.za/2001/01/07/insight.in02.htm>), 12/01/2004.
- Kydd, J. 2002. **Agriculture and Rural Livelihoods : Is Globalisation Opening or Blocking Paths Out of Rural Poverty ?** Agricultural Research and Extension Network (AGREN) Paper No. 121, January.
- Lahiff, E. & Cousins, B. 2005. Smallholder Agriculture and Land Reform in South Africa. **Institute for Development Studies (IDS) Bulletin**, 36: 2 (June).
- Lahiff, E. P. 1999. **Land Tenure in the Arabie-Olifants Irrigation Scheme**. IWMI South Africa Working Paper No. 2. Colombo, Sri Lanka: IWMI.
- Lahiff, E. P. 2000. Land Tenure in South Africa's Communal Areas: A Case Study of the Arabie-Olifants Scheme. **African Studies Journal**, 59: 1, 46 - 69.
- Laker, M. C. 2004. **Development of a General Strategy for Optimizing the Efficient Use of Primary Water Resources for Effective Alleviation of Rural Poverty**. WRC Report No. KV149/04. Pretoria: WRC.
- Land Reform Group (LRG). 1995. Report on the Makuleke Community submitted to the Land Reform Research Programme, March.
- Lanjouw, J. O. 1998. **Demystifying Poverty Lines**. SEPED Series on Poverty Reduction, UNDP Poverty Elimination Programme. Internet (<http://www.eldis.org/static/DOC6774.htm>) 06/09/2004.
- Lankford, B. 2003. Irrigation-based Livelihood Trends in River Basins: Theory and Policy Implications for Irrigation Development. **Physics and Chemistry of the Earth**, 28, 817 – 825.
- Levin, R. 2002. Land and Agrarian Reform in South Africa: Contemporary Challenges and Perspectives. In Ramachandran, V. K. & Swaminathan, M. (Ed.), **Agrarian Studies: Essays on Agrarian Relations in Less Developed Countries**, 166 - 178. London: Zed Books.
- Levin, R. & Weiner, D. 1996. The Politics of Land Reform in South Africa after Apartheid: Perspectives, Problems, Prospects. **Journal of Peasant Studies**, 23: 2, 3, January - April, 93 - 119. Special Issue on the Agrarian Question in South Africa (Ed. Bernstein, H.). London: Frank Cass & Co. Ltd.
- Ligthelm, M. 2001. Olifants Water Management Area: Catchment Management Agency Establishment. **Intersectoral Management of River Basins**, 23 - 43. Proceedings of an International Workshop on Integrated Water Management in Water-stressed River Basins in Developing Countries: Strategies for Poverty Alleviation and Agricultural Growth, held at the Loskop Dam (Mpumalanga) from 16 to 21 October.
- Limpopo (Northern Province) Department of Agriculture. 2001. Arabie/Olifants Irrigation Scheme CPC Funding: Motivation for additional funding for Upper Arabie/Olifants CPC and Mid-Arabie/Olifants CPC. Proposal prepared by Loxton Venn and Associates (LVA) on behalf of the Northern (Limpopo) Province Department of Agriculture.
- Limpopo Department of Agriculture (LDA). 2002. RESIS: A Business Plan for the Revitalization of Smallholder Irrigation Schemes in the Limpopo Province, November.
- Limpopo Department of Agriculture (LDA). 2000. A proposal for the use of an existing DBSA movable assets loan at Makuleke Irrigation Scheme, August.
- Limpopo Department of Agriculture (LDA). 2003. **Water Care Programme: Technical Plan for Rehabilitation of Makuleke Irrigation Scheme**. Prepared by Golder & Associates, LVA, WOMIWU and Rural Integrated Engineering (RIEng).
- Limpopo Provincial Government. 2004. **Limpopo Provincial Growth and Development Strategy (PGDS): 2004 to 2014**. Polokwane: Office of the Premier.

- Little, P. D. & Watts, M. J. 1994. Introduction. In Little, P. D. & Watts, M. J. (Ed.), **Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa**, 3 – 18. Madison: The University of Wisconsin Press.
