

UNIVERSITY OF THE WESTERN CAPE

GILBERTO RICARDO

STUDENT NUMBER *****

MASTER IN DEVELOPMENT STUDIES

INSTITUTE FOR SOCIAL DEVELOPMENT

**Sustainable Tourism Development: A case study of Bazaruto Island in
Inhambane, Mozambique**



Supervisor: Professor Pieter le Roux

November 2004.

**SUSTAINABLE TOURISM DEVELOPMENT: A CASE STUDY OF BAZARUTO
ISLAND IN INHAMBANE, MOZAMBIQUE**

BY

GILBERTO RICARDO



A dissertation submitted in partial fulfilment of the requirements for the Degree of Master of Arts in Development Studies in the Institute for Social Development (ISD), Faculty of Arts, accredited by the University of the Western Cape

Signed _____
Professor Pieter le Roux (Supervisor)

Signed *Gilberto Ricardo*
Gilberto Ricardo (Candidate)

November 2004

Abstract

Sustainable Tourism Development: A case study of the Bazaruto Island in Inhambane, Mozambique

Gilberto Ricardo

MPhil mini-thesis, Institute for Social Development (ISD), Faculty of Arts, University of the Western Cape.

Sustainable tourism development strategies are regarded as suitable for developed countries, while pro-poor tourism strategies are seen as suitable approaches for underdeveloped countries. Both approaches stress the importance of local community-based or collaborative tourism management. The goal of these strategies is for local communities to achieve a more equitable share of benefits accruing from tourism development.

This study deals basically with the problem of which policy changes need to be brought about to ensure sustainable tourism development on Bazaruto Island. From an economic perspective, one would wish to maximise the economic returns to tourism, ensuring that as many of the benefits as possible stay within Mozambique while some accrue to local community members. In addition, from an ecological perspective, it would be necessary to ensure that much of the pristine environment is retained. The local community would wish to ensure significant participation in preserving and promoting its culture as part of the development of tourism.

A population of 2517 people live on the island and a total of 61 structured questionnaires were administered to tourism workers. A public debate and group and individual interviews with tourism resort workers, native island community members, managers of the tourist

resorts, tourists and community based organisations (CBOs) were also conducted. These methods were complemented with visual observation, recording of geographical coordinates using the Global Positioning System (GPS), ground measuring, video recording and picture shooting. Afterwards, several computer packages such as the Statistical Package for Social Sciences (SPSS), MapInfo, Excel and Word Processing were used to organise, manipulate, analyse and present data.

This study found that the new policy change for sustainable tourism development is a partnership between tourism investors and native islanders, government and conservationists. It is the one strategy which has reduced conflicts of interests and scarce resources that have developed on the island among stakeholders who are concerned in tourism. Natural gas utilisation by the tourism sector contributes to both negative and positive impacts. The negative impacts include the leakage effects of foreign currency in the national economy. The pristine environment has been damaged since tourism promotion has increased the demand for firewood from local communities. Nevertheless, the new tourism policy brings positive environmental impacts such as sustainability and reducing air and sea pollution.

Local native communities do not have significant participation. There is lack of participation in decision-making in tourism development. Only 18% of the native community islanders are employed in the tourism industry. Non-participation and lack of integration of native islanders in the tourism business deny them the chance of enjoying economic benefits accruing from the sector. Non-integration and lack of participation is attributed to illiteracy and deficiency in technical skills of the native islanders. However, the major reasons for exclusion are the private nature of tourism investment and the spatial pattern of social development into ghettos, coupled with unwillingness to transfer know-how from tourism investors to the native islanders.

The researcher observed that the preservation and promotion of local culture in the development of tourism is only partially explored by tourism developers. There is little enhancement of cultural attractions, monuments, or architectural building style such as

employing traditional styles in the resort complexes by building thatch-roofed chalets presenting interiors adorned with locally made handcraft.

The study concludes that although there has been a failure to preserve the physical environment of the island, a production of waste, and over-utilisation of forestry resources, tourism development has had a positive environmental impact on the preservation of some indigenous plant species within the area.

Key words

Tourism

Development

Sustainability

Environment

Bazaruto

Community

Participation

Culture

Mozambique

Inhambane.

Dedication

To my wife, Verónica Armando, and our children, Gérsia, Waissi, Florinda and Ricardo: I thank you all for enduring both the hard test of time, emotional isolation, lack of warm family environment, and the long and lonely moments that I spent in the cold environment studying. I very much appreciate your wonderful moral support, love, sacrifices and persistence, and I owe to you my success and everlasting love and joy.

Acknowledgments

I am indebted to the Kellogg Foundation for funding this study. My special thanks go to Professor Dr. Arlindo Chilundo, the General Coordinator of the Land Studies Unit and Development (NET) of the Eduardo Mondlane University (UEM) and to the Arts Faculty Directorate, Professor Dr. Arlindo Ngunga and Dr. Inocêncio João Pereira, for awarding me the scholarship.

I am grateful to Professor Pieter Le Roux for his wise guidance and valuable and dedicated comments. He invested much time in helping me throughout the writing of the thesis.

I also owe special thanks to my employer and workmates in the Mozambican Government for material support. I recognize and appreciate the feedback from Professor Gordon Piri and Mr. Mark Boekstein from the geography department of UWC and Professor Jean van der Merwe from the geography department of Stellenbosch University for their useful comments, and the assistance from friends Munyaradzi Saruchera of the Land and Agrarian Studies at UWC, colleagues, Edwin, Joseff, Helen and Oswell with the readings and corrections that saw the completion of this piece. These colleagues played an important role because English is neither my home language nor largely spoken in my country of origin.

Particular thanks go to the management and staff of the Indigo Bay Resort, Bazaruto Lodge, and Island Tourist Resorts for material support during the fieldwork, including the Bazaruto National Park Management. I also extend my sincere gratitude to all the key informants from Bazaruto Island Native Communities, particularly the *Thomba Yethu* members and Castigo Alberto Dzivane.

To my friends and relatives, Estêvão and Inês Licussa, Francisco and Amelba Rungo, Hilário and Fáusta Cumaio, Augusto and Orlanda Cândida, João Meque, Franciso Meque, Zefanias Boaventura, Maria de Lurdes Guambe and my brother Leonardo Ricardo for their encouragement throughout the study period. Lastly, I am grateful to all the staff at ISD at UWC for their endless readiness to assist students each year.

Declaration

I hereby declare that this work, entitled “Sustainable Tourism Development: A Case Study of Bazaruto Island in Inhambane, Mozambique”, is my own work, that it has not been previously submitted for any degree or examination in any other university, and that all sources I have used or quoted have been indicated and acknowledged by complete references.

Gilberto Ricardo.

November 2004

Signed Gilberto Ricardo

TABLE OF CONTENTS

	Page
Abstract	iii
Key words	vi
Dedication	vii
Acknowledgments	viii
Declaration	ix
Table of Contents	x
List of Tables	xvi
List of Graphs	xvii
List of Maps	xviii
List of Figures	xix
List of Pictures	xx
List of Appendixes	xxii
Abbreviations	xxiii

CHAPTER ONE	1
INTRODUCTION	1
1. Introduction.....	1
1.2. Contextualisation/Background.....	2
1.2.1. Tourism in Mozambique.....	2
1.2.2. Tourism in the Inhambane ecoregion	3
1.2.2.1. The Bazaruto Island	3
1.2.2.2. Significance	4
1.2.2.3. Justification.....	6
1.3. Conceptual/Theoretical Framework	6
1.3.1 Tourism.....	6
1.3.2 Sector paradigm	7
1.3.3. Development.....	8
1.3.4. Modernisation theory.....	8
1.3.5. Dependency paradigm	9
1.3.6. Sustainable Development	10
1.3.7. Sustainable Tourism Development.....	10
1.3.8. Participatory approaches: Community participation and Development.....	11
1.4. Statement of the Problem.....	13
1.4.1. Formulation of question.....	14
1.4.2. Aims of the Study	15
CHAPTER TWO	16
RESEARCH METHODOLOGY DATA PRESENTATION ANALYSIS, AND	
FINDING	16
2.1 _ Introduction.....	16
2.2 Research Design	16
2.3 Research setting.....	17
2.3.1. The Bazaruto Island.....	17
2.3 Sample procedure	17
2.3.1 Number interviewed	20

2.4 Research Methods.....	21
2.5 Research instruments	21
2.6 Research procedures used while collecting data in field at Bazaruto Island	22
2.7 Ethical statement.....	25
2.8 Data presentation and analyses	26
2.9 General profile of the tourism worker and native community islanders	26
2.11 Formal education level of respondents and implications in sustainable tourism	27
2.12 Social welfare as an indicator to sustainable tourism development for the community islanders	29
2.13 Tourist attractions for visitor to Bazaruto Island.....	32
2.14 The relevance of contacts between tourists and local communities	33
2.15 Concluding remarks.....	35
CHAPTER THREE.....	36
EMERGENCE OF CONFLICTS BETWEEN THE NATIVE COMMUNITY MEMBERS AND TOURIST RESORTS AT BAZARUTO ISLAND	36
3.1. Introduction.....	36
3.2. Outlining conflict theory analyses	36
3.3 Emergence of conflicts between local community members, tourist activities and tourist resort operators on Bazaruto Island	43
3.4 Conflict for land possession opposing local communities and tourist resorts operators on natural resources use.....	46
3.5 Absence of an environmental impact assessment in the application letter.....	50
3.6 Negative environmental issues involving golf courses and marinas	51
3.7 Conflict around land possession and use among Indigo Bay investors and Bazaruto islanders’ communities	53
3.8 Growing resentment between native islanders and tourist entrepreneurs as a sign of conflict	55
3.9 The case of Bazaruto Lodge perpetuating conflict for sharing benefits accrued from use of natural resources.....	56

3.10 General expectations of native islanders in getting employment in the tourism industry as solution to conflict.....	58
3.10.1 The case of Bazaruto Lodge perpetuating conflict by refusing to employ native islanders	59
3.11 The case of Indigo Bay solving conflicts and creating harmonious relationships with the indigenous islanders’ community for tourism development.....	61
3.11.1 Building social infrastructures and providing social support for building consensus	61
3.12 The role of the mediator and learning how to deal with conflict: comparing the Richtersveld National Park and the conflict involving Bazaruto Island.....	62
3.13 Conclusion	64
CHAPTER FOUR.....	66
CULTURAL CHANGES IN TOURISM SUSTAINABLE DEVELOPMENT ON THE BAZARUTO ISLAND.....	66
4.1 Introduction.....	66
4.2. Integration of the native community culture and tourism on the island	67
4.3 Monuments and sites as cultural attraction of Bazaruto Island	69
4.4 Fading of traditional dances as a consequence of culture globalisation and tourist package activities on the island	72
4.5 Tourism and preserving traditional dances in the context of cultural change	74
4.6. Tourism and socio-cultural structure of the native island communities.....	77
4.7. Impact of demonstration effects of tourism and moral drift in the culture of the local community	78
4.8. Influence of tourism in arts production of the native community islanders	83
4.9 Concluding remarks.....	84
CHAPTER FIVE	85
THE ENVIRONMENTAL IMPACT OF TOURISM DEVELOPMENT INVOLVING THE USE OF NATURAL RESOURCES ON THE ISLAND: LANDSCAPE, FISHERIES, GAS, FIREWOOD AND WOOD CONSTRUCTION MATERIAL.....	85

5.1 Introduction.....	85
5.1.1 Local communities care about the environment.....	86
5.2 Degradation of natural resources as environmental impacts of tourism on Bazaruto	86
5.2.1 _ The impact of marine fishing.....	86
5.2.2 Waste and sewage disposals as a negative impact on tourism in Bazaruto.....	91
5.3 Environmental impacts of tourism on landscape.....	94
5.3 1_ Tourist’s use of sand dunes and associated environmental impacts.....	94
5.3.2 Negative environmental impacts of weather conditions on sustainable tourism.....	96
5.3.3 Soil erosion due to runoffs associated to walkways caused by tourists and by islanders’ wood gathering.....	104
5.4 Environmental impacts on vegetation.....	106
5.4.1 Use of natural resources as firewood by the local communities and tourism workers as a negative environmental impact of tourism on the island.....	106
5.4.2 Tourism as a source of immigration labour force to the Bazaruto Island, and the use of vegetation.....	108
5.4.3 Environmental impacts on housing and harvesting vegetation for building materials.....	110
5.5. The environmental impact of tourism on the use of energy resources.....	113
5.5.1 The utilisation of natural gas by the tourism sector.....	113
5.5.2 The case of Bazaruto Lodge.....	116
5.5.3 The case of Indigo Bay Tourist Resort.....	117
5.5.4 Vegetation preservation by Indigo Bay as a positive environmental impact.....	119
5.6 Discussions and concluding remarks.....	120
5.6.1 Environmental sustainability of tourism on Bazaruto Island.....	120
5.6.2 Concluding remarks.....	122

CHAPTER SIX123
COMMUNITY PARTICIPATION AND POLICY PROPOSALS FOR
SUSTAINABLE TOURISM DEVELOPMENT OF THE BAZARUTO ISLAND....123

6.1 Introduction.....	123
6.2 Participatory approaches: Community participation and tourist development.....	123
6.3 Social impacts of tourism on Bazaruto Island.....	124

6.4 Community participation and integration in tourism.....	126
6.5 Local community benefits and the distribution of tourism income and employment ..	130
6.6 Community partnership and integration in tourism industry; cost-benefit analysis, informal and formal tourism	134
6. 7 Community consultation and decision-making as a process of participation.....	137
6. 8 New participatory strategies to bring community economic benefits from tourism ...	141
6.8.1 _ The role of Thomba Yethu in empowering the natives community and managing tourism benefits.....	142
6.9 Discussion	144
6.10 Concluding remarks	148
CHAPTER SEVEN.....	150
CONCLUSIONS AND RECOMMENDATIONS.....	150
REFERENCES.....	156
APPENDIXES	170

List of Tables

Table 1 Summary of informants involved	20
Table 2 Academic Level of Bazaruto Island Tourism Workers in 2003	27
Table 3 Academic level of interviewed native islanders	28
Table 4 Professional occupation of the Bazaruto native islanders	29
Table 5 Key feature indicators of indigenous tourism in developing countries	59
Table 6 Typology of tourist roles	77
Table 7 Some actual or potential major changes in the cultural environment of the islanders due to tourism	82
Table 8 Marine regressions and transgressions on Bazaruto Island due to cyclone effects from 28 February to 3 March 2003.....	102
Table 9 Bazaruto Island tourism workers' origins	109
Table 10 Diesel and natural gas usage in generating energy in the Indigo Bay Tourist Resort.....	115
Table 11 Proposed revenue share percentage	133
Table 12 Community integration indicators in managing tourism on Bazaruto.....	139
Table 13 Comparing the major themes identified by key informants, of Taquile and Bazaruto Islands.....	140
Table 14 (in Appendix VII) - Cyclones affecting Mozambique during 1959-2003.	
Table 15 (in Appendix VIII) - Marine Fish Exploited in the Bazaruto Archipelago	
Table 16 (in Appendix IX) - List of some indigenous ornamental plants that surrounds the Indigo Bay Island Tourist Resort.	
Table 17 (in Appendix X) - List of demographic figures and calculations to determine the Bazaruto Island Population in 2004.	
Table 18 (in Appendix XI) - Indigo Bay Tourist Resort calculated entry fees 2003.	

List of graphs

Graph No. 1 _ Bazaruto tourism workers' level of education 2003, page 27.

Graph No. 2 _ Number of cyclones affecting provinces of Mozambique from 1959-2003, page 98.

Graph No. 3 _ Bazaruto tourism workers' use of energy resources, page 106.

Graph No. 4 _ Bazaruto Island tourism workers, distance walked to collect firewood, page 107.

Graph No. 5 _ Bazaruto Island tourism workers' origins, 2003, page 109.

Graph No. 6 _ Bazaruto Island: who builds houses for tourism workers? Page 111.

Graph No. 7 _ Number of tourists who visited the Indigo Bay Resort in 2003 according to the guest record book, page 135.

List of maps

Map 1 - Bazaruto Island: Geographical location of the study area, page 4.

Map 2 - Bazaruto Lodge Island Resort and workers' settlement, page 101.

Map 3 - Bazaruto Island: critical erosion areas south of Sitone, page 95.

Map 4 - Indigo Bay Island Resort and workers' settlement, page 100.

Map 5 - Bazaruto Island: tourism infrastructures and the sectors' workers' settlements, page 71.

Map 6 - Bazaruto Island: lakes and crocodiles; Appendix XIII A.

Map 7 - Distribution of dugongs, marine turtles, dolphins and marine turtle nests;
Appendix XIII B.

List of figures

Figure No. 1 - Natural resources, community livelihoods, security and coping strategies in the tourism activities of Bazaruto Island.

Figure No. 2 – Resources-trend diagram.

Figure No. 3 - Terminology to describe the cross-shore beach profile.

List of pictures

Plate A1, Picture 1a - A young master woodcraftsman in 1997.

Plate A1, Picture 1b - The young master woodcraftsman with his trainee.

Plate A1, Picture 2a - New young woodcraftsmen demonstrating carving skills.

Plate A1, Picture 2b - A shanty settlement of tourism workers of the Indigo Bay Resort in 2003.

Plate A1, Picture 3a - Accumulating piles of garbage (cans and bottles) and transferring them to Vilankulo as an environmental management strategy.

Plate A1 Picture 3b - Managing of tourism garbage involves selection, burial in a pit and burning using an incinerator. Hungry islanders look for food remainders, risking their lives.

Plate A2, Picture 4a - The Bazaruto Lighthouse, a cultural tourist attraction built in 1913 by the Portuguese.

Plate A2, Picture 4b - The Pangaia Primary School, built by the Indigo Bay Resort for the local community.

Plate A2, Picture 5a - A round-shaped hut is the typical building of the tourism worker

Plate A2, Picture 5b - The tourism workers' kitchen hut is less elegant.