- Little, P. D. 1994. The Development Question. In Little, P. d. & Watts, J. M. (Eds.).1994. **Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa**, 216 - 257. Madison: University of Wisconsin.
- Lipton, M. & Ahmed, I. 1997. **Impact of Structural Adjustment on Sustainable Rural Livelihoods: A Review of the Literature**. IDS Working Paper 62. Institute of Development Studies and Poverty Research Unit, University of Sussex.
- Liverman, D. M. 1990. **Vulnerability to Global Climatic Change**. In Karsperson, R. E. et al (Karsperson, K., Dow, K. Golding, D. & Karsperson, J. X. (Eds.), Understanding Global Environmental Change: The Contributions of Risk Analysis and Management, Chapter 26, 27 – 44. Worcester, MA: Clark University.
- Machete, C. L. et al (Mollel, N. M., Ayisi, K., Mashatola, M. B., Anim, F. D. K. & Vanassche, F. 2004. **Smallholder Irrigation and Agricultural Development in the Olifants River Basin of Limpopo Province: Management Transfer, Productivity, Profitability and Food Security Issues**. WRC Report No. 1050/1/04. Pretoria: WRC.
- Machete, C. L. & Mollel, N. M. 2000. Extension and Support Services for Smallholder Agricultural Development in South Africa: Who is the Smallholder Farmer? In Cousins, B. (Ed.), **At the Crossroads: Land and Agrarian Reform in South Africa into the 21st Century**, 340 – 348. Cape Town: PLAAS, University of the Western Cape; National Land Committee (NLC).
- MacNeill, J. et al. (Winsemius, P. & Yakushiji, T.). 1991. **Beyond Interdependence: The Meshing of the World's Economy and the Earth's Ecology**. New York: Oxford University Press.
- Malena, C. 2004. **Strategic Partnership: Challenges and Best Practices in the Management and Governance of Multi-Stakeholder Partnerships Involving UN and Civil Society Actors**. Background paper prepared for the Multi-Stakeholder Workshop on Partnerships and UN-Civil Society Relations Pocantico, New York, February.
- Manona, S. et al (Denison J., Van Averbeke, W. and Masiya, T.). 2010. **Proposed Land Tenure and Land Administration Interventions to Increase Productivity on Smallholder Irrigation Schemes in South Africa**. Paper presented at 'Overcoming Inequality and Structural Poverty in South Africa: Towards Inclusive Growth and Development', 20-22 September 2010, Birchwood Hotel and Conference Centre, Johannesburg. URL: <http://www.phuhlisani.com/oid%5Cdownloads%5CManona%20et%20al.pdf> (Accessed 15 August 2012).
- May, J. (Ed.). 2000. **Poverty and Inequality in South Africa: Meeting the Challenge**. London; New York: Zed Books.
- May, J. et al (Budlender, D. Mokate, R. Rogerson, C. & Stavrou, A.). 1998. **Poverty and Inequality in South Africa**. Report prepared for the Office of the Executive Deputy Presidency and the Inter-Ministerial Committee for Poverty and Inequality, 13 May.
- Mayson, D. 2003. Joint Ventures. In Hall, R. (Ed.), **Evaluating Land and Agrarian Reform in South Africa Series**, No. 7 (September). Cape Town: PLAAS, University of the Western Cape.
- Mayson, D. 2004. **Joint Ventures**. Policy Brief 8. Cape Town: PLAAS (University of the Western Cape).
- Mbeki T. 2003. 'Letter from the President'. <http://www.anc.org.za/ancdocs/anctoday/2003/at33.htm#preslet>.
- Mitchell, B. 1979. **Geography and Resource Analysis**. New York: Longman.
- McDowell, C. & De Haan, A. 1997. **Migration and Sustainable Livelihoods: A Critical Review of the Literature**. IDS Working Paper 65.

- Mphahlele, R. E. *et al* (Malakalaka, T. M. & Hedden-Dunkhorst, B.). 2000. **Characteristics of Smallholder Irrigation Farming in South Africa: A Case Study of the Arabie-Olifants River Irrigation Scheme**. IWMI South Africa Working Paper No. 3. Colombo, Sri Lanka: IWMI.
- Murray, C. 2002. **Livelihoods Research: Transcending Boundaries of Time and Space**. In *Journal of Southern African Studies*, 28:3, 489 – 509.
- Myrdal, G. (1957) **Economic Theory and Underdeveloped Regions**. London: Methuen.
- NEPAD. 2005. Comprehensive Africa Agriculture development Programme (CAADP). Published by NEPAD.
- Nleya, N. *et al* (Thompson, L., Tapscott, C., Piper, L. & Esau, M.). 2011. "Reconsidering the Origins of Protest in South Africa: Lessons from Cape Town and Pietermaritzburg". **Africanus**, 41:1, 14 - 29.
- Nleya, N. 2011. Linking service delivery and protest in South Africa : An exploration of evidence from Khayelitsha. **Africanus**, 41: 1, 3 – 13.
- North, D. C. 1990. **Institutions, Institutional Change and Economic Performance**. Cambridge: Cambridge University Press.
- Norton, R. D, 2004. **Agricultural Development Policy: Concepts and Experiences**. Chichester: John Wiley and Sons Ltd.
- Nussbaum, M. 1988. Nature, Function, and Capability: Aristotle on Political Distribution. *Oxford Studies in Ancient Philosophy Supplement*, No. 1, 145 – 184.
- Nussbaum, M. 1990. Aristotelian Social Democracy. In Bruce, R. D. *et al* (Mara, G & Richardson, H. (Eds.), *Liberalism and the Good*. New York: Routledge, 203 – 252.
- Omara-Ojungu, P. H. 1992. **Resource Management in Developing Countries**. Harlow: Longman Group UK Ltd.
- O’Riordan, T. 1998. Civic Science and the Sustainability Transition. In: Warburton, D. (Ed.), **Community and Sustainable Development: Participation in the Future**, 96 – 116. London: Earthscan Publications Ltd.
- Ostrom, E. 1992. **Crafting institutions for self-governing irrigation systems**. University of Michigan: ICS Press.
- Ostrom, E. 1990. **Governing the Commons: The Evolution of Institutions for Collective Action**. Cambridge: Cambridge University Press.
- Ostrom, E. 1989. Issues of Definition and Theory: Some Conclusions and Hypotheses. In the **Proceedings of a Conference on Common Property Resources Management**, 599 – 615, April. Washington DC: National Academy Press.
- Perret, S. 2001. **New Water Policy, Irrigation Management Transfer and Smallholding Irrigation Schemes in South Africa: Institutional Challenges**. Working Paper 2001 - 15, Department of Agricultural Economics, Extension and Rural Development, University of Pretoria. Paper proposed at the FAO E-mail Conference on Irrigation Management Transfer, held from September to October. Internet (<http://www.fao.org/landandwater/aglw/waterinstitutions/default.htm>).
- Perret, S. 2002. **Supporting Decision-making on Rehabilitation and Management Transfer of Government Smallholding Irrigation Schemes: The Smile Approach**. Paper presented at the Rural and Urban Development Conference held at the National Institute for Economic Policy, Johannesburg, from 18 to 19 April. Published in the proceedings.
- Peters, P. E. 2004. Inequality and Social Conflict over Land in Africa. **Journal for Agrarian Change**, 4: 3 (July 2004), 269 – 314.
- Piontek, C. M. 2000. **Listening for a Change: A Testimony of Non-violent Land Reclamation in South Africa**. Hereford Oral History Project on behalf of Africare and the Rural Enterprise and Agribusiness Programme (REAP), August.

- Platzky, L. & Walker, C. 1985. **The Surplus People: Forced Removals in South Africa**. Johannesburg: Ravan Press.
- Putnam, R. D. 2001. Social Capital: Measurement and Consequences. **Isuma: Canadian Journal of Policy Research**, No. 2 (Spring 2001), 41 - 51.