Plate A2, Picture 6a - A fine sand beach in front of the Bazaruto Lodge is what tourists look for.

Plate A2, Picture 6b - A car trail heading towards the sand dunes is detrimental to environmental impact management.

Plate A3 Picture 7a - Partial view of the Indigo Bay Tourist Resort showing a wooden walkway to preserve vegetation.

Plate A3, Picture 7b - A typical A-shaped chalet of the Bazaruto Lodge, north of the island.

Plate A3, Picture, 8a - A new profile of the coastline, refigured by the cyclone Japhet from 28 February to 3 March 2003, which left the beach disfigured.

Plate A3, Picture 8b - A typical luxurious chalet of the Indigo Bay Tourist Resort threatened by the cyclone Japhet is left hanging without support.

Plate A3, Picture 9a - A shore profile, similar to figure 3, of the coastline refigured by the cyclone Japhet from 28 February to 3 March 2003, and some dead trees.

Plate A3, Picture 9b - Tourists enjoying the sandy beach on Bazaruto Island. Native islanders blame tourists for the changing traditional dress codes.

List of Appendixes

APPENDIX I - Guidance for visual observation on Bazaruto Island in 2003

APPENDIX IIA, B - Questionnaire for tourism workers

APPENDIX III - Interview guide for the native communities for analysing sustainable tourism development of Bazaruto Island

APPENDIX IV - Guided interviews with tourism entrepreneurs on Bazaruto Island

APPENDIX V - Questionnaire for tourists visiting Bazaruto Island

APPENDIX VI A, B - Public debate guide for debate with native communities on Bazaruto Island

APPENDIX VII, Table 14 - Cyclones affecting Mozambique during 1959-2003

APPENDIX VIII, Table 15 - Marine fish exploited in the Bazaruto Archipelago

APPENDIX IX, Table 16 - List of some indigenous ornamental plants that surround the Indigo Bay Island Tourist Resort.

APPENDIX X, Table 17 - List of demographic figures and calculations to determine the Bazaruto Island population in 2004.

APPENDIX XI, Table 18 - Indigo Bay Tourist Resort: calculated entry fees, 2003.

APPENDIX XIIA, B - Researcher's credential letters from the University of the Western Cape (UWC) and the Eduardo Mondlane University (UEM) to carry out fieldwork.

ABREVIATIONS

CBO	Community-based Organisations
EMS	Environmental Management Systems
EP	<i>Empresa Pública</i> - Public Enterprise
FDI	Foreign Direct Investment
GPS	Global Positioning System
HPI	Human Poverty Index
IBCS	Indigo Bay Resort Community Services
IMF	International Monetary Fund
IHEI	International Hotels Environmental Initiatives
INAM	<i>Instituto Nacional de Meteorología</i> - National Institute of Meteorology
ISO	International Organisation for Standardization
MCP	Manifest Conflict Process
MCDT	Mozal Community Development Trust
Mt	Meticais
NACOBTA	Namibia Community-based Tourism Association
PCD	People-Centred Development
PPT	Pro-Poor Tourism
SADC	Southern African Development Community
SPSS	Statistical Package for Social Sciences
UNDP	United Nations' Development Programme
UNSTAT	United Nations' Statistical Commission
US\$	United States' Dollar
WTO	World Tourism Organisation

CHAPTER ONE

INTRODUCTION

1. Introduction

The tourism sector in Mozambique has a long tradition, stemming from colonial times. Tourism in Mozambique, and the island of Bazaruto in particular, was at its height before independence was granted to the country. One crucial characteristic of the tourism industry on this island is that local communities have never been shareholders, nor have they been incorporated into tourism development. Therefore, in the case of Bazaruto Island, it has never been of any real benefit to the local people living on the island. This thesis discusses how best to develop sustainable tourism on Bazaruto Island in the Inhambane eco-region.¹

Bazaruto Island has a shared tourist physical environment (Bazaruto Bay) with the Santa Carolina Island, Benguerua, Magaruque, Bangué and the adjacent mainland. These islands, together with Chuambo, Inhassoro, São Sebatião, Bartolomeu Dias, and Vilankulo on the mainland, form a development growth pole. In this pole, Vilankulo Airport acts as the main gateway for tourists visiting the sub eco-region. It receives incoming flights and serves as a major aircraft refuelling base. It also facilitates immigration and customs, and manages to avoid duplication of duties on the islands (Dutton & Zolho, 1990:54).

During the past decade, the tourism sector has grown significantly. This has led to the establishment of the Ministry of Tourism. The Ministry currently deals with policies and strategies for this sector. However, up to date, no significant developments have been made towards integrating local communities as part of the tourism industry and its benefits. This thesis will attempt to evaluate the tourism industry on the island in general, and will specifically enquire how the local communities can benefit economically from the tourism industry.

1. The term eco-region, deriving from ecological region, is a demarcated area with observable particular patterns or mosaics in ecosystems, (Carr; Olsen, Pierson, and Oourbois, 1998a, 1998b:4). It is better described as a geographical space based on perceived patterns of causal and integrative factors including land-surface forms and use, geology, climate, soils, water, indigenous and planted vegetation, wildlife, cultural behaviours and identity that are present within it.

1.2. Contextualisation/Background

1.2.1. Tourism in Mozambique

When tourism was established in Mozambique as a department of the government in April 1959, the intention was to provide and promote information on all matters related to the sector and to support, co-ordinate, facilitate and develop all aspects of tourism in Mozambique. At that time, there were some private initiatives and municipalities running tourism (Spence, 1963:132). Tourism then gained particular importance in the country for a number of reasons, particularly with the emergence of national parks such as Gorongosa National Park, which became very popular. Folk culture, for instance the Marimba dance of the Chopi's, also aroused a lot of interest. The natural environment is very important, especially beaches like the Bazaruto Archipelago, the Quirimbas Archipelago, Fernão Velosa, Tofo and Wimbe are landmarks to be considered. It is within the context of a policy of promoting tourism that the entrepreneur Joaquim Alves extended tourism to Bazaruto and the Santa Carolina islands, which administratively belong to the Inhassoro District.

The growth of tourism in Mozambique suffered a heavy blow due to a succession of wars. The first one was the war for independence, which lasted for 10 years (1964-1974). This was followed by a destabilisation war that lasted for another 16 years (1976-1992). These wars inhibited the expansion of the tourism industry. Infrastructures that support tourism such as roads, airports and airstrips, ports, hotels and railways were destroyed. Furthermore, the deteriorating security situation made Mozambique generally an unsafe place for tourists. However, Bazaruto Island and others remained a safe haven. For this reason, tourism flourished on Bazaruto Island in spite of the war.

1.2.2. Tourism in the Inhambane ecoregion

Inhambane is situated on the Tropic of Capricorn and has a wonderful climate with temperatures averaging a maximum of 30°C in summer, a winter minimum of 18°C, and an annual average of 24°C (Dutton and Zolho, 1990:16). A mild, humid climate, the warm blue waters of the Mozambican channel, and a fascinating history, coupled with an exotic culture and endless palm-fringed beaches, make the Inhambane eco-region the “Holy Mecca” of tourism in the country.

Tropical zones like Capricorn are excellent hubs for cyclones. In summer, during the peak tourism period from January through March, an average of 10 cyclones of all types occurs every year.² Therefore, tourism can be negatively affected by a chain of factors such as tropical rains and cyclones, with their associated thunderstorms, hurricanes, and the resultant floods like the ones of February 1999 and 2000. These created lakes and swamps where mosquitoes causing malaria breed.

A lack of good communication between individual entrepreneurs and the local and central government, and the inadequacy of policies to ensure a better environmental management and sustainable development strategies involving community participation, makes the development of the tourism sector problematic.

1.2.2.1. The Bazaruto Island

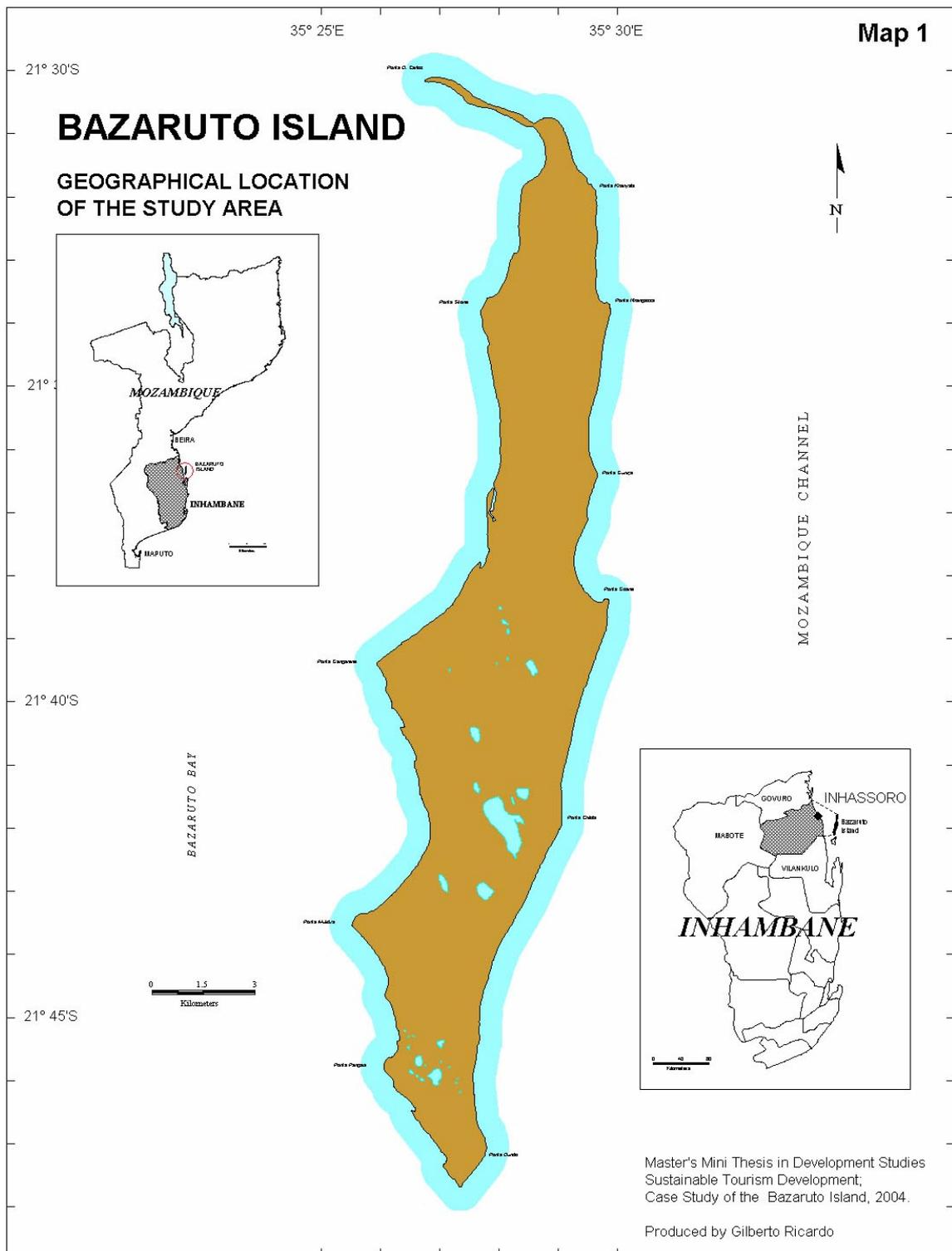
Bazaruto Island, or *Uthurusua*³, to use the indigenous name, is situated in the Inhambane province in Inhassoro District (see map 1). It is 572 km northeast of the city of Maputo, as the crow flies or, to take a local landmark, 29.6 km from the old Inhassoro runway⁴ to the Bazaruto lighthouse. Bazaruto Island is 35.8 km long and has a maximum width of 10 km. It has a surface area of 98 km², with a perimeter of 81 km.⁵ In 1997, it had 2,279 inhabitants living in 557 households (Ricardo, 1999:17).

² Hurricane Alley 1999. Accessed in: <http://www.hurricanealley.net/swio.htm>. [Retrieved 18/09/2004. Time: 12:07].

³ The native name derives from a set of sand dunes, which look like mountains.

⁴ At the moment the runway is closed.

⁵ The measurements supplied represent the arithmetic average of three measures of the same parameter, using an electronic planimetre.



1.2.2.2. Significance

Tourism development on the island is an investment that impacted heavily on the lives of the fishing community inhabiting the island because it changed power relations and livelihoods, as well as cultural dynamics. Current developments suggest that there are

some conflicts of interest occurring on the island because the majority of the local people are not benefiting from tourism development.

Following international and national environmental recommendations, it is necessary to monitor how the environmental impact assessment (EIA) is being implemented. Does the tourism development on Bazaruto Island have significant adverse or positive impacts on either the people or the environment? This investigation will cover aspects such as the local community, the flora, the soil, the water, the air, the climate, the landscape and architectural and archaeological features and sites (Wirth, 1998).

This study will examine whether the environmental factors which originally made the island attractive for tourism are still in place. It is with the intention of preserving the environment that the Bazaruto Archipelago Master Plan of Dutton and Zolho (1990) was devised. It established the preliminary framework for conducting tourism activities while respecting international standards. It shaped the development of the tourism industry along lines that are still in force within the sub eco-region today.

In 2002, the Dutton and Zolho plan was replaced by another, named *Plano de Maneio do Parque Nacional do Arquipélago do Bazaruto*⁶, which is in force for the period 2002-2006. Because of the relevance of the Dutton and Zolho master plan, it will be discussed together with the new plan in force, and these plans will be measured against the tourism sustainability indicators proposed by the Worldwide Fund for Nature.

Tourism at Bazaruto Island has never been studied in the context of theories of development. The present research will endeavour to bring new perspectives, such as modernisation theory, the dependency paradigm, sector paradigm, and participatory approaches, to help find solutions for the problems which have emerged in the tourism sector of the island.

The Dutton and Zolho plan recognised that sustainable development of tourism depended on the continued conservation of the environment, of the traditional lifestyle of the people of Bazaruto Island and, where possible, the restoration of the landscape, the ecosystems, and the threatened species of the Archipelago.

⁶ Meaning: Management Plan of the Bazaruto Archipelago, of Correia et al. 1998.

If the tourism industry is developed according to this environmental plan, it will remain attractive to tourists and will generate employment opportunities and bring in foreign exchange.

1.2.2.3. Justification

When the tourism policy was devised and the master plan was accepted, the Ministry of Tourism had not yet been created, and the responsible authority was the Ministry of Agriculture. The main overarching goal of the conservation strategy on the island was to involve local communities and to preserve the environment. It is important to evaluate the sustainability of the significant changes which have taken place in the past four or five years and to assess the environmental and ecological impact of these changes.

The importance of the present research is that despite a number of studies having been carried out to assess the impact of development on the physical environment or economy, or even both areas, none of them has assessed the physical environmental, economic and cultural impacts combined, to examine the implementation of ongoing programme policy strategies and attempt measuring their sustainability on Bazaruto Island.

1.3. Conceptual/Theoretical Framework

1.3.1 Tourism

Tourism is a multidimensional, multifaceted, multi-sectoral and usually also a profit-oriented activity (Sharpley, 2000). It touches many lives and many different economic activities, and is difficult to define. There is no universal consensus on what constitutes tourism. However, scholars generally agree that the term has to be sought in two distinct dimensions of *demand* and *supply*. According to the World Tourism Organisation (WTO) and the United Nations Statistical Commission (UNSTAT), from the conceptual point of view and in terms of demand, tourism is “the activity of persons travelling to and staying in a place outside their usual environment for not more than one consecutive year for leisure, business and other purposes” (cited in Cooper, Fletcher, Gilbert, Shepherd and Wanhill, 1998:8).

From the supply side, the technical definition covers a spectrum of tourism businesses, from those which are wholly serving tourists to those which also serve local residents and other markets, where business is classified into two types:

- a) Businesses that would not be able to survive without tourism (airlines, hotels, national parks).
- b) Businesses that could survive without tourism, but in a diminished form (restaurants, taxis, local attractions) (Cooper et al. 1998:9; Oppermann and Chon, 1997:6).

1.3.2 Sector paradigm

The sector paradigm stipulates that “the economy of developing countries is composed of two different sectors that co-exist side by side with few interlinkages. In relation to tourism, this paradigm asserts that different types of tourism co-exist in developing countries, serving different types of tourists by different tourism suppliers” (Oppermann and Chon, 1997:43). In fact, there are two different groups of tourists being served by Bazaruto Island; namely, institutionalised and non-institutionalised tourists. The latter have received little attention, and empirical observation demonstrates that the number of backpackers or drifter tourists is insignificant on this island.

There is only one camping site at Zenguelema, the central part of the island, and very few tourists use this facility. Therefore, this study will focus its analysis on the physical, environmental, economic and cultural impacts of formal tourism.

1.3.3. Development

Development is a word that has come into vogue recently. Development has been commonly defined as a process whereby a community, region or nation improves its economic position by increasing the quantity and quality of goods and services at its disposal. Tourism development can be measured in terms of job creation by the tourism sector, increased income, and also improvement in the availability of basic services such as health, education and cultural opportunities, as well as in the reduction in levels of inequality (Roodt, 2001). However, for the development of communities to be sustainable in tourism, I argue that there is a need for inclusion and participation of all beneficiaries, including women and the uneducated, in decision-making about improvements conceived, as well as in their implementation.

1.3.4. Modernisation theory

Modernisation is an endogenous process which realises the potential for development in all societies (Sharpley, 2000), and is historically seen as the process of change towards those types of social, economic and political systems that have developed in Western Europe (Britain, Germany, France, Austria, Switzerland, Italy, etc.) and North America (USA and Canada) from the seventeenth century up to the twentieth century.