- Razavi, S. 2003. Introduction: Agrarian Change, Gender and Land Rights. **Journal of Agrarian Change**, 3: 1, 2, January and April, 2 - 32. Special Issue on Agrarian Change, Gender and Land Rights (Ed. Razavi, S.). Oxford: Blackwell Publishing.
- Reardon, T. et al (Berdegue, J. & Escobar, G.). 2001. Rural Nonfarm Employment and Incomes in Latin America: Overview and Policy Implications. **World Development**, 29: 3, 395 - 409.
- Ribot, J. 2002. **African Decentralization: Local Actors, Powers and Accountability**. United Nations Research Institute for Social Development (UNRISD) Working Paper No. 8, Democracy, Governance and Human Rights (PP - DGHR - 8), 1 December. Geneva: UNRISD. (Original draft paper entitled Resistance to Decentralization in Africa).
- SASUSG. 1997. **Evaluating Eden: A Review of Community Wildlife Management in Southern Africa**. Report to the British Government's Overseas Development Administration, July 1994, London. 2nd Annual Batho Pele Learning Network.
- Shaker, M. 2005. **A Case Study on Revitalization of Smallholder Irrigation Schemes in Limpopo Province "RESIS"**. Paper presented at a 2nd Annual Batho Pele Workshop held in Nelspruit (South Africa) from 29 March to 1 April.
- Schreiner, B. et al (Tapela, B. & Van Koppen, B.). 2010. **Overcoming inequality and structural poverty in South Africa: Towards inclusive growth and development**. Paper presented at an Institute for Poverty Land and Agrarian Studies (PLAAS) Poverty Conference held in Johannesburg from 09 to 10 September.
- Schreiner, B & Van Koppen, B. 2001. From Bucket to Basin: Poverty, Gender and Integrated Water Management in South Africa. **Intersectoral Management of River Basins**, 45 - 69. Proceedings of an International Workshop on Integrated Water Management in Water-stressed River Basins in Developing Countries: Strategies for Poverty Alleviation and Agricultural Growth, held at the Loskop Dam (Mpumalanga) from 16 to 21 October.
- Scoones, I. 2009. Livelihoods Perspectives and Rural Development. In **Journal of Peasant Studies**, 36: 1, 171 — 196.
- Scoones, I. 1998. **Sustainable Rural Livelihoods: A Framework for Analysis**. IDS Working Paper 72. Brighton: IDS.
- Scott, W. R. 1995. **Institutions and Organizations**. Thousand Oaks: Sage Publications.
- Seidman, A. & Anang, F. (Ed.). 1992. **21st Century Africa: Towards a New Vision of Self-Sustainable Development**. Trenton (New Jersey): Africa World Press.
- Sen, A, 1999. *Development as Freedom*. Oxford: Oxford University Press.
- Seville, D. et al (Buxton, A. & Vorley, B.). 2011. **Under What Conditions Are Value Chains Useful Tools for Pro-Poor Development?** Ford Foundation Report by The Sustainable Food Laboratory. London: IIED.
Internet (<http://www.fao.org/landandwater/aglw/waterinstitutions/default.htm>).
- Shah, T. et al (van Koppen, B., Merrey, D., De Lange, M. & Samad, M.). 2002. **Institutional Alternatives in African Smallholder Irrigation: Lessons from International Experience with Irrigation Management Transfer**. IWMI Research Report No. 60. Colombo, Sri Lanka: IWMI.
- Singh, S. 2005. **Contract Farming for Agricultural Development Review of Theory and Practice with Special Reference to India**. CENTAD Working Paper. New Delhi: Centad.
- Singh, S. 2002. Contracting Out Solutions: Political Economy of Contract Farming in the Indian Punjab. **World Development**, 30: 9, 1621 – 1638.

- Sinwell, L. 2010. Conceptualizing direct action as a form of participation in development: A South Africa case. *Politikon*, 37: 1, 67 - 83.
- South Africa. 1996. **The Constitution of the Republic of South Africa**. Act 108 of 1996, adopted on 8 May and amended by the Constitutional Assembly on 11 October.
- South Africa. 1998a. **National Water Act**. Act 36 of 1998. Legislation No. 19182, Gazette No. 1091, 26 August.
- South Africa. 1998b. **Agricultural Policy in South Africa**. Discussion document. Ministry for Agriculture and Land Affairs, Pretoria.
- South Africa. 2000. **Municipal Systems Act**. Act 32 of 2000. Legislation No.21776, Gazette No. 1187, 20 November.
- South Africa. 2001a. **Land Redistribution for Agricultural Development (LRAD): A Sub-Programme of the Land Redistribution Programme**. Policy document. National Department of Land Affairs. Pretoria: DLA.
- South Africa. 2001b. **The Strategic Plan for South African Agriculture**. Sector Plan Document. National Department of Agriculture (NDA), 27 November.
- South Africa. 2004a. **Broad-Based Black Economic Empowerment Framework for Agriculture (AgriBEE)**. Draft Discussion Document. NDA, 26 July.
- South Africa. 2004b. **Policy on the Financial Assistance of Resource Poor Irrigation Farmers**, Policy document by the Department of Water Affairs and Forestry (DWAF), November. Pretoria: DWAF.
- South Africa. 2004c. **Progress Report on the Implementation of the Comprehensive Agriculture Support Programme (CASP)**. Report by the National Department of Agriculture, 31 August.
- South Africa. 2005. **A Draft Position Paper for Water Allocation Reform in South Africa: Towards a framework for Water Allocation Planning**. Discussion document of the Department of Water Affairs and Forestry (DWAF), January.
- South Africa. 2007. **The Accelerated and Shared Growth Initiative for South Africa (AsgiSA): Annual Report 2006**. Pretoria: Office of the Deputy President.
- South Africa. 2012. **Strategic Plan for Smallholder Producers: 2011 – 2014/15**. Draft 4, 01 January.
- StatsSA. 2001. **Population Census 2001**. Pretoria: StatSA.
- StatsSA. 1996. **Population Census 1996**. Pretoria: StatSA.
- Statistics South Africa (StatSA). 2002. **Measuring Rural Development: Baseline Statistics for the Integrated Sustainable Rural Development Strategy**. Pretoria: StatSA.
- Streeeten, P. et al (Burki, S. J., Ul Haq, M., Hicks, N. & Stewart, F.). 1981. **First Things First: Meeting Basic Human Needs in Developing Countries**. London: Oxford University Press for the World Bank.
- Stewart, F. 1985. **Basic Needs in Developing Countries**. Maryland: Johns Hopkins University Press.
- Sustainable Livelihoods in Southern Africa (SLSA) Team. 2003. **The Rural Poor, the Private Sector and Markets: Changing Interactions in Southern Africa**. Cape Town: PLAAS, University of the Western Cape.
- Swartz, M. et al (Shilenge, T. & Naidoo, S.). 2003. **Rural Development Using Spatial Planning Frameworks: An Overview of the Role of Spatial Development Frameworks in Promoting Rural Development**. Paper prepared for the South African Land Reform Conference held in Johannesburg, May.
- Swift, J. 1989. **Why are Rural People Vulnerable to Famine?** IDS Bulletin, 20: 2, 8 – 15. April.
- Tapela B. N. forthcoming. **Strategic Partnerships in Smallholder Irrigation Schemes in Limpopo Province: A Critique of Institutional Arrangements for the 'Recharge' Phase of the RESIS Programme**. Paper to be published in a Special Edition of *Law Democracy And Development* entitled 'Working on the Margins: Addressing Structural Poverty and Economic Marginalization'.

- Tapela, B. N. et al (Ntsebeza, L., Nleya, N. & Sigenu, K.). 2011a. **Social Water Scarcity and Water Use**. Final Report to the Water Research Commission (WRC K5 1940//3), June.
- Tapela, B. N. et al (Jenhezwa, V. R., Magoba, R. F. & Hlongwane, A. G.). 2011b. **Baseline and scoping study on the development and sustainable utilisation of storage dams for inland fisheries and their contribution to rural livelihoods**. Report on indigenous knowledge and practices, subsistence, commercial and recreational fishing. Prepared for the South African Water Research Commission (WRC K5 1957//4), September.