“Modernisation theory tends to assume that all societies progress in a linear fashion from a traditional state to modernity, with models of development based on historical processes that had taken place in the industrialised world” (Haines, 2001:32). Rostow distinguished certain stages of economic growth in the development of his modernisation theory, namely “the traditional society; the preconditions for take-off; the take-off; the drive to maturity and the age of high mass consumption” (Rostow, 1960:307; Webster, 1991:52; Le Roux and Graaff, 2001:52).

According to Rostow⁷, the “first stage” is “dominated by the agrarian form of production, with hierarchical social structures allowing for only a small degree of social mobility. Extended family and clan relationships are central organising social elements”

⁷ Rostow on The Non-Stages of Economic Growth: Communist Manifesto (1960), referenced by Haines (2001:33).

(see Haines, 2001:33). Psychologically, modernisation “can be inculcated and reinforced in the modernity path through structured education” (Haines, 2001:36).

In their critique of Rostow, Le Roux and Graaff (2001:52) and Webster (1991:52) emphasise that people are major role players when socio-economic transformation takes place and that changes are not simply structurally determined.

For a society to change from primitive to modern, barriers to economic progress have to be removed, and a satisfactory degree of capital investment must be made. The modernisation paradigm continues to support the rationale for tourism-induced development. Tourism development is perceived as contributing to economic growth through foreign exchange earnings, the multiplier effects and backward linkages which are firmly embedded in modernisation theory (Sharpley, 2000; Haines, 2001). Tourism on Bazaruto Island, when analysed from the perspective of modernisation theory, is perceived to be an unusual development, taking place within a primitive local society.

1.3.5. Dependency paradigm

In tourism circles, the critics of modernisation theory developed the dependency paradigm, which states “tourism is an industry as any other, which is used by the developed countries to perpetuate the dependency of the developing countries. Instead of reducing the existing socio-economic regional disparities within the developing countries, tourism reinforces them through its enclavic structure and its orientation along traditional structures” (Oppermann and Chon, 1997:40).

This context can be better explained by the world system theory. The tourism sector in Mozambique now falls under the South African economic influence. The world system theory proposes that

Core or First World countries actively underdeveloped peripheral or Third World Countries, but unlike dependence theory, it proposes that the relationship between core and periphery is mediated by a third group, called semi-peripheral countries.

- [it] proposed, contrary to the dominant modernization theory of the time, that capitalism actively underdevelops the Third World; and

- [it] explained this underdevelopment as occurring through the exploitation of the Third World Countries by the First World countries. (Graaff and Venter, 2001:77-78)⁸

Mozambique, according to a whole range of indicators, can be characterised as an underdeveloped country. The tourism sector in Mozambique depends essentially on the South African economy (imported fresh foodstuffs, technology, tourists, etc.).

1.3.6. Sustainable Development

Sustainable development, when centred on people, means development that meets the needs of the present without compromising the ability of future generations to meet their own needs by degrading the resource base (Shepherd, 1998:43; Barton, 2000:7; Hall and Lew, 1998:3; Garrod and Fyall, 1998:203)⁹. According to Barton (2000:7),¹⁰ the UK government concludes that “sustainable development is about ensuring a better quality of life for everyone, now and for generations to come”.

In the context of tourism, “resource problems are not really environmental problems; they are human made problems” (Sharpley, 2000:7). This is why the participation of the local community is crucial for sustainability. Some basic principles guiding sustainability are: holistic planning and strategy making; the importance of preserving essential ecological processes; and the need to protect both human heritage and biodiversity (Garrod and Fyall, 1998). Achieving sustainable development in the Third World, of which Mozambique is part, requires a change of lifestyle in the Western countries, not only to place less stress on non-renewable resources but also to assist in the transfer of funds from the north to the south so that they can help preserve the physical environment and its people (Hall and Lew, 1998).

1.3.7. Sustainable Tourism Development

Sustainable tourism development can be seen as meeting the needs of present tourists and the hosts on Bazaruto Island while protecting and enhancing opportunities for future generations. It is intended to reduce the tensions and frictions created by the

⁸ In Coetzee et al. (2001). *Development Theory, Policy and Practice*. Oxford University Press Southern Africa. Cape Town.

⁹ Quoting WCED (1987).

¹⁰ Quoting DETER, 1998d).

complex interactions between the tourism industry, visitors, the environment and the local communities, leading to management of all resources in a way that can fulfil economic, social and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity and life-support systems (Garrod and Fyall, 1998; Sharpley, 2000).

The Worldwide Fund for Nature prepared a set of 10 parameters for assessing the sustainability of tourism development that included cultural, environmental, and economic and community participation aspects. However, Garrod and Fyall (1998) and Butler (1998) criticise the validity of the ten principles, including the recommendations, saying that they cannot be measured.

Fundamentally, sustainability implies that all environmental elements are dealt with simultaneously and from an integrated and holistic relationship. The natural environment must be discussed within the context of environmental economics and not merely on a sectoral basis.

1.3.8. Participatory approaches: Community participation and Development.

It is argued by some that sustainable development in tourism requires participation of the local communities in the implementation of coherent policies, programmes, and plans. Participation means the involvement of people, especially the local communities, in organisations directly related to the decision-making and implementation of tourism development (Roodt, 2001).

Developmental approaches can be divided into two categories: growth-centred and people-centred approaches. People-centred approaches or theories of human development, also called “alternative development” (Sharpley, 2000:6), place people at the centre of the development process. This approach suggests a broader ‘bottom-up’ strategy where economic growth should be endogenous, contributing to the satisfaction of people’s needs and not as the ultimate goal of development.

In order to successfully achieve meaningful development, the community has to be integrated in the development process. This would maximise gains and minimise

wastage of resources and avoid breeding conflicts. An integrated rural development strategy (Monaheng, 2001) can thus promote better living for people in their local communities, especially the disadvantaged people who are the centre of the community development paradigm.

1.3.9 Structuration theory

Giddens (1984), in his book *The Constitution of Society* postulates the structuration theory argument, which combines two elements of social thoughts. In the structuralist tradition, the weight is on structure (constraint), while in the phenomenological and hermeneutic traditions, the human agent is the prime focus.

The focus of structuration theory is on the understanding of human behaviour as agency and its influence in social institutions. This theory is based on the premise that “dualism has to be re-conceptualized as a duality - the duality of structure” (Giddens, 1984). Jacobs (1993) adds that the structural properties of social systems exist only as forms of social conduct that are reproduced chronically across time and space. In tourism, the duality of the structuration theory, when applied to analyse socio-economic and environmental impacts, highlights that a human being is an agent of change. He/she creates his/her own future by transforming nature, but neither under conditions of his/her choice nor with the consequences he/she intends. Hence, human intervention in nature could potentially produce either positive or negative impacts.

When structuration theory is examined in a social sphere related to the tourism context, a tourist is seen to be the human agent of cultural changes. Tourists tend to dress in a manner which exposes their bodies, conduct which has some negative effects on the hosting community. This spontaneous sense of freedom in tourists is an unusual moral conduct that they do not display even in the societies where they live. When a tourism developer starts a project, he or she does not intend to provoke conflict with the local communities due to the behaviour of tourists. However, one might lose clientele as a result of being too strict about the behaviour of tourists.

According to Giddens (1984:298), “all social research has a necessarily cultural, ethnographic or 'anthropological' aspect to it”; thus, this study is social research embedded in social theory. It is further argued that “social theory has the task of providing conceptions of the nature of human social activity and of the human agent,

which can be placed in the service of empirical work” (Giddens, 1984:284). The way tourism as a social activity impacts on social lives of the islanders of the Bazaruto compels fieldwork by researchers to assess the detrimental and beneficial effects of tourism.

Tourism itself is a system of change of the physical environment whereby a huge flow of tourists bring detrimental effects to the environment. Over-utilisation of space and facilities, pollution of seawater, littering of beaches, and sand-dune boarding bring undesired environmental consequences which a tourist developer can hardly control.

Giddens (1984) emphasizes that the points of connection of structuration theory with empirical research are to do with working out the logical implications of studying a 'subject matter' of which the researcher is already part and elucidating the substantive connotations of the core notions of action and structure. The fact that the researcher of this study had carried out a previous study on the island about traditional authority and the use of natural resources will provide evidence linking tourism action to the changes in traditional structure.

A further argument in the structuration theory is brought by Jacobs, who argues that “Behaviour and structure are intertwined; people go through a socialization process and become dependent on the existing social structures, but at the same time, social structures are being altered by their activities. Put into different words, this means that social structures are the medium of human activities as well as the result of those activities” (Jacobs, 1993:1).

1.4. Statement of the Problem

Tourism development on Bazaruto Island is not fully utilising the existing potential. This is because skills that the local indigenous community can offer, such as local cultural dances, craft-work skills, and the knowledge of how to breed sheep and goats, are ignored. A meaningful sense of ownership by the community can be built by consultation, partnership, participation and mutual understanding between stakeholders such as tourism operators, local government structures, Bazaruto National Park Management and the local indigenous community.

The basic problem this thesis has to deal with is the question of policy changes which have to be brought about to ensure sustainable tourism development on Bazaruto Island.

From an economic perspective, one would wish to maximise the economic returns to tourism, ensuring that as many of the benefits as possible stay within Mozambique and others accrue to local community members. From an ecological perspective, one would wish to ensure that as much as possible of the pristine environment is retained. From the point of view of the local community, one would wish to ensure a significant participation by this community through preservation and promotion of their culture in the development of tourism. Clearly, there are trade-offs amongst these, at times, competing objectives. The challenge for this dissertation will be to deal with these trade-offs in a transparent and consistent fashion.

1.4.1. Formulation of question

Given the preceding problem, the research seeks to answer the following questions:

- 1) How can one resolve conflicts with regard to land use between the local interests of the communities and tourism entrepreneurs?
- 2) How does tourism on Bazaruto Island economically benefit the native islanders and help the local communities to minimise poverty?
- 3) How can the local communities on Bazaruto Island use the coastal fauna and flora in a participative and integrated way in order to promote sustainable tourism development which will preserve the environment and the cultural integrity of the island?
- 4) Does it make sense that only the tourist sector uses gas and not the local residents (natives), given the objective of sustainable development?

1.4.2. Aims of the Study

The intention of the study is:

- a) to investigate the emerging conflicts at local tourist resorts between local communities, national citizens and foreign tourism entrepreneurs
- b) to monitor the contribution of the proposed sustainable tourism development strategies to reducing poverty of the local communities and increasing their economic benefits
- c) to analyse the integrated use of coastal fauna, flora, and cultural resources, including local communities' participation and their strategies, in the tourism sector on the island
- d) to analyse the environmental role and economic impact of natural gas supply and use in sustainable tourism development of the island.

CHAPTER TWO

RESEARCH METHODOLOGY DATA PRESENTATION ANALYSIS, AND FINDING

2.1 _ Introduction

This chapter analyses and discusses, in a summarised form, the main findings of the study, covering all issues approached in chapters two to five. The results dealt with here are mainly quantitative and thus appear in percentages. Tables as well as graphs are complemented by analytical descriptions. Qualitative data will be incorporated in the chapters which follow.

2.2 Research Design

This study employed triangulation of both qualitative and quantitative methods as well as analyses of theories that led to the findings. Qualitative field research is an inductive, descriptive and explanatory method. According to Mouton (2001) and Babbie (1995), this method reinforces the extensiveness of the different cultural, economical and environmental components examined.

Quantitative field research is a procedure for data collection and for quantification of relationships between variables, with an aim to determine the relationship between one thing (an independent variable) and another (a dependent or outcome variable) in a population (Hopkins, 2000). The quantitative research design used in this study is limited to descriptive variables to assess the sustainability of tourism on the island.

The quantitative and qualitative approaches were used in monitoring environmental impact assessment (EIA) by examining the: (1) environmental assessment procedures; (2) limitations of natural resources; (3) environmental problems and conflicts that may affect project viability; (4) possible detrimental effects to the local communities and the flora and fauna, landscapes, and cultural sites that are within the proposed study area (Cooper et al., 2000).

2.3 Research setting

2.3.1. The Bazaruto Island

This study was held within the area of the 98 km² of Bazaruto Island, where most tourist infrastructures are based and where most of the activities take place, from Ponta Dom Carlos in the north to Ponta Dundo in the south, and from Ponta Zenguelema in the west to Ponta Goane on the east coast. Most of the participatory observation was done in this geographical space. In the water-covered surrounding space, the study focused more on Bazaruto Bay on the west coast and up to a range of 8km into the open sea of the Mozambique Channel (see map 5). It is in Bazaruto Bay and the Mozambique Channel that water sports take place and where marine life flourishes.

2.3 Sample procedure

A population of 2,517 inhabitants was determined as living on the island in 2003. This population was calculated in 1997, at a time when the writer of this thesis did a population survey of the island, using a Global Positioning System (GPS) to record all human settlements. These settlements were estimated to have 2,279 inhabitants distributed throughout 557 households at the time.¹¹ An updated calculation of the population of the island was carried out using demographic techniques (see table 17 in Appendix X).

The universe of study for tourism involves a heterogeneous population which demands stratified sampling (Strydom and Venter, 2002:205). As defined, “stratification consists of the universe being divided into a number of strata that are mutually exclusive and the members of which are homogeneous with regard to some characteristics, such as [occupational professions, origins, places of residence and motivation to be on the island]” (ibid).

The fact that there were no lists of names involving the entire selected sample justified the adoption of cluster sampling. According to Strydom and Venter (2002:205), cluster sampling is usable when a sampling frame such as a list of names is not available. The cluster sampling technique was therefore used to select the target groups in this study. Employing this sampling method is most suitable when the sample design is much more

¹¹ Ricardo, G. (1999). *Estratificação da Autoridade Tradicional , sua relação com a Utilização Comunitária dos Recursos Naturais*. The researcher’s previous study of the Bazaruto Island presented in 1999 for his Honours Degree.

complex (Babbie, 1995). Cluster sampling is said to provide a good enough sample that focuses on naturally occurring clusters.

The sample determined for the study is divided into the following clusters: tourism workers, native islander community members, tourism managers, tourists, consultants, community leaders, community-based organizations (CBO), the Bazaruto Park Management and government departments at national, provincial, district and local levels. The cluster division was followed by selection of elements within each of the defined clusters.

Each of the targeted groups has a relevant role but with different weight; thus, a weight was given in relation to the level of impact and closeness of links with tourism issues. The tourism workers are clearly very important for tourism because they are regularly providing services to the tourists. They live in concentrated settlements close to tourist resorts and have migrated to the island because of the development of tourism. The sample of tourist workers was drawn as follows: From a list of 185 names, every seventh worker starting with a randomly selected number three was drawn until the last one. Seven was the standard distance between workers in the sample and was thus adopted as the “sampling interval” (Babbie, 1995:208). After reaching the last number, 185, the process was carried on until reaching the set target of 36 workers out of 173 (20.81%) workers employed in the Indigo Bay Resort at the time. Clearly, the list of names was outdated as a statistical map of workers showed only 173 workers employed by the resort. Names were placed randomly on the list of the Human Resources Department of the Indigo Bay Resort, starting from 6, then followed by 173, 146 and so forth, and the first number to be drawn was 146. This criterion of drawing names from the list of names which were neither recorded in alphabetic order nor in sequential numbering is “technically referred to as systematic sample with a random star” (Babbie, 1995:208).

A procedure that facilitated the replacement in case the selected worker was not present at the resort was developed. On reaching Bazaruto Lodge, a similar criterion was used to draw 25 workers to be sampled out of 69 (36%) from a joint bunch of workers of the Bazaruto Lodge and Gonna Fishing Sports Enterprise.

Two tourists were interviewed in the Bazaruto Park headquarters, five in the Indigo Bay Resort sitting room, and seven in the Bazaruto Lodge dining room. Details of these tourists are provided later when dealing with data presentation.

The process of questioning native islanders consisted of drawing a proportional number of natives, based on the number of families living in each of the three main zones and their areas in the island, namely, Sitone (9), Machulane (7), Pangaia (9), and Mulizda in the south of Zengulema (13). This last number includes six islanders living in this zone with whom the researcher travelled for thirteen hours on a sailing boat from Vilankulo to Bazaruto Island on the day of arrival.

The purposive method as part of stratified sampling was used in order to offer the possibility of greater accuracy by ensuring that the groups created by a stratifying criterion are represented in the same proportion of impacts of their activities in preserving the quality of the environment of the island (Bryman and Cramer, 1999).

To complement the data and assess the degree of accuracy of information that individual and group interviews provided, a public debate was held with native islanders who were community leaders and key informants as well as members of management committees of the tourism industry and of natural resources. Complementary information gathering through public debate involved eight native islanders of the CBO *Thomba Yethu*. Further details of this debate are given in the research procedure.

2.3.1 Number interviewed

Table 1 below summarises the description of the number of informants involved in the field research.

Table 1 Summary of informants involved

Description of nature of informants involved		Number of informants involved in				
		Questionnaire	Interview	Public debate	Freq.	Percentage
Tourism sector					65	
Tourism workers		61				43%
Tourism managers	Individual		1			2%
	Group		2			
Community Consultant			1			1%
Native community	Individuals	38			63	44%
	Group		16			
Administrative Post Leaders			1			
<i>Thomba Yethu</i> CBO				8		
Group Interviews number: 3						
Tourists						
Visitors on the Island		14			14	10%
Sub-total		113	21	8		
Total people involved					142	100%
Total population of the island		2,517			6%	

A total of 142 informants, representing 6% of the population, were involved in this survey. Within the sample of 142 informants, 65 members of the drawn sample, representing 46%, are directly involved in the tourism industry, 63 informants, representing 44% of the sample, are native islanders, and 14 tourists, representing 10%, complete the sample.

The tourism sector cluster was composed of senior managers, a community consultant, and workers of several categories. The native islander cluster was composed of the administrative post leader, representative leaders of the Community Based Organisation, of distinct portfolios, some of whom are community leaders of the Pangaia, Zenguelema and Sitone zones on the island, and several native islanders. Tourists were from Germany, Italy, Portugal and Zimbabwe.