- Tapela, B. N. 2009. **Water Rights in Informal Economies: Case Studies of Makuleke, Phetwane and Fifteen Communities in the Arabie Irrigation Area (RESIS Cluster Eleven) in Limpopo Province, South Africa**. Research Report prepared in collaboration with IWMI under the South African Component of the Consultative Group for International Agricultural Research (CGIAR) Challenge Programme for Water and Food (Project 66).
- Tapela, B. N. et al (Matete M. & Heinsohn, D.). 2009a. **A Training Manual on Selected Economic and Social Aspects of Large Water Infrastructure, for the Sustainable Major Water Infrastructure Development Programme in Eastern and Southern Africa**. Prepared for SADC Water Division, East African Community (EAC) Environment and natural resources Division, UNEP & InWEnt.
- Tapela, B. N. et al (Buschër, B., Maluleke, L., Twine, W. & Steenkamp, C.). 2009b. **Guidelines for Negotiating Social Research in Communities living adjacent to Transboundary Protected Areas: Kruger National Park**. Johannesburg: University of Johannesburg.
- Tapela, B. N. 2008. Livelihoods in the Wake of Agricultural Commercialization in South Africa's Poverty Nodes: Insights from Small-scale Irrigation Schemes in Limpopo Province. In **Development Southern Africa**, Special Issue: Living on the Margins. Volume 25 Number 2, June.
- Tapela, B. N., Maluleke, L. & Mavhunga, C. 2007. New Architecture, Old Agendas: Perspectives on Social Research in Rural Communities Neighbouring the Kruger National Park. In **Conservation and Society**. Special Issue: Politics of Engagement between Biodiversity Conservation and Social Sciences. 5: 1, 60 - 87.
- Tapela, B. N. 2001. Community Participation in Natural Resources Management: Case Study of Makuleke Community. Unpublished MA dissertation (cum laude), Geography Department, University of Pretoria, South Africa.
- Tapela, B. N. 2002a. **Assessment of Sustainability in Integrated Development Planning (IDP) and Local Economic Development (LED) processes in the Limpopo Province of South Africa: Case Study of the Greater Groblersdal Local Authority Area in the Sekhukhune Cross Border District Municipality**. Research report to the United Nations Development Programme's (UNDP) Integrated Development Planning Review towards the World Summit on Sustainable Development (WSSD) held in Johannesburg. Published in **Local Pathway to Sustainable Development in South Africa**. Pretoria: The World Summit IDP-LA21 Partnership (DPLG, DEAT, SALGA, CSIR, GTZ, DBSA & UNDP).
- Tapela, B. N. 2002b. Challenge of Integration in the Implementation of Zimbabwe's New Water Policy: Case Study of the Catchment Level Institutions Surrounding the Pungwe-Mutare Water Supply Project. In **Physics and Chemistry of the Earth**, Vol. 27, Nos. 11 – 22, 993 – 1004. (Published by Elsevier Science Ltd., Exeter (UK)).
- Tapela, B. N. & Omara-Ojunga, P. H. 1999. Towards Bridging the Gulf between Wildlife Conservation and Rural Development in Post-Apartheid South Africa: The Case of the Makuleke Community and the Kruger National Park. In **South African Geographical Journal** 82: 1, 148 - 155.
- Tapela, B. N. 1999. **Makuleke: A Gender-Sensitive Analysis of Community Participation in an Integrated Conservation and Development Programme**. In: Fairhurst, J., Musyoki, A., Wilson, D. & Saidi, T. (Eds.) *Integrating Environment and Society: The Thohoyandou Environs*, Northern

- Province, South Africa. Centre for Science Development (CSD) Collaborative Research Project, University of Pretoria and University of Venda, 179 –188.
- Tapela, B. N. 1997. **Geographical Perspectives on the Interactions between the Kruger National Park and its Neighbouring Rural Communities: A Case Study of the Makuleke Community**. Honours Dissertation: University of Venda, Thohoyandou.
- Tapela, T. N. 1985. **Growth Points and Regional Development in Zimbabwe: A Case Study of Sanyati**. Unpublished MA Thesis. University of McGill (Montreal).
- Terreblanche, S. J. 1998. **Empowerment in Context: The Struggle for Hegemony in South Africa**. In Kirsten, J. et al (Van Zyl, J. & Vink, N.) (Eds.), *The Agricultural Democratization of South Africa*. Cape Town: AIPA/Francolin Publishers.
- Tomlinson Commission Report. 1955. **Commission for the Socio-economic Development of the Bantu Areas within the Union of South Africa**. Government Printer, Pretoria.
- Tobacco Institute of South Africa (TISA). 2004. **Hereford Tobacco Project**. Press Release, 25 March. Internet [<http://www.tobaccosa.co.za/releases3.asp>] 25/03/2004.
- Tren, R. & Schur, M. 2000. **Olifants River Irrigation Schemes: Reports 1 and 2**. World Bank/IWMI Working Paper 3 (IWMI South Africa Working Paper No. 5). Colombo, Sri Lanka: IWMI.
- Turton, A. R. and Ohlsson, L. 2000. **Water scarcity and social stability: towards a deeper understanding of the key concepts needed to manage water scarcity in developing countries**. SOAS Water Issues Study Group, Occasional Paper 17. London: University of London.
- UNDP. 1999. **Sustainable Livelihoods: Concepts, Principles and Approaches to Indicator Development**. Sustainable Livelihoods Unit of the UNDP, 1 - 22. Internet [<http://www.undp.org/sl/Documents/Indicators.htm>] 06/09.2004.
- UNDP. 2004. **Human Development Report 2004**. New York: Oxford University Press.
- UNEP. 2007. **Dams and Development: A Compendium of Relevant Practices for Improved Decision Making**. Section 5: Compensation Policy (focus on Benefit Sharing Mechanisms). Internet [www.unep.org/dams]
- UNEP. 2006. Addressing Outstanding Social Issues. Dams and Development Project: Compendium on Relevant Practices – 2nd Stage. Final Report.
- Van Averbeke, W. et al (Denison, J. & Mnkeni, P. N. S.). 2011. **Smallholder irrigation schemes in South Africa: A review of knowledge generated by the Water Research Commission**. Water SA, 37: 5, WRC 40-Year Celebration Special Edition 2011.
- Van Averbeke, W. & Mohamed, S. S. 2006. **Smallholder Irrigation Schemes in South Africa: Past, Present and Future**. Internet [<http://www.sancid.org.za/files/keyNotes>] 29/08/2012.
- Van Averbeke, W. 2008. **Best Management Practices for Small-Scale Subsistence Farming on Selected Irrigation Schemes and Surrounding Areas through Participatory Adaptive Research in Limpopo Province**. Report No. TT344/08. Water Research Commission, Pretoria
- Van Koppen, B. et al (Van der Zaag, P., Manzungu, E., Tapela, B. & Mapedza, E.). 2010. **Roman water law in rural Africa: dispossession, discrimination and weakening state regulation?** Paper presented at an International Association of the Study of the Commons (IASC) Conference held in Hyderabad from 10 to 14 January.
- Van Koppen, B. et al (Hilmy, S. Aliber, M., Cousins, B. & Tapela, B.). 2009. **Water Resources Management, Rural Redress and Agrarian Reform**. Development Bank of Southern Africa (DBSA) Development Planning Division. Working Paper Series No.7 , DBSA: Midrand.
- Van Koppen, B. 2002. **A Gender Performance Indicator for Irrigation: Concepts, Tools and Applications**. Research Report 59. Colombo (Sri Lanka): International Water Management Institute.
- Van Koppen, B. 2001. Water Rights. In **2020 Focus 6: Empowering Women to Achieve Food Security**, Brief 3 of 12, August.