2.4 Research Methods

In this study, the researcher carefully examined as many sources of information as possible to achieve the objectives of the research. He aimed at being scholarly, honest and forthright about the methods used and assumptions made. The research methods used were interviews, questionnaires, participatory observation, and review of documents. Thus, the research question outlined in section five, chapter one will be investigated in two ways:

(i) by secondary analysis, which is a systematic discussion of theories and knowledge obtained from relevant documented sources (references, reports, topographical charts of the study area)

(ii) by empirical fieldwork carried out on the island.

Some empirical data presented here was collected by using direct participative observation. This method strengthens the comprehensiveness of the examined cultural, economic and environmental components integrated in the tourism development strategy on the island, which change over time (Mouton, 2001; Babbie, 1995). These different groups were dealt with separately. Islanders were questioned about basic needs (housing, water, sanitation, health facilities, and subsistence strategies related to tourism activities and interaction with tourists).

2.5 Research instruments

This study used several types of research instruments including a video camera; a single-lens reflex (SLR) camera; a tape recorder for sound; a Global Positioning System (GPS) receiver; a tape measure; face-to-face questionnaires for tourism workers and native islanders; a structured interview guide for tourism managers, community leaders, group discussion and native islanders; guided visual observation; self-administrated questionnaires for tourists and a public-debate guide (see Appendices I-VIB). Each piece of equipment had a specific function for capturing and keeping data for further processing and analysis.

Questionnaires, in general, produce more valid information because they provide predictable outcomes due to their standardised and structured nature. In addition, a questionnaire is easily manipulated in both descriptive and inferential statistics as it can be properly scored and therefore analysed. The questionnaires employed for the survey

were structured in sections specifically designed to capture relevant information, in order to answer the questions set. Both the questionnaires and the structured interview guide had an introductory part covering place of survey, date, and survey number. This was followed by one section that was common to all and which included a personal profile. This profile incorporated the name of the respondent, the professional occupation, age, gender and academic level. Each specific section provided information that was intended to answer the set questions.

a) Group and individual structured interviews were carried out with the islanders. A total of 21 people was interviewed, subdivided as follows: Three individual interviews were conducted with key informants, namely a consultant, a tourism manager, and an administrative post leader. In addition, 16 people, comprising native community members and two managers of the tourist resorts, were interviewed separately in group interviews. A complementary information-gathering session through public debate involved 8 native islanders of the CBO *Thomba Yethu*.

b) A high-precision survey using a Global Positioning System (GPS) was carried out to locate some of the places tourists used to visit that were devastated by the cyclone of February 2003. The researcher then constructed thematic maps that showed spatial distribution of housing, infrastructures and other activities related to tourism. This method is relevant to depicting the areas of particular interest to tourists. Furthermore, such areas might experience severe stress due to over-utilisation by tourists, native islanders and tourism operations. Maps, it was found, help to monitor environmental impacts.

2.6 Research procedures used while collecting data in field at Bazaruto Island

Permission to conduct the study and assistance therein was obtained from the Ministry of Tourism in response to a letter addressed for this purpose. From 13 to 23 August, 2003, the researcher conducted a field survey on Bazaruto Island. After the researcher had presented himself to the resort's management and handed in his credential letters from both the University of the Western Cape (UWC) and the Eduardo Mondlane University (UEM) (see Appendix XIA, B), permission was granted by the resorts' managers for the research work to take place. The researcher then met with staff from the Human Resources Department and afterwards was given a list of workers' names and statistics concerning the current number of workers and their origins.

The survey was undertaken with the researcher conducting in-depth face-to-face interviews, conducting focus-group interviews and public debates, and recording the answers by means of the equipment mentioned above or taking notes in a notebook. The interviews, public debates and focus discussions with the local community were held in Xitsua and Gitonga, two local languages of the mainland but also spoken on the island, as well as in Portuguese. Thereafter, the transcripts were translated into English. It sometimes proved to be difficult to obtain the exact words of one language in another, especially when translating a term which did not exist in the local language.

Questions for tourism workers were delivered in Portuguese, Xitsua and Gitonga, depending on the language of the workers, in order to help them to understand the content of the questionnaire. Answers were recorded on the questionnaire form.

The public debate was held at Sitone, at a public venue, under trees and close to the Sitone Primary School. The Bazaruto Community Counsellor was invited and attended the public debate, but made no comments. The native islanders who attended the public debate were either community leaders or key informants. Some were members of management committees of tourism and natural resources on the island. The debate was aimed at assessing the degree of accuracy of information collected from interviews and at raising specific issues.

In this debate, the executive members of the *Thomba Yethu* each responded openly to questions which the researcher asked. Each participant gave his own opinion about the same question, either confirming or supporting what another participant had said. Some respondents gave different opinions about the issue presented, and the discussion developed until a consensus was reached.

A total of 12 questions was asked, covering issues such as the land conflict which emerged on the island involving the native islanders and the Indigo Bay Tourist Resort. The Indigo Bay Tourist Resort intended to expand the land concession it had, remove the native inhabitants, and put a fence on the new concession. Another question covered community members' participation in decision-making regarding tourism, among other issues, as detailed in Appendix VIA. Answers were then video and tape recorded and translated, transcribed, computer processed, analysed and, finally, included in this research.

A semi-structured interview for the Bazaruto Island Park managers was prepared. However, it was not carried out because the Bazaruto Park administrator was not present on the island. The community counsellor was recently contracted and knew little about ongoing issues of the island. The researcher decided to use several sources of secondary data from previous studies done on the island.

The participative observation carried out involved an adequate guide and covered topics such as demographic pressure on land and its consequences, sandy tracks and grass pathways, land-use forms, housing, main energy resources use, and economic and socio-cultural issues (see appendix I). Walking and observing around the island encompassed video recording, note taking, tape measuring critically eroded coastal areas and interviewing people. It included taking pictures during the fieldwork to complement the structured research.

Having determined the sample, a total of 61 questionnaires were administered to tourism workers, 38 to native islanders, and 14 to tourists, making up a sum of 113 questionnaires. Interviews with tourism workers were conducted during working hours. The tourist-resort management provided an office and released the selected worker for a couple of minutes at a time, in order to respond to the questionnaire. After the worker had responded to the questionnaire, he/she passed on the message to a colleague to report to the office to respond to the questionnaire. Tourists of the Bazaruto Lodge filled in the questionnaire in the dining hall after meals or in their rooms. Native islanders responded to questionnaires from several places (boat, beach, home and public meeting sites).

The administrative community leader was interviewed in his home at Sitone on Saturday 23/08/2003. The interview was held in Xitsua and tape recorded.

Considering the fact that the probability of finding native islanders at home is dependant on their routine activities, the strategy adopted was to approach some of them either at home or on the beach while fishing or harvesting sand oysters and crabs. However, group interviews and questionnaires with native islanders of Pangaia were carried out in pre-arranged gatherings at the home of the community leader and included the leader himself.

To select islanders to be interviewed, a purposive method was used, based on key informants such as community leaders of Sitone and Pangaia, who are known to have

valuable information. Furthermore, native islanders living in the Mulidza area, where there are strong contacts between tourists and native villagers, were targeted. In the Pangaia zone, where tourism development has caused significant impacts, interviewees were given the choice of being interviewed either as a group, or individually.

The purposive sampling method “is based entirely on the judgement of the researcher, in that the sample is composed of elements that contain the most characteristic, representative or typical attributes of the population” (Strydom and Venter, 2002:207) This criterion was chosen to guarantee the quality of data as the researcher possesses extensive knowledge about the native islanders and their high level of illiteracy.

The field research was also extended to the provincial and national level directly related to this study. The objective was to check files, meet people involved, and collect facts that were raised by all people whom the researcher contacted on the island. Therefore, the researcher went to both the national and provincial departments dealing with land allocation of the *Direcção Nacional de Geografia e Cadastro* (DINAGECA). Details of this issue are provided in chapter three. The researcher also proceeded to the headquarters of the Indigo Bay and Bazaruto Lodge tourist resorts in Maputo to collect data, which are supplied in detail in chapters three and six.

2.7 Ethical statement

The fieldwork was carried out in accordance with the standards of conduct of a given profession or group: in this case, social sciences (Babbie, 1995:448). Respondents were granted anonymity and confidentiality. Data collected were treated in an aggregated manner, ensuring confidentiality by removing all names and addresses of the respondents and replacing them with identification numbers. A master identification file was created linking numbers and names to allow the later correction of missing or contradictory information. The results of this study will be orally presented to the native community and copies will be supplied to the Bazaruto Park management, which is in charge of the many conservation activities of the island, and to the Ministry of Tourism, the Eduardo Mondlane University, the donors, and government departments interested, as well as to the resorts on the island.

2.8 Data presentation and analyses

All the data from questionnaires were coded, processed, and analysed using the Statistical Package for Social Sciences (SPSS) for Windows 12. Descriptive statistical analyses of data were carried out to obtain information regarding the frequency distribution of professions and occupations, age, educational level, utilisation of natural resources, places of origin and so forth. Descriptive statistics and frequencies were used to categorise, group and summarise data in the form of tables and graphs. Cross tabulations were made to attempt to assess the degree of correlation among variables. The nature of quantitative data collected for this research is nominal; therefore, it is possible to use only non-parametric tests. Non-parametric or distribution-free tests are so named because they do not depend on assumptions about the precise form of the distribution of the sampled populations (Bryman and Cramer, 1999:116-117). However, given the nature of nominal data, correlation coefficients were meaningless and were thus discarded.

2.9 General profile of the tourism worker and native community islanders

Data collected from tourism workers, tourists and native community members using questionnaires were analysed and presented through percentages of frequency distribution. In total, 61 structured questionnaires were administered to tourism workers. The number of respondents represents 25% of the 242 workers in the tourism industry based on the island. These respondents comprised 21 (34.4%) females and 40 males (65.6%). Among the 38 native community members involved in the study, 15 were females and 23 males (39.5% and 60.5% respectively). In addition, a total of 14 tourists also responded to questionnaires: 7 females and 7 males.

2.10 Age of respondents

Respondent native community members were on average 32.3 years old, and the youngest respondent was 13 years old, while the oldest was 73 years old. The median of this respondent group was 26 years, while the mode was 23 years. The majority of the respondents were young. More than two-thirds (68%) were aged 13-35 years. Nearly one-fifth (18.4%) were middle-aged, between 36-55 years, and about one-eighth (13%) were 56-73 years.

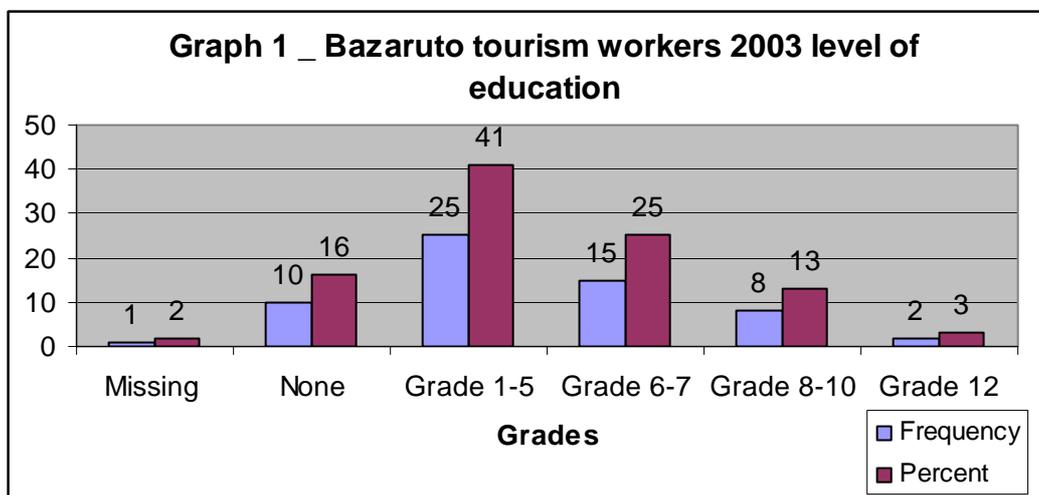
The age range for tourism workers interviewed was between 18 and 60 years. Nearly three-quarters (71%) were young (18 to 35 years). Approximately one-quarter of tourism workers were in the age group of 36 to 55 years, and the remainder of the tourist workers were aged 56 to 60 years.

2.11 Formal education level of respondents and implications in sustainable tourism

In general, the education level of tourism workers is low. Figures regarding this group reveal a high level of illiteracy, with 18% of respondents never having attended school in their lives, 41% of the respondents having only attained junior primary school education (ranging from Grade 1 to 5), 25% having been to senior primary school (Grade 6 to 7), 13% having attended junior secondary school (Grade 8 to 10), and 3% having completed senior secondary school (Grade 11 to 12 - see table 2 and graph 3).

Table 2 Academic Level of Bazaruto Island Tourism Workers in 2003.

Grade	Frequency	Percent
Missing data =999	1	2
None	10	16
Grade 1-5	25	41
Grade 6-7	15	25
Grade 8-10	8	13
Grade 12	2	3
Total	61	100.0



The low level of education among tourism workers impacts negatively on the efficiency of the tourism business, given the fact that much time is needed to explain to workers how tasks should be done. According to the General Manager of the Indigo Bay Resort, “a large proportion of time was spent on teaching them basic skills to do the work”.¹²

Data concerning community members showed a higher level of illiteracy among native islanders than among tourism workers. More than half (60%) of the respondents had not attended any school at all. Of the respondents, only 37% had attended junior primary school, and only 3% of respondents had attended Grade 7, which is part of senior primary school (see Table 3 below). The fact that the Bazaruto Island native community members do not currently possess a high level of formal education makes it difficult to organise and manage pro-poor tourism-based strategies benefiting the native local communities. It also makes the native community islanders depend heavily on primary activities such as fishing, ploughing the land, and sheep and goat breeding (see illustration in Table 4 below). Furthermore, the high degree of illiteracy of native community members may have had a negative influence on the quality and significance of responses provided, as these members do not understand in full the context of the matters on which they are questioned.

Table 3 Academic level of interviewed native islanders

Grade	No. of respondents	Percentage
None	23	60%
Grade 1-5	14	37%
Grade 7	1	3%
Total	38	100%

Among the native community members of Bazaruto Island, illiteracy also impacts negatively on how money is spent. Because of the lack of formal education, money earned does not always go towards improving their standards of living, but is often channelled to the buying of alcohol and to prostitution, leaving the family dependents languishing in hunger at home. These events take place within the global context of tourism and are associated with the huge variety of imported, alcoholic beverages flooding the island.

¹² Interviewed, by the researcher in the Bazaruto Island on the 18/08/2003.

Table 4 Professional occupation of the Bazaruto native islanders

Profession or occupation	Frequency	Percentage
Boat builder	1	3%
Boat owner	1	3%
Craftsmen	3	8%
Fiscal Fauna Guard	1	3%
Fishermen and fisherwomen	11	29%
Oyster harvesters	4	10%
Peasants	4	10%
Sailors	7	18%
Sheep breeder	1	3%
Student	1	3%
Vendor	4	10%
Total	38	100%

Meanwhile, in terms of level of formal education, a big contrast between tourists visiting Bazaruto Island, the tourism workers, and the native community members, is depicted. Tourists showed a very high degree of formal education. The majority of the 14 tourists interviewed had university degrees. The data corroborates what Cooper et al. (1998:170) call an ‘incipient mass tourist’, coming in a steady flow and seeking Western amenities. The evidence corresponds with the fact that the two resorts of the island are of top quality. The Bazaruto Lodge is a four-star resort and the Indigo Bay Resort is a five-star resort. Although the sample collected is not sufficiently large to draw a definite conclusion, it is in line with the arguments of Cooper et al. (1998:170).

2.12 Social welfare as an indicator to sustainable tourism development for the community islanders

It is important for conservationists to view some tourism developments as potentially positive activities for economic and social welfare. However, ecotourism or alternative tourism on Bazaruto Island has failed to create enough jobs and economic opportunities for native islanders. It has only recently started integrating and promoting the local culture, providing water facilities and sufficient health centres, and hence has not yet fully met the criteria established by the definition and intention of ecotourism to “enhance the livelihoods of the poor rural people”, and does not recognize the deep

poverty of many of those who live in the protected area, the Bazaruto National Park (Turner, 2001:369).

Evidence shows that the majority of the island's native community members do not have access to potable water (90% of respondents reported lack of this benefit). Visual observation in the field substantiated this evidence from respondents. When asked from what source they got the water they used, it was found that 87% of native islanders got their water from wells (holes) that they dig in the ground. This suggests that tourism projects have very little impact on the quality life of the majority of islanders. Only 5% of those questioned said they had access to drinking water from taps belonging to the island resorts. The few respondents who stated they had access to drinking water from resorts were the traditional leaders of Machulane, who enjoy greater acceptance by resort managers and live closer to tourism infrastructures.

Native community members use community wells nearby their homes. Seventy-six percent of respondents said that they had at least one well. Fifty-five percent of respondents said that they had to walk more than 15 minutes to go to a nearby well and return, 21% took between 15 and 30 minutes to walk to a nearby well and 16% took between 30-60 minutes to reach the community well. Only 8% had to walk over an hour to fetch water from a well.

As there are many water aquifers on Bazaruto Island, at least 40% of respondents said they had one to three community wells within a radius of 5km of their homes and from which they fetch water. Another 47% of respondents had more than three wells in the radius mentioned before. Thirteen percent of the respondents said that they had no well within 5km of their homes.

On Bazaruto Island, in general, underdevelopment, poverty and famine are rife. Ramsay (1995:46) maintains that this status reflects an "obvious contrast between the wealthy tourists and the materially impoverished islanders and tends to promote denigration, especially among youth, of a traditional value system that lacks authority and power". The expectancies of the native members of the community were that tourism development would bring welfare to the majority of its members. When failing to do so, it becomes incompatible with sustainability. Of the native islanders, 90% of the

respondents pointed out, when asked if they had affordable good quality housing stock and commercial shops, that they did not (see Appendix A1, picture 3b).

Another indicator of well-being is having access to job opportunities and training centres, and 84% of respondents pointed out that they did not have jobs, while a very insignificant number of people (13%) said that they had access to employment and training centres. Such statements do not reflect the real facts about employment on the island.

Communication facilities such as telephones and the Internet in the modern, global economic world are important for fast communication and thus contribute to development. For example, the many tourists that flock to the Indigo Bay Resort have learned of the existence of the resort by various means. Some tourists are directed to the resort by friends who were there before, while others were directed by Rani Africa International and other tourist chain commodities like Swiftflite Air Charter Company, travel agencies, and a website (www.bookinafrica.com).

To evaluate the level of availability of such communication means, community members were asked if they had access to the Internet. Ninety-seven percent responded that they did not have access to the Internet. Tourists were questioned about how they came to know of Bazaruto Island, to which they responded as follows: 64% heard about Bazaruto Island Tourist Resorts through friends, 22% knew about Bazaruto through magazines, pamphlets, and advertisements, 7% came through travelling agencies, hotel chains, and another 7% through the Internet.

Tourists' recreational sailing and transportation to the island from the mainland using the native islanders' boats as part of an organised transport system would contribute income to the natives. Within this context, native community members were asked if there is any organised sea transport system, not included in the resorts' package accommodation, to transport tourists from the mainland and from one island to another. Ninety percent of the respondents said that there is no such system of organized transport.

Native islanders were also questioned as to whether tourists hired local community members' boats for sailing within the Bazaruto Channel and to visit other tourist resorts. Forty-five percent of respondents said yes, tourists hire boats from local communities.

Twenty-four percent said tourists hire community boats when they need them for sailing for fun, and 29% of respondents said that tourists did not hire community boats at all.

The local island community generally uses boats to travel from one side of Bazaruto Bay to the other. Driving cars along the coastline, sometimes transporting tourists, has had a largely negative impact on some parts of the island such as Sitone, where certain types of crabs have disappeared and can only be found in other places where there is no movement of cars (personal interview with Fernando Mutondo, 23/08/03).

When asked to assess the environmental effect and bring more evidence regarding the movement of vehicles along the offshore and through the sand dunes affecting the stability, 58% of the respondents said that there was no traffic at all in the offshore zone, while 42% of the respondents said that the traffic is moderate to low and does not affect the vegetation and stability of sand dunes. In fact, this is not totally accurate. Participatory observation shows that in some places, like in Sitone in the northern part of the island, the movement of vehicles along the shoreline is active. Also, between Indigo Bay and Sitone, there is a place where vehicles go across the sand dunes, affecting their stability (see Appendix A2, picture 6b).

2.13 Tourist attractions for visitor to Bazaruto Island

To assess the reasons for the motivation of tourists to visit Bazaruto Island, tourists were asked to point out what attracted them. Of the respondents, 86% said that the beauty of the beach, integrity of the ecosystems, the loneliness of the beaches and the cleanliness were the key factors in attraction, while 14% gave other reasons such as the peacefulness and the culture of the native people. Fifty-five percent of native community members responded that the sea and its marine fauna are the most attractive environmental resources. Thirteen percent saw the terrestrial fauna, including avifauna species, as the major attraction, and 18% stated that the integrity of ecosystems is a major attraction.

Generally, tourists are drawn to Bazaruto by natural attractions. However, individual choices vary from tourist to tourist. Tourists reported enjoying the scenes and the natural, preserved landscapes, fishing, sand boarding, friendliness of the resort staff and the native people, the geographical location of Bazaruto Island, the diving and

snorkelling, the relaxing and tranquil atmosphere, the safety, dune hiking, and ‘the island paradise trip’.

The accessibility of natural resources for use by the local communities seems not to be fairly shared with the tourism operators and the National Marine Park Management. Respondents had diverging opinions when asked if they had access to natural resources of the island. Fifty-three percent responded that they did have, while 42% answered that they did not.

Islanders who claimed not to have access to these natural resources referred to places and items identified and packaged to be sold to tourists. This process is termed commodification. These practices derive from Western society’s vision, which is embedded in its global tourism culture. This approach leads to the identification of certain natural features with a view to towards turning them into commodities. The process consists of the

selection and framing of possible ingredients in a vacation package and the globalization of the picturesque and the sublime into various scenic regimes. In locating and fixing attractive sceneries, and turning landscapes into commodities, aesthetics attractive as mirrors of consumers’ desires, the process does not only draw pictorial representations, but also forms that the market can package, sell, and copy (Löfgren, 1999:275; Johnson, Gregory, Pratt and Watts, 2000:109).

On Bazaruto Island, mechanisms to meet the conservation of natural habitats are set in motion by coercion or education. Nevertheless, violations are still taking place. To assess the level of awareness and effectiveness of these controlling mechanisms, tourism workers were asked if they knew who controls the implementation of rules prohibiting the harvest of building materials on the island. Ninety-eight percent responded that the WWF fiscal guards are the ones who are in charge of regulations controlling prohibition. It was felt that anyone caught violating the law through cutting of the vegetation would be given a community-work punishment, but 20% of workers thought that those who broke the law would be given a fine, and 15% of the respondents gave other reasons.

2.14 The relevance of contacts between tourists and local communities

To assess whether the tourism industry incorporates local culture as a resource to their visitors, tourists were asked if they had ever watched any cultural dance of the local

community. Ninety-three percent, or 13 respondents, said that they had never watched any cultural dance of the local community. This reveals that the traditional dances performed by members of the local community, on the whole, were initially neglected as part of the package for tourism entertainment. However, a special group of tourism workers of the Bazaruto Lodge perform traditional cultural dances for tourists (which can again be seen as commodification), while in Indigo Bay, a group of children, called *Matsakisse*, was created in August 2003 to perform other types of traditional dances when required to do so.

Tourists were also asked whether they had met and talked to native community members. Sixty four percent said they had, while 21% said they had never, and 15% stated that they have never gone to native village. This question was to assess to what extent meetings and visits to a community villages influenced the local culture. Additionally, tourists were questioned as to whether they visited local native villages on the island. The results showed that 86% of tourists had never visited local family homes and had never slept there. Seven percent said that it was not on their agenda to visit any native community village.

Tourists were asked which language they communicated in with the local community members when they met them. Eighty-six percent of the respondents said that they spoke Portuguese with the natives, while 7% said they spoke English to the natives. These results are skewed because the majority of tourists who filled in the questionnaire were from Bazaruto Lodge, which has a large number of Portuguese guests and is also run by Portuguese managers, despite the fact that it is a joint venture.

Reports of incidences of malaria in tourist resorts might impact negatively on tourism. Several tourist activities are known to have ceased due to malaria. Wolfs (1991:106) ascertained that in 1930 tourism in the Kruger National Park stopped, apparently because too many American tourists had returned back home from vacation in South Africa with malaria. The mass media in the United States was publishing information in this regard alleging that South Africa was a tourist death snare. Tourists were asked if they were aware of the existence of malaria on Bazaruto Island and what malaria prevention measures they took. Sixty-four percent of the respondents said that they had used some repellent, 21% took some tablets, and 7% said that they had the constant assistance of their doctors.

Tourists were also asked whether floods or other meteorological phenomena were a concern to them, and what sort of monitoring and possible rescue they needed. Opinions in this regard were widely divided. Thirty-six percent of respondents said that they did not think about that issue, 21% said that they listened to the radio and watched television and the Internet to update themselves on weather issues, and 7% said that there is a guarantee that the tourism operator will provide rescue if needed.

2.15 Concluding remarks

The results of the questionnaire relating to tourist attractions reflect what Oppermann and Chon (1997:119-121-2) classify as a large fraction of tourists who come to visit developing countries because they are attracted by the three “Ss” -- sun, sand and sea. In the case of Bazaruto Island, the combination of multiple natural and social attributes such as the richness of marine and wild life, the untouched environment, the warm current of the Mozambique Channel, the beautiful unpolluted beaches, makes the island a naturally endowed resource suitable for tourism activities. The two resorts have not connected their sewage plants and disposals to the sea, which enhances the water quality, thus drawing more tourists to the Bazaruto tourist resorts.

CHAPTER THREE

EMERGENCE OF CONFLICTS BETWEEN THE NATIVE COMMUNITY MEMBERS AND TOURIST RESORTS AT BAZARUTO ISLAND

3.1. Introduction

This chapter investigates emerging conflicts in the tourism sector of Bazaruto Island, involving local native communities and foreign tourism investment. Beginning with conflict-analysis theories as the first focus of discussion, it proceeds with a discussion of the land allocation processes for tourism investment through the state land law and shows how this is in conflict with customary land law. There is also a conflict of interest about different uses of natural resources, namely, to develop tourism on the one hand and to sustain the islanders on the other. Finally, the chapter also analyses how lack of information to the native community and of consideration for them by the tourism sector denies them their share of the benefits of tourism and therefore leads to conflict, undermining the sustainability of tourism.

3.2. Outlining conflict theory analyses

Conflict analyses are important for this study because they contribute to an understanding of how the community's livelihoods are disrupted.

“Conflict is a form of social dynamic phenomenon interaction, a manifest conflict process (MCP), a struggle over claims to scarce resources, characterized by phases of initiation, escalation, controlled maintenance, and management, perhaps leading to some kind of termination reflective of settlement, resolution, or transformation” (Sandole¹³, 1993:6). Marongwe (2002:3) adds that in terms of power and status, conflict is a process by which the aims of the opponents might be to neutralise, injure or eliminate rivals. Authors such as Matthew, Halle and Switzer (2002:14) emphasize that “Conflict can be any fundamental disagreement that prevents cooperation and collaboration and causes social tension and dispute. Conflict can sometimes be a force for positive change, as it represents a dynamic state of human interaction”. This is not

¹³ In <http://www.gmu.edu/academic/pcs/sandole.htm>. Retrieved 06/04/2004. Time: 18:19.

the case in Bazaruto Island, where conflict is latent and rooted in fundamental disagreement regarding the sharing of natural resources, thus hindering cooperation of islanders.

According to Matthew et al. (2002:14-15); Marongwe (2002:3); Ohlsson (2000); and Saruchera (2002:34), fundamental causes of conflict in society are scarcity of resources induced by increasing human population numbers and ethnic inter-related political, social and economic factors “which create a potential climate for violent conflict without making its eruption inevitable”. The main conflicts dealt with by these authors are as follow:

- a) resource-based conflicts -- based on competition for economic power and access to natural resources
- b) interest conflicts – caused by perceived or actual competitive, substantive interests, psychological and procedural interests
- c) livelihood conflicts – originated in rapid process of change resulting in a sudden fall into endemic poverty
- d) relationship conflicts – caused by strong emotions, misperceptions, poor communication and repetitive behaviour such as traditional codes of conduct and practices among islanders
- e) supply-induced conflicts – derived from demand-induced and structural-based scarcity.

On Bazaruto Island, the fundamental origins of conflict are competition because of environmental and landscape attractions and its strategic location on Bazaruto Bay, and demographic pressure in parts because of environmental change and resources depletion leading to scarcity.

According to Porto (2002:2):

The use and control of ecological resources involving multiple actors, diverging and often conflicting valuable natural resources, including productive pastures, fisheries and farming lands as causes of conflicts have been motivated by both grievance and greed. Grievance is related to unjust

and inequitable distribution of land and natural resources in many regions of Africa. Greed for valuable ecological resources has in many instances been the underlying causes of armed conflicts.

According to Mathieson and Wall (1982), tourism causes many conflicts. The Bazaruto Island is a small ecological region in Africa, of only 98 km², and has been inhabited for about a millennium. The inhabitants have relied on primary activities such as fishing for food, trade, and sheep and goat farming. The emergence of tourism on the island, with water sports such as fishing and diving in coral reefs, brought a situation that triggered wider conflicts between different group users. This is because native islanders are restricted from fishing freely, as a conservation measure and as a strategy for managing fish stocks while facing population growth. Tensions over fishing resources among indigenous islanders, different groups of fishermen, and tourists have made the resolution of disputes on shared territorial space use on the island more difficult. The presence of Chinese poachers' fishing boats and tourist anglers, concomitantly with the islanders' unsophisticated fishing methods and limited and poor arable land, undermines efforts towards protecting coastal and marine habitats.

From 1994, combined economic and political factors, such as the opening of borders for large foreign capital investment that gave room to building and modernising tourist resorts and increased immigration of people, triggered off an escalation of disputes, conflicts of interest, verbal conflicts, events, decisions and actions.

The limited supply of fishing resources leading to conflict on the island came about because fisheries resources are exhausted and the number of fishermen has increased naturally due to demographic growth. Indigenous islanders fish not only for their subsistence but also for commercial purposes. These practices have not given enough time for fishery stocks to regenerate, and thus excess demand is created.

The land concession extension to Indigo Bay Resort reflects a commodification of communal land resources and an emerging cause of conflicts in native land communal areas. Within the conflict-analysis framework, it is regarded as a “structurally-based conflict, leading to a skewed distribution [of scarce land and resources], resulting from the failure of existing policies, institutions and programmes to distribute resources in a more equitable and socially acceptable manner” (Marongwe, 2002:3, 8). This

commodification is only a cause of conflict when it undermines the land-use rights of the indigenous islanders by not integrating them into the tourist economy.

According to the ‘resources-war’ hypothesis, proposition groups engaged in conflict are primarily motivated by grievances and access inequality, embedded essentially in economic agendas. In this context, Porto (2002:8-10) emphasizes a strand of the ‘resources war’ hypothesis which has become known as the ‘greed theory’ of conflict. In the case of Bazaruto Island, this conflict is more likely to be caused by economic opportunities than by grievance. Economic factors drive conflict, such as the combination of large exports of natural tourist attractions as key commodities, low education, a high proportion of unemployed young men and resultant economic decline amongst them; all of which drastically increase the risk of conflict. Greed seems more important than grievance. If tourism investment brings economic growth and gives hope, this will offset the economic decline, and encourage excluded native islanders into participating in the benefits of tourism instead of considering conflict action.

Driven by a common sense of defending their asset, the land, in what can be termed “collective action theory”, the islanders participated in public consultative meetings with the government team towards assigning land-use concession rights to the Indigo Bay Resort. This issue involves a “power struggle” between the government that has decision-making power, Indigo Bay Tourist Island Resort, as investors, and the islanders themselves, who do not have decision-making power, but own the land.

The lack of trust between the Indigo Bay Resort and the indigenous community is a legacy created by the previous resort managers. However, the researcher is optimistic that this conflict is going to be settled. The Bazaruto Lodge managers experienced a similar conflict at the beginning of their project. If native islanders walked past the front of the resort, it was considered to be an inconvenience and embarrassment to tourists. For example, one islander lay drunk in front of the resort. This was the reason given for the Bazaruto Lodge management’s desire to erect a fence along the beach. An agreement was reached to allow indigenous islanders to transit freely (personal interview with Lewi Erasmus, Bazaruto Island 22/08/2003).

The atmosphere of mistrust which emerged between native islanders and the tourism sector on the island developed into a conflict due to the lack of compliance by the tourism industry to one of the ten principles of sustainable tourism established by the

Worldwide Fund for Nature (WWF). The specific principle considered here maintains that “Consultation between the tourism industry and the local communities, organisations and institutions is essential if they are to work alongside each another and resolve potential conflicts of interest” (Garrod and Fyall, 1998:202).

The presence of tourism investments and tourists on the island creates and maintains the perception amongst the indigenous islanders that there are unequal economic opportunities and that there is unequal access to natural resources, as well as vast differences in standards of living between social groups. This contributes to a sense of grievance. The Bazaruto Island conflict over land, the refusal to hand in the tourist entry taxes, and the unwillingness of Bazaruto Lodge to offer employment to the people provide a breeding ground for conflict.

Indigenous islanders of Bazaruto have made their living for generations on communal land through combined agrarian activities such as tilling the land, fishing, and goat and sheep breeding. These activities are no longer profitable, as a direct consequence of scarce and irregular rainfall patterns, together with infertile soils. When the fertility of soil is exhausted due to the traditional system of constant use, people are obviously pauperised at an unprecedented rate. They lose, or are unable to obtain, livelihoods from traditional exploitation and use of natural resources. The problem worsens when these islanders have access neither to formal education nor to jobs. The fact that sheep and goats adapt themselves easily to poor fodder and that there is an abundance of water in lakes in communal grazing land zones has prompted some native islanders to adopt this type of farming as a community economic maximising strategy. However, lack of alternative employment opportunities on a small island led the islanders to depend primarily on natural resources, thus depleting and degrading these resources in a context of natural resource scarcity (See Matthew et al., 2002:16).

The failure of agriculture as an economic subsistence activity to accommodate the growing population of islanders has increasingly forced them to look for livelihoods in fisheries and for employment in the tourist resorts of the island, with very limited success. This leads to growing risks of conflict. Evidence shows that the construction of tourist resorts on the island brought restrictions in the use of natural resources to the indigenous people and has imposed some degree of unbalanced access to, or unsustainable use of, natural resources, and plays a critical role in environment-related conflict, as well as increasing vulnerability to natural calamities.