- Van Rooyen, J. *et al* (van Zyl, J., Kirsten, J., Stroebel, A. & Swanepoel, F.). 2001. Rural Development: A South African Study. In **Proceedings of the first Integrated Rural Development Programme Public Policy Colloquium**, 37 – 51. Colloquium organized by the Centre for Applied Social Studies (CASS), University of Zimbabwe and held at the Great Zimbabwe Hotel, Masvingo, from 28 to 30 March.
- Van Wiclin, I. & Warren W. 1999. **Sharing Project Benefits to Improve Resettlers' Livelihoods**. In Cernea, M. (Ed). *The Economics of Involuntary Resettlement: Questions and Challenges*. World Bank.
- Van Zyl, J. *et al* (Kirsten, J. & Binswanger, H.)(Eds.). 1996. Introduction. In Van Zyl, J. *et al*(Kirsten, J. & Binswanger, H.)(Eds.), **Agricultural Land Reform in South Africa: Policies, Markets and Mechanisms**, 3 - 17. Cape Town: Oxford University Press.
- Vink, N. & J. Kirsten. 2000. **Deregulation of Agricultural Marketing in South Africa: Lessons Learned**. Monograph 25. Sandton (South Africa): The Free Market Foundation.
- Vink, N. *et al* (Kirsten, J. F. & Van Zyl, J.). 1998. Favouritism in Agricultural Policy and Support Services. In Kirsten J. *et al* (Van Zyl, J. & Vink, N.) (Eds.), **The Agricultural Democratisation of South Africa**, 71 – 82. Cape Town: AIPA/Francolin Publishers.
- Vivian, J. M. 1995. Foundations for Sustainable Development: Participation, Empowerment and Local Resource Management. In Vivian, J. M. & Ghai D. (Ed.), **Grassroots Environmental Action: People's Participation in Sustainable Development**, 50 - 80. London: Routledge.
- Veldwisch, G. J. A. 2004. **From Rehabilitation to Revitalization: Experiences in the Thabina Irrigation Scheme, Limpopo Province**. Paper presented at an IWMI workshop held in Silverton, Pretoria, on 7 May.
- Warburton, D. 1998. **A Passionate Dialogue: Community and Sustainable Development**. In: Warburton, D. (Ed.), *Community and Sustainable Development: Participation in the Future*, 1 - 39. London: Earthscan Publications Ltd.
- Watts, M. J. 1994. Life under Contract: Contract Farming, Agrarian Restructuring, and Flexible Accumulation. In Little, P. D. & Watts, M. J. (Ed.), **Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa**, 21 - 77. Madison: The University of Wisconsin Press.
- WCD (World Commission on Dams). 2000. *Dams and Development: A New Framework for Decision Making*. Earthscan Publishers: London (UK).
- Wegner, L. & Zwart, G. 2011. **Who will Feed the World? The Production Challenge**. Oxfam Research Report, April.
- Wilson, F. *et al* (Kanji, N. & Braathen E.). 2001. **Poverty Reduction: What Role for the State in Today's Globalized Economy?** London: Zed Books Ltd.
- Wilson, J. 1986. The Political Economy of Contract Farming. In **Review of Radical Political Economics**. Vol. 18(4):47:70. Internet [www.sagepublications.com].
- World Bank. 2004. *Involuntary Resettlement Sourcebook, Planning and Implementation in Development Projects*. Washington: The International Bank for Reconstruction and Development.
- World Bank Group (2007). *Policies, Procedures, Directives and Standards as contained in Operational Policy 4.12 Involuntary Resettlement (OP 4.12) and Bank Procedure 4:12 Involuntary Resettlement (BP 4.12)*.
- World Bank. 1998. *Recent Experience with Involuntary Resettlement. Overview Report of the Operations Evaluation Department*. Report No 17538.
- Zwarteveen, M. 1997. **A Plot of One's Own: Gender Relation and Irrigated Land Allocation Policies in Burkina Faso**. Research Report 10. Colombo: IWMI.

Zwarteveen, M. & Neupane, N. 1996. **Free-riders or Victims: Women's non-participation in Irrigation Management in Nepal's Chhattis Mauja Irrigation Scheme.** Research Report 7. Colombo: International Irrigation Management Institute (IIMI).