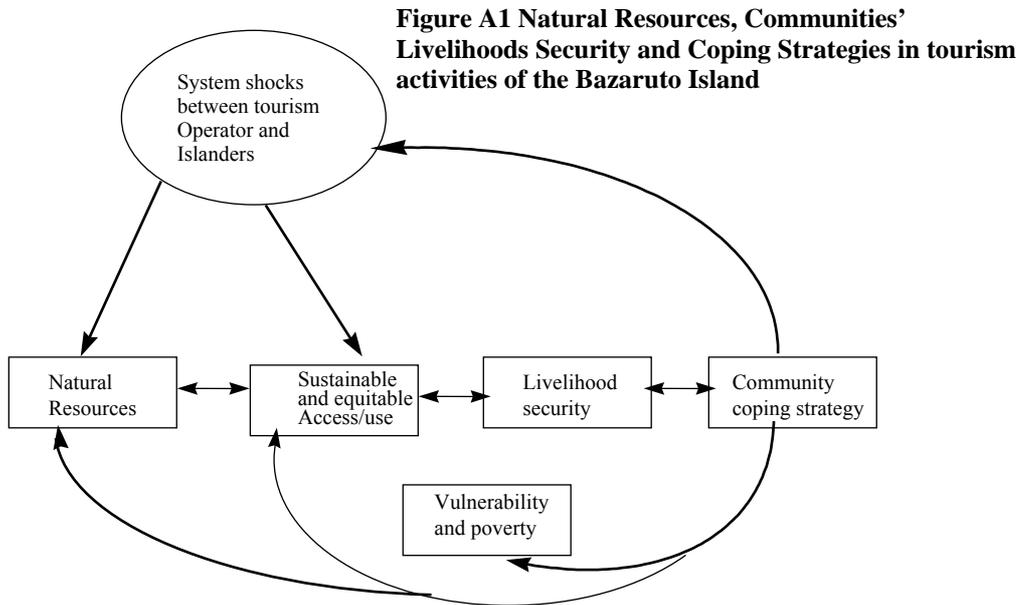
A further analysis of use and conservation of natural resources indicates that the continuous cycle of over-dependency of indigenous islanders on natural resources has led to the depletion of fishing stocks and degradation of the pastures and the ecosystem on Bazaruto Island. As a result, fishing and agriculture no longer play their traditional roles. The emergence of tourism based on cultural and environmental attractions within the rural traditional livelihood system resulted in unsustainable practices which caused social conflict and marginalized native islanders.

Indigenous islanders have been forced to adopt coping strategies. Coping strategies are the “practices that groups and individuals adopt in the face of trends and shocks that affect the viability of their livelihoods, in order to restore their security” (Matthew et al., 2002:16). For example, indigenous islanders used to collect crocodile and marine-turtle eggs and to fish for dugongs and marine turtles, which represent both food and animal protein. Consider the fact that for tourist developers and the government, crocodiles are possible tourist attractions; for ecologists, they are of environmental concern; and for tourists, crocodiles seen in their natural habitat are exotic draw cards (See Map 6, Appendix XIII A). The Bazaruto National Park authorities, through fiscal community guards, have tried to halt the practice of crocodile hunting for skins and trophies. There are thus conflicts regarding resource-use among the different parties involved in tourism.

However, native islanders continue to fish in the coral reefs in front of the Indigo Bay Tourist Resort, and on other reefs, exacerbating tension between the indigenous islanders and resort operators and tourists. This was visually observed by the researcher and further stated in interviews with native islanders and tourism operators on the island.

Matthew et al (2002:17) argues that “the linking of the environment and security of indigenous communities through the mechanism of livelihoods emerges as the ‘missing link’ between poverty, environmental degradation and conflict” (better illustrated in Diagram 1). The diagram summarises interrelated systems acting together. These systems show that there are conflicts of interests among components deriving from access and use of natural resources, hence sustainability of conservation and livelihood security are affected, forcing communities to adopt coping strategies to decrease vulnerability and poverty. Such systems include those of tourism operators, tourists, native islanders, conservationists of the Bazaruto Marine Park and fishermen of

Bazaruto Bay, and the activities of one component may positively or negatively affect the others.



Source: Adapted from Matthew, (2002:17).

Under the customary law and during the colonial era, the indigenous community of islanders lived on state land with usufruct rights, without there being any need to issue title deeds.

Natural resources degradation, including loss of biodiversity, can create scarcities that drive people out of the places where they live. Inadequate supplies of firewood and construction poles and timber, depleted aquifers, and soil erosion due to sand dunes cause a reaction which results in an increase in poverty, insecurity and environmental degradation. The trees that were knocked down by the cyclone of February/March 2003 will no longer secure soils. The cyclone caused the waters to invade the land and open valleys, and this flow of water caused further soil erosion and disrupted fish production. “In rural areas where people directly depend on the soil [terrestrial] and water forests for subsistence, poverty is essentially an environmental trend” (McNeely, 2002:45).

Degradation of soil and forests on Bazaruto Island is greater in the area of Machulane where the concentration of tourism workers is high. The use of trees for fuel and charcoal production is seen as the prime contributor to environmental degradation, leading to conflict.

A decline in soil productivity, fish, and grazing fodder on the island leads to resource scarcity and to economic hardships, and might thus contribute to violent conflict. Grazing land has been traditionally demarcated, following traditional laws. If one drives one's herd to the zone or into another traditional chiefs' area, violent conflict may result. Some of the famous sheep and goat breeders such as Ricardo Chidambane of north Zenguelema and Matchikitani Salani of Pangaia have been driven to poverty and lost almost their entire herds. Native islanders told the researcher that this was due to lack of veterinarian assistance. Sheep and goats have been the traditional saving system for islanders. Despite the fact that the indigenous community has not reacted violently to the government, there is a strong feeling of dissatisfaction and of blaming the government for abandoning them.

3.3 Emergence of conflicts between local community members, tourist activities and tourist resort operators on Bazaruto Island

Tourism on Bazaruto Island is based on the aesthetic beauty of the land and the natural resources of its coastal environment, in particular on its fauna and flora. It is developing as a result of Foreign Direct Investment (FDI) in the settled coastal zone of Mozambique. Bazaruto also has wonderful landscapes. Landscape resources are a combination of attributes, all of which provide tourist entertainment: clean sea waters and sandy beaches, coral reefs and their exotic fish, marine and terrestrial fauna, and the sand dunes and sea.

The natural endowments and abundance of several categories of resources is the main reason the Ministry of Tourism declared Bazaruto Island one among the 26 short- and long-term tourism development zones along Mozambique's Coast. However, the nature of tourism activities conflicts with the traditional land rights of occupation according to the native community's use of natural resources as prescribed in the country's Land Law 19/97, article 12 (detailed later). According to Pigram (1983:79) and Mathieson and Wall (1982:127), conflict arises due to impossibility of maintenance of a beautiful landscape where two or more different activities of the local native communities such as small-scale farming, pastoralism and fishing must be reconciled with recreational tourism activities.

Local terrestrial forests are composed of a variety of trees that provide the local community with firewood, building materials and a selection of wild fruits, the date palm or *titchindzu* (*Phoenix reclinata*), *mareru* (*Eugenia caffra*), and others. The swamp forest, mangrove forest, firewood biomass, and wild palm (*Hypaene natalensis*) provide the local community with straw for weaving baskets, for mat-making, tapping of the wild-palm wine, *utchema*, building material, and medicinal plants for curing diseases. For tourists, the forest is important in that it enhances the island's attractiveness

From the tourism perspective, Bazaruto Island's marine and terrestrial fauna offer resource-based tourist attractions because there has been low-intensity development and minimal artificial intervention, thus enhancing their degree of distinctiveness and limiting their intensity of use (Cooper et al., 1998). The market value of these natural resources was enhanced by the building of tourism developments on the island.

The nature of these resources determines the activities taking place there, such as swimming, fishing, snorkelling, scuba diving in the coral reefs, visiting the Ponta Dundo archaeological site and sand boarding on the dunes, as well as sightseeing (see maps 3 & 5). Those who snorkel may see dugongs, dolphins, fishes, rays, squids, lobsters, marine turtles, shellfish, crabs, oysters and corals.

For the ornithologists there are the (*Theron calva*) or green-pigeons, wild ducks, woodpecker, (*Marops superciliosus*) or Olive bee eater, weaver birds such as (*Loceus cucullatus*), the Spotted-back Weaver; and several marine birds, such as flamingos, seagulls, etc.

Notable terrestrial fauna are small mammals such as the samango monkey (*Cercopithecus mitis*), the night ape (*Galago maholi*), the red duiker (*Cephalophus natalensis*), the bushbuck (*Tragelaphus scriptus*) and the Tonga red squirrel (*Paraxerus pillatus*) (Dutton and Zolho 1990). Most of these creatures are regarded as sources of meat for the indigenous community islanders, enriching their diet, while tourists prefer them alive for sightseeing. It is here where the conflict starts. Native islanders have killed their dogs to show their commitment to wildlife preservation and not to hunting. However, some have stated during interviews that they still use silent weapons such as snares to catch these small animals, preferably red duiker (*Cephalophus natalensis*) and bushbuck (*Tragelaphus scriptus*).

Islanders interviewed by the researcher explained that conflicts are caused by the Indigo Bay Resort prohibiting them from fishing in front of the resort premises and within the sight of tourists. The resort also ordered the Mulidza fishing community not to fish in the coral reefs so as to breed and preserve exotic fish. The resort charges US\$2 per tourist for scuba diving and snorkelling in such places and the proceeds are supposed to be given to some fishermen among the community members in compensation for not fishing in the restricted areas. However, no written agreement exists which can be enforced to ensure that the resort compensates the native islanders in this matter.

Additional community benefits from the agreement will include building two big boats run by the community to transport tourists. Some of the respondents reported that if the Indigo Bay Resort guaranteed that there would be no impediment to fishing anywhere in the sea, there was no problem at all, that the land concession could be applied to this tourist resort. One also added, “it is still tolerable that fishing is forbidden only in some areas. Our major concern is that, if fishing is totally forbidden on the island, the local fishing communities will not be able to feed their families” (An islander of Bazaruto, 2003).

Madivadge, another islander respondent, interviewed on a different occasion by Elias (2003:22), agrees with the researcher’s statement by saying that:

Before the Park laws were introduced islanders fished freely on the Island, but now we are very limited. The Park authorities promised compensation which we never saw. We are suffering. The fiscal Park guards say always that we are going to benefit, because the two hotels that are operating on the island namely, Bazaruto Lodge and the Indigo Bay Resort, are going to give us the tourist entry fee taxes.

The nature of land use by the community members, governed by the country’s customary land-law rights of occupation and inheritance, differs from the philosophy of the conventional government law and from how tourism investors approach government entities for acquiring land allocated for tourism developments.

3.4 Conflict for land possession opposing local communities and tourist resorts operators on natural resources use

Islanders of Bazaruto have land-use rights based on both customary and state law. According to customary law, a native islander successor has the right to occupy the land of his or her ancestors. Making use of these rights, islanders built their huts and planted some fruit trees freely. The State Land Law 19/97, which recognises such rights under terms of Article 12-a (1997), states that “the land use right is acquired by an occupation by single individuals and by local communities, according to customary practises in issues which do not contradict the Constitution”.¹⁴

The Mozambique Land Law is in line with Article 4 of the Lagos Declaration stating that:

Policies, laws and programmes to secure these rights are an urgent necessity across the [African] continent. This must include the recognition of customary norms in tenure relations and their integration into national policy and legal frameworks. Governments must also allocate sufficient resources for effective implementation of these policies and laws.

In order to acquire land-use rights in the most suitable, attractive coastal areas for tourism development, e.g. on Bazaruto Island, investors approach government institutions. This reflects the “competition to get the best” portion of land, (Maser, 1996:39); this competition is exacerbated by the fact that land is a free-of-charge asset in Mozambique and the law states that land is a “state property and cannot be sold or, by any means, alienated, mortgaged or confiscated”.¹⁵ However, tax is paid for land use subject to the terms and conditions of Article 28 of the Land Law 19/97.¹⁶ Blaikie, Cannon, Davis and Wisner (1994:153) describe the demand for land by foreign buyers: “coastal land and marine resources worldwide tend to be under the increasing control of absentee interests in developed and developing countries”.

According to Williams (2001:367-369), in

Scandinavia and New Zealand an open access to the land ownership for foreign investment is marketed internationally as a tourism commodity. Particularly in New Zealand, conflicts emerge between government and local communities who

¹⁴ / “Boletim da República (BR) 1997:200—(17), I Série _ Número 40, 3º Suplemento. Imprensa Nacional de Moçambique, Maputo”.

¹⁵ / Article nr. 3 of the Law no.19/97 of October the 1st 1997. In _ “Boletim da República (BR), I Série _ Número 40, 3º Suplemento. Imprensa Nacional de Moçambique, Maputo”.

¹⁶ / (BR, 1997:200—(18).

claim right of settling on public lands, pastoral leases and conservation areas which are the only ones made available for settlement, therefore increasing pressure on available assets.

Similarly, the same scenario on Bazaruto Island leads to conflict. Nevertheless, it is desired that on the island “tourism developments and programs should complement traditional lifestyles while providing employment and business opportunities” (Addison, 1996:296).

In this context, it is interesting to note that the Indigo Bay Resort, with its 50 rooms, is the owned by Rani Africa International, based in the southwest of Zenguelema, whereas, Bazaruto Lodge in northern Sitone, with its 26 thatched-roof A-frame bungalows, is owned by Salvour and Pestana Hotel and Resorts with some shares owned by the Banco Austral and the Mozambique Government.

As an initial step to acquiring land-use rights, the investor submits an application to the responsible government body. The intent of the government is to attract more FDI; therefore, land should be available to investors. The Mozambican government has adopted a market economy or “laissez faire approach” (Boekstein, 2000:8) to attract and keep foreign direct investment, and to promote development in the tourism sector. This exacerbated many problems associated with land grabbing from the local communities in coastal zones like Bazaruto Island. According to Maser (1996:20), this situation is a blatant illustration of inequality in respect of property rights, which reflects injustice committed sometimes with acknowledgement and involvement of state agents. The mission of these agents is to uphold and fulfil the legal mandates of protection of the land rights of the local community and to protect the environmental quality of the area for all citizens, present and future.

Alden (2001) and Hilary (2003), analysing foreign investment in the tourism sector in southern Mozambique in 2000, reported on land grabbing and consequent displacement of local communities in Matutine, the Inhaca Peninsula and Cabo de São Sebastião (Kewene), and the Vilanculos Coastal Wildlife Sanctuary, next to the marine park of islands in the spectacular Bazaruto Archipelago, for development of luxury resorts.

The local community was removed, with only a few jobs offered, and faced restrictions on fishing rights, which has affected the lives of up to 50,000 people. “The removal was to make way for the new investment, which includes an exclusive holiday development with safari camps (the \$12 million investment included restocking the area with

elephants, hippopotamus, rhinoceros and zebra). These tourist sites within the wildlife sanctuary are now on sale for \$100,000 each, with 27 already taken” (Hilary, 2003:6). Indeed “The brazen manner in which the government colludes with international investors to set about disenfranchising the small farmers is illustrated by these examples in the area of tourism” (Alden, 2001:4).

However, as Ramsays’ (1995:46) analysis of the issue of land possession on the island points out:

Living on state land with the usufructural rights only, the islanders have no power of exclusion. Under these conditions resource use tends to acquire the characteristics of an open access system which is not a management regime at all since people use opportunistically, the resources but do not manage them.

Indigo Bay Resort, currently the biggest resort complex on the island, acquired the former Sabal Bay Lodge, which was built on an area of 29,5 hectares, centred at the geographical coordinate Latitude 21°42’30’’S and Longitude 35°27’00’’E. After huge investments made to acquire and equip the resort, the investors saw the need to extend the area which they were occupying. The proposed extension concession area is part of phase three of the expansion, aimed at building 50 additional timeshare units, a restaurant/bar, and a Boat Marina Club, including a clubhouse, a staff village at Mulidza and 35 self-catering chalets, a nine-hole golf course and houses at Zenguelema, including other structures, in order to be able to offer more accommodation and services to guests. The intended Indigo Bay Resort extension concession area lays the base for the conflict that emerged in the year 2002 between Indigo Bay Resort and the islanders.

According to unanimous statements of community members consulted in the three zones of the island, Pangaia, Zenguelema, and Sitone, in separate and joint group discussions during the fieldwork, Indigo Bay Resort submitted an application asking for 14 km² of land concession in the surroundings of the present location of the resort.

To substantiate the evidence of the informants, the researcher went to both the national and provincial departments, namely, the *Direcção Nacional de Geografia e Cadastro* (DINAGECA), *Departamento de Cadastro de Terras* (National Directory of Geography and Property Registration, Department of Land Registration) and the extended branch *Direcção Provincial de Geografia e Cadastro de Inhambane* (Provincial Directory of the Geography and Property Registration of Inhambane), where he had access to file

number 633. This application was submitted to his Excellency the Governor of the Inhambane Province on 28 February, 2002. It requested an area ranging from the Ponta Zenguelema to the north, referenced by the parallel line latitude 21°40'00"S, and Ponta Mulidza, at a parallel delimited by latitude 21°43'30"S¹⁷ or 21°43'.838"S to the south, and by the beach to the west, and equally also to the east coast line.

The total extension area is 1,370 hectares. This is equivalent to 14 km² (DINAGECA, 2002). The area of the intended new concession represents 14.28% of the total area of the island, calculated as 98 km² (Ricardo, 1999:18).

A consultative meeting took place on the 3rd of June, 2002 and involved government staff at several levels of authority and the indigenous islanders' communities' members, as well as a representative of the Indigo Bay Resort and one representative from Bazaruto National Park Authorities. This is a normal procedure that conforms to the National Land Law 19/97, Article 13-3, which states that, "the process of assigning a title deed for land use right includes the opinion of local administrative authorities, preceded by consultation with the respective communities, for the purpose of confirmation that the area is free and it does not have occupants".¹⁸ Therefore, all information gathered and discussed here reflects the opinions of the people who were involved in this process as active role-players. The provisional land concession of the initial 29.5 hectares applied for by the Sabal Bay Lodge, was granted to the Indigo Bay Resort on the 11/03/2003.

The public consultative meeting for the land concession extension has identified that there is a relationship conflict. This conflict is caused by strong emotions, misperceptions and poor communication between the Indigo Bay Resort and the indigenous islanders' community and seems to be a "destructive environmental conflict in one way or another that is a spawn of misunderstandings, miscommunication, and misperceptions of the capabilities and intentions of adversaries and a conflict which alters both structural and interplay relationships over time" (Maser, 1996:25; Porto 2002:20). The origins of these conflicts date back to 1999, when the resort changed its management and its name from Sabal Bay Lodge to Indigo Bay Resort. The company

¹⁷ / This is the official reference parallel contained in the file of the Indigo Bay Resort to which I had access, while the following parallel regarding the "Ponta Mulidza" supplied was taken in the field by the researcher's GPS, according to the indication from the islanders, community.

¹⁸ / "Boletim da República (BR) 1997:200—(17), I Série _ Número 40, 3º Suplemento. Imprensa Nacional de Moçambique, Maputo". Translation by author Gilberto Ricardo, 2004.

managers of 2000 to 2002 exhibited racism and a lack of good communication, which bred hostility and lack of confidence. This led the native community to consider that there was a hidden agenda from Indigo Bay Resort and the government regarding community land.

The intended land extension area and all activities on it are to be allocated on an exclusive-use basis to Indigo Bay Tourist Resort. This could lead to conflict on a number of issues. First, land possession and use by the Indigo Bay Resort investors would result in indigenous islanders' communities, "rapid and deleterious processes of deprivation and marginalization" (Ohlsson, 2000) in two ways:

i) by rapidly making the islanders' community poorer, by not having any access to grazing land for their sheep and goat, moving their fishing camps and squeezing them into an already occupied land; abandoning their fruit trees at home and in the bush, and leaving their cultivated plots and/or

ii) resulting in increased deep inequality between Indigo Bay Resort investors and the native community of Bazaruto Island, unless a sharehold is granted. If native islanders had land-use deeds, they would either be partners in investments or invest in community-based tourism themselves.

Second, there are negative environmental issues involving golf courses, marinas, and the absence of environmental impact assessment in the application letter. Third, the lack of compensation of the victims of "forced removal", would fuel growing resentment between indigenous community islanders and tourist entrepreneurs.

3.5 Absence of an environmental impact assessment in the application letter

The researcher examined thoroughly file 633, which has all documents related to the previously named Sabal Bay Lodge, now owned by the Indigo Bay Tourist Resort, and found in the extension land concession application that there was a simple letter, dated the 28 February 2002, explaining the activities which were going to take place and requesting the concession area. On 12th June 2002, the application had a technical draft map showing the latitudes demarcating the intended area.

When the Sabal Bay Lodge development was started, an environmental impact assessment was carried out. The Bazaruto Master Plan of Dutton (1990) predicted that there would be some significant negative impacts. These negative impacts were identified, and

recommendations were drawn up. The consequences of this tourist development, and the issues concerning whether these recommendations were implemented or not, are discussed in chapter six of this study.

The Sabal Bay Lodge, from which the Indigo Bay Resort acquired land-use rights and property, did not plan to introduce a marina and a golf course on the island. Currently, Indigo Bay Resort intends to introduce new tourist development plans, incorporating both a marina and a golf course. The construction and operation of a marina as well as a golf course have much more far-reaching negative environmental impacts than the development previously proposed by the Sabal Bay Lodge and further upgraded by the current Indigo Bay Tourist Resort complex.

It is agreed that marina construction and operation has negative environmental impacts such as increased sedimentation from dredging operations and pollution of water from inappropriate disposal of oils, paint residues and fuel, thus threatening endangered species such as native fauna. Tourism activities result in increased numbers of feral animals and habitat reduction and fragmentation. It will also have a negative impact on vegetation and will affect air quality (Pickering, Harrington, and Worboys, 2003; UNEP, 2002). Any project with significant impact is regulated by the Mozambican environmental laws.

The Mozambique Environment Law No. 20/97 of 1st October 1997, Article 3, states that all public or private activities that might influence environmental components, directly or indirectly, are subject to this law. Furthermore, some activities proposed in expansion phase three of Indigo Bay Resort, by their very nature, are going to impact on the environment, as predicted in Articles no. 14 and 15 of the abovementioned law. Their approval must be subject to having an environmental impact assessment done.¹⁹ It conflicts with the environmental law when a formal application goes to a government body for approval while still incomplete because it misleads leaders and makes them take wrong decisions.

3.6 Negative environmental issues involving golf courses and marinas

The new proposal for expansion of the Indigo Bay Resort does not show what impact this development will have on the surrounding environment of the southwest Mulidza dunes. It is also not clear whether these dunes will be incorporated as an ecosystem into

¹⁹ / “Boletim da República (BR) 1997:200—(20 and 22), I Série _ Número 40, 3º Suplemento. Imprensa Nacional de Moçambique, Maputo”.

the golf course in their natural state, or whether the natural vegetation composing the landscaped area will be totally removed. An environmental impact assessment would include an adequate description of the natural terrain of the development area. The assessment would also cover the size and the shape or type of dune system to be part of the golf course in Bazaruto Park, the possible impact on the associated coastal dune fields and the beaches, and possible mitigation measures. Data is required on the stream flow of the lakes to be used as irrigation for the golf courses. Without knowing the amount of water available in the lakes or ponds, it is impossible to determine the amount to be extracted for irrigation, and what the impact will be on crocodile lakes and humans.

Pesticides and some chemical fertilizers are going to be used for grass fertilization and are known to be both hazardous and toxic. An assessment should detail which ones will be used in the area and how. Studies have revealed the dangers of pesticides and chemical fertilizers associated with golf courses to both wildlife (especially birds) and humans. Saddul (1998) studied the environmental impacts conducted on Mauritius, and concluded that golf courses have sacrificed welfare, including lagoons surrounding environments, and people, by dumping several tons of biocides and fertilisers per course per year. He adds that the total impact of golf course expansion, especially on small islands, is greater than not having a golf course. Furthermore, the author points out that in Barbados and elsewhere, oceanographers have already discovered evidence of nutrient-loaded ground-water discharge onto coral reefs which is due to a combination of changed fertiliser practices on golf courses and poor sewage disposal.

Coral reef fringes on the coastline of Bazaruto Island will be easily suffocated by sediments from pesticides. The construction of a golf course involves deforestation through the clearing of trees, the introduction of alien grass, and other works that could destroy a sensitive ecosystem. Because the island lies in the cyclone zone, this could have a very devastating effect on the coast line. To maintain golf courses in the tropics, one needs 1000 tons of biocides per golf course, millions of litres of water and other minerals and chemical compounds used for soil improvement. Golf courses require chemical sprays which pollute the air (http://www.nfld.net/paa/nr_wb0502a.doc).

An environmental impact assessment should include information on lakes, wetlands or ponds likely to be affected by leaking pesticides and chemical fertilizers. The use of chemical fertilizers on Bazaruto Island may allow a high degree of leaking into ponds,

lakes and wetlands, especially where the sandy soil is so permeable. This ecosystem currently presents an important habitat for many species of waterfowl. The unspoilt beaches and beauty of Bazaruto Island Park is an excellent environment for bird watching and other eco-tourism opportunities. It makes Bazaruto Island an attractive eco-tourism destination. This attraction could vastly diminish with the development of a golf course.

3.7 Conflict around land possession and use among Indigo Bay investors and Bazaruto islanders' communities

Indigo Bay Resort's desire is for the islanders who are within the proposed demarcation area to move further north, close to Ponta Zenguelema, or further south towards Pangaia, and settle on the other side, Ponta Mulidza. This was the reason for the concern regarding the islanders' free movement and settlement. Elias (2003:22) shares the same view, arguing that "the intention of the Indigo Bay Resort of enlarging the area they are occupying now threatened the island population, who feel that they would be restricted from free movement".²⁰

However, the native islanders emphasised that the removal process was to be selective, subject to the condition that islanders who have huts with rounded reed walls and thatched roofs would move, because tourists would see poverty. Serious dissatisfaction of the affected native community members against Indigo Bay Resort grew into an open conflict. It was perceived that the resort manager, who was spearheading this process, expressed a disrespectful attitude towards Mozambicans as "sovereign people".²¹ The desire to displace the islanders from their land had a very negative impact on the Indigo Bay Resort's interests, leading to the dismissal of the General Manager of the Indigo Bay Resort in 2002. The Ministry of Tourism stated that "the attitude of investors of Indigo Bay had previously been positive. The investor made an energetic decision by dismissing the manager immediately" (Elias, 2003:22).

The islanders, in the interview, added that those who had decent and attractive houses with corrugated-iron roofing were likely to stay. However, the researcher considers that the removal of any native islanders for any land concession to be allocated for tourism development would destroy the social ecosystem, because the indigenous islanders are

²⁰ / "Recursos naturais de Moçambique, - Parque Nacional de Bazaruto, Ilhéus sob risco de acantonamento". In the *Zambeze* (weekly newspaper) of Thursday, the 15 May 2003, pp. 22 - Maputo.

²¹ / A Indigo Bay staff member interviewed by the researcher in the Bazaruto Island about this issue 18/08/2003.

an integral part of the environment and the socially-built landscape would miss these elements. The indigenous community refused to obey the removal order. In addition, they suggested that Indigo Bay Resort should go and build its structures where there are no people living. It is unfair that the removal of fishing camp sites, grazing land, buildings and fruit trees included no provisional compensation.

A land-use planning of communal lands has been established for Bazaruto Island within the National Marine Park (see Correia et al., (2000) and Dutton and Zolho (1990) for details). However, the proposed new extension area for Indigo Bay Resort does not show any details of how it is to meet the regulations set for the Park in this zoning plan.

Long-lasting talks for over eight hours were part of the consultation process for land concession involving Provincial Government officials, the district officers, local officials, as well as Bazaruto National Park officials and Indigo Bay Resort officials. The DINAGECA officially classifies the application for land extension concession as being “formulated by a collective body” (a share holding) as described by point (c) of Article 12 of the Land Law. Meanwhile, the land concession process is still being discussed, but it has been emphasised that in order to do demarcations and allocate land-use rights of the intended piece of land, a consensus should be reached between the native community members and their local leadership and the Indigo Bay Resort.

However, if the Mozambican Government assigns a land extension concession to Indigo Bay Resort without the consensus of native community members, it will be a deliberate violation of Article 3 of the Lagos Declaration, which states that securing the land and resource rights of the rural poor people is a necessary, if not sufficient, condition for economic renewal, so that rural development in Africa can be attained. Emphasis should be on the enhancement of the productive capacities of rural inhabitants and the regeneration of local economies, and not on the inequitable concentrations of wealth for a small number of people.

Community members, however, voiced in interviews and public debate and also in statements contained in the Dinageca File (2002:88-89), as well as in a corroborative statement of Albano Mananisse²², the view that they were sceptical about reaching any pact with the Indigo Bay Resort, because the company, according to them, never built harmonious relationships with local community members. The tendency to prohibit the

²² An islander interviewed by Elias (In *Zambeze*, 15 May 2003)

breeding of goats and sheep has created barriers, as have the attempts to prevent transit through and access to the company's premises by the native community members to, as well as access to the beach and certain other areas, especially those that are contiguous to Indigo Bay Resort. The company has erected fences and set up gates with sentinels on them, in what could be interpreted as "the right or entitlement to protect their economic investment" (Maser 1996:23).

Tourism investors of Bazaruto Island did not realise that when a fence is erected surrounding a tourist resort, it plays two roles. First, it acts as a barrier to prohibit access of native islanders to the complex premises. Second, it imposes a psychological barrier which blocks the building of confidence and harmonious relationships between the native islanders and the tourism sector.

3.8 Growing resentment between native islanders and tourist entrepreneurs as a sign of conflict

The Ponta Mulidza community residents demanded that the Indigo Bay Resort managers grant consideration to the natives by granting usufructural rights in order to restore harmony. This is a pre-condition the islanders set before they would consider assenting to the concession of the land to the Indigo Bay Resort. Community islanders of north Sitone stated that they felt many tourist entrepreneurs who came to Bazaruto Island perceived native islanders as people of low status and stupid, and not able to think at all. "These entrepreneurs assume that the island is a found asset that was lost in the bush without anybody. Such managers have no sensibility with the concerns of the native inhabitants who live there. Acting in this manner hotel owners pretend that there is no link between tourism operators and the islanders." (An islander interviewed in Sitone, Bazaruto 23/08/2003).

The discussion held between indigenous island community members, government officers, Indigo Bay Resort managers and Bazaruto Park managers brought about a positive solution, in which the Indigo Bay Resort would not prohibit local community members from crossing the beach or coming near their premises in the future.²³ The general manager of the Indigo Bay Resort, when interviewed, confirmed this progress, saying, "our community counsellors are working to bring better relationship between tourism operators, tourists and the indigenous community members" (18/08/2003).

²³ / Report of the Public Debate held by the Researcher with the Community Members Association named "Thomba Yethu" at Sitone on the 23 August 2003.

3.9 The case of Bazaruto Lodge perpetuating conflict for sharing benefits accrued from use of natural resources

Both oral and documented sources provide plenty of evidence that “there are funds destined for the communities from the established entry taxes to tourists charged by resorts, which never benefited the indigenous communities”.²⁴ However, there is a dispute over the entry fee taxes, as to whether they are part of a signed and documented agreement agreeing to grant benefits to the community from income to the resorts on the island (DINAGECA 2002:89), or allegedly waiting for an approval of a regulation by the government. Islanders emphasised that in order to alleviate the suffering of the community, these funds should be released and applied to building the community’s structures.

The islander’s association, *Thomba Yethu*, mentioned, in a public debate held with the researcher on the 23/08/2003, that the tourist tax entry fee is a disputed issue. Tourism operators like the Bazaruto Lodge have been delaying or refusing to hand in collected entry taxes to the indigenous islanders since 1997. This is a clear case of marginalization of the indigenous islanders from economic benefits accruing from exploitation of valuable natural marine resources, such as fishing and the landscape, for tourism.

Islanders argued that this resort must pay the money that is owed to them from the past seven years. They further said they only received some money once in 1996 and that was only enough to build a Primary School at Sitone.²⁵ One of the Bazaruto Lodge managers acknowledged that “some Lodge managers do not want to pay the Park’s funds. I am on their side on that. The money should be paid”. Native community islanders considered themselves unfairly treated when “in the neighbouring Benguerua Island of the Bazaruto Archipelago, the indigenous community members received an entry tax fee and other material support” (Islanders at the public debate, Bazaruto, 23/08/2003).

Native community members also say that they should be compensated for not fishing in certain areas and zones of the sea. “We are fighting for the same cause” (An islander in

²⁴ / (Islanders of the Bazaruto and the multi-sectoral team meeting report, contained in DINAGECA, Indigo Bay file 2002:88-89).

²⁵ / Report of the Public Debate held by the Researcher with the Community Members Association named “Thomba Yethu” at Sitone on the 23 August 2003).

Bazaruto, 22/08/2003). Madivadge²⁶ again says, “The Bazaruto Park insists that it has a policy for conserving the land and sea resources but this has given us neither any benefit at all, nor anything in compensation”.

The native islanders demand that tourist operators must hand in their share of the US\$5 charged per tourist who enters the island, as a pre-requisite for their active participation and collaboration in management of the island’s natural resources, which is needed to develop tourism. They emphasize that “if Bazaruto Marine Park managers and the tourism sector prohibits us from using natural resources the way we want and do not give us entry fee tax, there will be no harmony” (Islanders at the public debate, Bazaruto 23/08/2003).

The issue described in the previous four paragraphs demonstrates the development of a “destructive conflict born out of a perceived threat to a person and community group’s right of survival” (Maser, 1996:21); therefore, emphasising that the native community’s successful integration and participation in projects like the tourism development in the island is threatened.

When managers of Bazaruto Lodge refuse to hand in the community money from the entry fee, not only are they a threat to the islanders’ subsistence, but it also is an obstacle to all policies and sustainability strategies put in place for tourism development. These arguments find ground in Boekstein (2000) and Shepherd (1998:43), who say that community involvement is an essential ingredient for achieving sustainable development, which demands effective partnership between the host community islanders, private commercial sector, non-profit organisations like the *Thomba Yethu* of Bazaruto Islanders, and most importantly, the public sector. Sustainable economic projects like fishing and tourism have to be formulated according to ecologically sound, economically viable, socially reasonable and humanely adaptable principles.

However, Mr. Azevedo²⁷ justifies the denial of the islanders’ rights to payment of tax entry fees, saying that the *Thomba Yethu* association does not have a legal existence yet. He added that “they wanted to do something on behalf of the communities”. However,

²⁶ / Interviewed by Elias (In *Zambeze*, 15/05/2003).

²⁷ / One of the managers of the Bazaruto Lodge in interview with Elias (In *Zambeze weekly News* 15/05/2003).

in fact, Azevedo was defending acts which for seven years infringed on the rights of the islanders to share benefits from tourists. This has fuelled dissatisfaction.

3.10 General expectations of native islanders in getting employment in the tourism industry as solution to conflict

The *Thomba Yethu* and the islanders' native communities expect the following actions from tourism developments established on the island:

1 ⇨ The tourism sector must employ natives: both youth and elderly people. Collected evidence illustrates that the tourism industry employs 242 workers of which 29 (14%) are from the island. The remaining 86% of current tourism workers come from outside the island. Native community islanders believe that if they earned a living by working in the tourism sector, it would not be necessary for them to fish in the coral reefs, as was explained by a member of the *Thomba Yethu* in public debate (Bazaruto Island 23/08/2003).

2 ⇨ Tourism entrepreneurs should give consideration and respect to indigenous islanders in order to have their support, in the name of sustainability in tourism development.

3 ⇨ Native islanders have recognised that their traditional lifestyle attaches them to fishing activities and the cumulatively aggravated birth rate of the native islanders will therefore threaten sustainable development. If local community members are offered formal employment in resorts, few people will rely on fishing, and this will enhance the protection of natural resources.

4 ⇨ For native islanders, tourism development is desirable if everyone accrues benefits from it. The native islanders, born and raised near the sea, have developed adaptability to this environment. However, this capacity does not result in an advantage and give preference for them to be employed as pilots of motorboats belonging to the resorts because people from the mainland are offered these jobs. The fact that Indigo Bay Resort has contracted some indigenous islanders and trained them as pilots of speedboats constitutes an exception in this respect. At Bazaruto Lodge, all pilots of speedboats come from the mainland. This lodge has employed only one worker (a woman) from the entire native island population.

As shown in Table 5 below, some indicators of tourism sustainability through local community involvement in using land and natural resources to avoid conflict were qualitatively assessed during the fieldwork.

Table 5 Key feature indicators of indigenous tourism in developing countries

Type of indicator	Characteristics occurring in the Bazaruto Island
1 Land ownership	Communal land/state land/reserves/natural resources use rights
2 Community control of tourism	No control of tourism by the community on Bazaruto Island.
3 Government support for local community tourism development	Not existent on Bazaruto Island.
4 Restricted access to the native sanctuary sites/communities:	Tourists are not restricted the access at Kanyala Sacred Site on Bazaruto Island, because the islanders do not value any more the place.
5 Local community tourism organisations:	The Bazaruto Island’s community is organising the “ <i>Thomba Yethu</i> ” CBO to develop local tourism.
6 Local community tourism strategies	The local community strategy on Bazaruto Island consists of exploiting eco-tourism based in a camp site with local traditionally built thatched huts.

Source: after Zeppel 1998:73, in Sustainable Tourism, a Geographical Perspective modified by G. Ricardo, 2004.

According to Zeppel (1998:74), tourists seek to come into contact with indigenous culture, whilst the indigenous islanders of Bazaruto argue that they also need to benefit by deriving income from tourism, land, cultural ventures and new economic investments. Attaining sustainable tourism still is conditioned by geographical location, accessibility, community control of land and resources and building efficient connections with the global tourism industry. The savannahs in developing African countries are sources for sustainable tourism ventures focused on community-based indigenous tourism projects that could be implemented with the help of non-government agencies.

3.10.1 The case of Bazaruto Lodge perpetuating conflict by refusing to employ native islanders

The Bazaruto Lodge bred conflict with the native community members by not employing them. Their dissatisfaction grew further when they recognised that this exclusion was deliberate. They became even more frustrated when the managers of this

resort did nothing to correct the situation. This means that the conflict situation is going to persist for an unpredictable time, entering a “conflict cycle, where the conflict itself may become the main source of its own continuation and extendedness” (Porto, 2002:18).

However, tourism managers of Bazaruto Lodge defend themselves against this, and other accusations outlined in this chapter, by saying that initially the education level of the islanders limited their suitability for work. Furthermore, “as islanders they live with time, wind, and fishing. They do not have to wake up early and go to work. They are not used to working in formal employment as they do not want to work under white bosses’ orders”.²⁸

The islanders defend themselves by arguing that: “where there are many people, a generalisation cannot be made. Every islander does not want formal employment in the tourism sector. There are those islanders who want and those who do not want formal employment. We need to involve community people; our sons must get used to working with bosses. We have to teach them that employment is like a home, where there are some principles and rules set out to be followed. As long as we accept a job contract assigning us a salary, we are bound to rules” (Islanders at the public debate, Bazaruto 23/08/2003).

Native islanders reported that mainlanders seeking employment in the tourism sector take advantage of native islanders by staying at the homes of their relatives who already work at the resort. As soon as they hear that there is a vacancy available, they go quickly to introduce themselves to be contracted to work, while the islanders are still at home.

According to the researchers’ empirical knowledge and visual observation while collecting data at Bazaruto Lodge, some workers who have been employed for more than 15 years have developed skills in the tourism sector. Hence, replacing experienced workers from the mainland with those who are native to the island, in order to solve issues of unemployment of islanders, becomes a difficult issue.

The fact that Bazaruto Lodge does not have any community consultants suggests that there is no interest in devising policies and alternative strategies to empower native islanders’ community members in their livelihoods in order to lessen the pressure on the

²⁸ / In interview with the researcher on the Bazaruto Island 22/08/2003.

natural resources and to compensate the community for restriction on ploughing or fishing in certain zones.

3.11 The case of Indigo Bay solving conflicts and creating harmonious relationships with the indigenous islanders' community for tourism development

3.11.1 Building social infrastructures and providing social support for building consensus

The Indigo Bay Resort has learned a hard lesson: that the lack of formal education and powerlessness of the islanders does not necessarily mean stupidity. The Indigo Bay Resort has understood that the indigenous islanders' community members have rights with regard to using land and natural resources. As compensation for restrictions imposed and to build consensus with the native community, the Indigo Bay Resort brought some new management staff and contracted community consultants in 2003. These new managers use persuasive methods to discuss issues in order to regain the trust of the indigenous community. It is within this context that the Indigo Bay Resort built a Community Social and Health Centre and a Primary School of Level 1 at Pangaia.

Apart from building the Primary School at Pangaia, Indigo Bay Resort contracted a teacher to teach there (see Plate A2, Picture 4b). The resort is "paying the salary of one teacher and the government will pay another. The school will lecture up to grade six. The proposal was sent in 2002 to the headquarters of the Inhassoro District and at the end of 2003, islanders were still waiting for the answer. "That means lack of consideration" (an islander in personal interview on Bazaruto Island, 23/08/2003). This resort has committed itself to helping the native islanders' community with their social material needs. However, some native islanders think "this is a sort of reward to deceive them in order to get them to agree to concede the land extension" (islander interviewed in the Bazaruto Island 23/08/2003).

During the period when the island was hit by a cyclone in February/March 2003, some native community islanders needed shelter and got social support from the Indigo Bay Resort. The resort provided them with accommodation and food for four days (a tourist resort worker, 14/08/2003). The researcher understands that it is extremely important that the community members acknowledge that there is a social benefit in establishing tourism development as a business institution on the island.

3.12 The role of the mediator and learning how to deal with conflict: comparing the Richtersveld National Park and the conflict involving Bazaruto Island

The ideas of expanding the resort concession area can be agreed upon through negotiations on an individual basis with people who live in the area where the expansion is going to occur. Talks should cover compensation, and islanders would probably accept if the offer were fair, a community counsellor suggested.²⁹

Meanwhile, the main challenge in resolving current conflicts faced by the native islanders and the Indigo Bay Resort is a result of the absence of mediators. The role of a mediator is to bring people together. “A mediator either makes people favour resolution on their own or else forces people to solve the conflict”, (Egeimi, Mohamood and Abdella, 2003:19). Even though Bazaruto islanders had lost trust in the governments’ willingness and ability to solve conflict impartially, the government has some interest in seeing the Indigo Bay Resort investment taking place. It also has a moral obligation to protect the national citizens’ land-use rights.

The land concession requested by the Indigo Bay Resort can somehow be considered as marginal land in terms of suitability for community use for agricultural purposes, (see Map 5 for the demarcated area). The use of this land by the tourism sector may bring about maximum potential benefits for both indigenous communities and investors. Hunter and Green (1995:42) argue that preservation of natural resources and of the built environment with community inclusion makes tourism a protector as well as a consumer of the environment. This strategy has served to boost economic value for other activities. It has been pointed out by many conservationists that natural resources have to be discovered and must have an economic value associated with a particular activity; in this case, aesthetic landscape value, as a precondition for tourism development.

Land is a key natural resource with multiple functions that are central to the development of any society (Saruchera, 2002:17). Bazaruto Island, which is part of the National Marine Park, has been used for marine and wildlife conservation for the past three decades, and for dwelling and farming by indigenous communities as well as goat and sheep grazing for centuries.

²⁹ / Interviewed by the researcher on Bazaruto Island 18/08/2003.

There are similarities between the problems experienced by the community of the Richtersveld National Park of Namaqualand in South Africa and the conflict involving the Bazaruto Island indigenous community islanders and the Indigo Bay Resort land extension concession. In the Richtersveld, negotiations for land concession were initially characterised by the virtual exclusion of the local community. Local farmers in the Richtersveld were denied continued access to animal grazing in the park. This resulted in conflict between conservation and farming interests: the conservation lobby wanted less stock in the area, while the farmers wanted more.

A supplementary similarity between Bazaruto Island and the Richtersveld National Park is that, according to Taljaard (2000:158), the objectives of the Richtersveld National Park are:

- Cultural heritage - community objectives;
- biological or natural heritage – conservation objectives; and
- needs for using the area, including tourism and mining – utilisation objectives.

While no mining activities take place on Bazaruto Island, the potential of cultural heritage has been identified very recently and packaged for tourism consumption. Simultaneously, there is a growing desire by the native community to enhance biological or natural heritage in a combined effort with the Bazaruto National Park management.

Differences lay in the fact that in the Richtersveld, local communities managed to organise themselves to successfully negotiate and demand their rights to land use, while at Bazaruto Island, negotiations are still in process. In the Richtersveld, two decades ago, the local population was not considered part of the environment and was thus not incorporated in the decision-making process. It was argued that the environment had to be protected from the local population before it was lost to posterity forever, and the park was thus justified as being aesthetic, moral and based on scientific grounds. The real victory of the local community in the Richtersveld was the significant recognition they gained. The community emerged victorious in their battle with the government, and prevented their communal lands from being privatised with the signature of the so-

called *Ooreenkoms-Richtersveld Nasionale Park* (Taljaard, 2000:156)³⁰ which was a contract signed in Kuboes on the 20th July 1991 (Boonzaier 1996).

The preceding argument is in line with the UN Agenda 21 (1999), which stresses that the more the community gets involved in control over the resources on which it depends, the more will be the stimulus for economic and human resources development.³¹

3.13 Conclusion

Conflict analysis of the land concession extension occurring at Bazaruto Island and which challenges the indigenous communities and the Indigo Bay Tourist Resort shows that the consultative team mandated by the Provincial Governor of the Inhambane Province with concerned stakeholders wanted to mediate a conflict which was not based on existing information concerning the real issue. The team had failed to mediate the conflict and reach consensus because of the following main reasons: First, the native islanders are very sceptical about the good intentions of government to lease the land as they have bad memories about what happened in the adjacent mainland, the *Cabo de São Sebastião* (Kewene) in 2000. Here, natives were evicted without compensation and their land is being sold now. Second, islanders were also suspicious that the multi-ministerial team might have been bribed to evict the islanders and take their land and assign it to the Indigo Bay Resort. Third, the racist attitudes created by the expelled manager of the Indigo Bay Resort spread seeds of dislike among native islanders. According to them, the company never built harmonious relationships with the local community members. These restrictions of movement are still fresh in the memories of the native islanders and the team could not analyse all these conflict situations before engaging the two parties in negotiations.

The native community members have recognised that the Bazaruto Lodge is deliberately excluding them from benefits (employment and tax entry fees). This exacerbates dissatisfaction of the natives about tourism development on the island. While the managers of that resort do nothing to correct the situation, this conflict is going to endure for an unpredictable time. In contrast, the Indigo Bay Resort has

³⁰ / Taljaard, Johan, Managing the Richtersveld National Park. Proceedings of SANP's Towards Best Practice conference – May 2000. In: South African National Parks, Towards Best Practices Conference, Pretoria.

³¹ / United Nations Agenda 21, Paragraph 14.16, (1999).

devoted efforts to helping in the social uplifting of indigenous community members and in defeating conflicts. This is tangible evidence that successful sustainability of tourism and park management not only depends on law enforcement and dialogue, but also on joint operational strategies.

The chapter reveals that there is neither compensation proposed for removing native islanders from their land nor alternative livelihoods offered in the proposed new places to which the native islanders will be relocated. The proposed land extension for a new tourist development plan for the Indigo Bay Resort is indeed an eviction, because it fails to recognise the land-use rights of the native islanders while excluding a mutual use of land or a shareholding of the new expansion investment.

The golf course and marina tourist developments of the Indigo Bay Resort are a threat to both the environment and the associated ecosystems. Furthermore, the introduction of golf courses and marinas without presenting an appropriate environmental impact assessment is a contravention of Mozambican law for protection of the environment.

CHAPTER FOUR

CULTURAL CHANGES IN TOURISM SUSTAINABLE DEVELOPMENT ON THE BAZARUTO ISLAND

The name Bazaruto is associated with a tale of love:

“It is said that the Portuguese Navy Captain Lourenço Marques while sailing on one of the vessels in which King D. João de Castro was travelling to India discovered the Bazaruto Bay. He became excited by this discovery. Lourenço Marques continued his trip to Melinde where he kidnapped a beautiful Muslim girl named Mariami Rabstra, born in Baghdad, capital of the then Abacidas. Fearing the justice from the ViceRoy of the Raja of Calcutta, he fled in an Arab ship and disembarked on Bazaruto Island” (Gomes de Sousa 1936:42).

The above quotation illustrates that Bazaruto Island was born to be a tourist destination for visitors from all over the world. Gomes de Sousa (1936:44) stated that “Bazaruto Island possesses all the conditions to constitute a splendid tourist resort from where the environmentalists would find excellent camps for their studies and the famous painters good reasons for their pictures”. Bazaruto Island has for a long time been a holiday destination and its name has been changed with time. The current name of the island is in itself a cultural change from *Utsurutsua*, its native name, which changed to “*Ilhas das Bocicas* or Bocicas Islands and then to Bussulutua”³², which is closer to Bazaruto, the current name.

4.1 Introduction

This chapter explains the impact of the use of coastal fauna and flora resources by tourists on Bazaruto Island on the local culture of the indigenous communities. The use of natural resources shapes, to a greater or a lesser degree, the local culture by the fact that hand carving, painting, music and food are based on local existing natural resources in interrelation with the degree of social development of the native people. When tourists visit to enjoy the amenities of Bazaruto Island, they bring with them their culture, which differs visibly from that of the locals. This leads to the islanders’ cultural life being driven into a state of uncertainty and susceptibility to change, because the islanders are constantly caught among four cultures: the aboriginal culture of the

³² / Gomes de Sousa (1936:38).

islanders themselves, the tourist-entrepreneur culture, the different cultures of the tourists, and that of the people from the mainland.

4.2. Integration of the native community culture and tourism on the island

Tourism can have an impact on the cultural authenticity of traditional art and dances and result in the commodification of traditional activities. It can also have an impact on the native communities' moral drift and can change social values with the emergence of new social structures and empowerment.

Negative and positive impacts can be observed.

i) Positive impacts include the:

- a) introduction of new values and practices such as formal education in schools
- b) emergence of new crafts produced by youth in the northern part of the island.

ii) Negative impacts include:

- a) increasing tension between imported and traditional lifestyles;
- b) erosion in the strength of local language;
- c) new patterns of local consumption in preference to conventionally manufactured beer; and
- d) risks of promotion of antisocial activities such as prostitution, laziness and theft in the village communities.

According to Williams (1998:160), the success of modern tourist destinations will depend on the ease with which distinctive images of places may be formed and marketed. Although images may be constructed around a variety of natural and non-natural resources, socio-cultural characteristics are especially important. There is evidence through visual observation and interviews with native islanders which demonstrates that the islanders have not been given a chance to incorporate any built cultural image regarding their own traditional rituals, folklore, music, dance, traditional religious ceremonies or sporting competitions. If presented to tourists, and seen as highly appreciated, this would probably attract more tourists and form part of the entertainment at the resorts of the island.

Tourism managers on Bazaruto Island interviewed by the researcher expressed concern about introducing local native dances. According to the managers, it becomes problematic and cost ineffective to integrate adults into the dances, because they would demand high payments. Furthermore, they argued that adults cannot offer high standards of performances by improving their style of dances. This indicates that the tourism sector is not interested in adding extra running costs to the introduction of traditional dances.

While collecting this data in August 2003, an initiative was introduced towards incorporating some traditional dance shows on the island, currently encompassing children whose ages vary between 8 and 12 years. This group of children practice local “traditional” dances which were initially taught by a Turkish girl who does not know what the traditional dances of the indigenous island people are. In mid-2004, a native islander took the lead in the dancing group, which is named *Matsakisse*.

Songs that these children sing exalt the Indigo Bay Resort as “their father”. These songs are contextually empty in content of the traditional cultural of the islanders and are considered to “display a small and superficial part of the local culture” (Mathieson and Wall, 1982:173). However, this change sounds positive as it provides dancing skills for the youngsters and may entertain tourists. This initiative from the local tourism sector is positively rejuvenating talents and promoting local cultural dances and values in a commercial way but, at the same time, leads to their commodification.

Taking into account that culture is dynamic and adaptable, native islanders appear to be a vibrant societal community, which constantly re-creates and reconstructs its own cultural bases. Maser (1996:140-3) classifies this socio-cultural transformation as a shift in cultural structures taking place in the life of today’s world. In this context, community members have to define who they are culturally by determining what legacy they want to leave for their children; they, therefore, need to craft and influence the vision of such a culture.

The Bazaruto Island native community is assessed against the statement of Maser mentioned in the previous paragraph. This community was found to be still in constant transition, considering their regular interaction with Western tourism that started in the early 1970s, with a slight interruption during the war period.

Constant transition of the native islanders' community leads to change in the local language, which is considered as "social empowerment" (Williams, 1998:167). The fact that international tourism is generally conducted in English confirms the fact that many tourists arriving on the island speak this language. This situation is motivating the native islanders to grasp English, and a few try *Fanakalo*³³, especially among the youth. The Indigo Bay Resort, based in the Zenguelema central zone of the island, being a foreign investment, and the international-class hotels compel of their workers to study and understand a little English to facilitate communication with tourists.

4.3 Monuments and sites as cultural attraction of Bazaruto Island

Socio-cultural impacts are part of the host-visitor relationship. In the initial stage of the planning process for tourism development on the island, cultural attractions and their impacts seem to have received relatively little attention. In this chapter, the study intends to assess the degree of change experienced by the indigenous communities of Bazaruto Island, which has been continually exposed to different cultures brought by visiting tourists. The visitors come from developed, urbanised and modernised societies, carrying with them their particular beliefs, values and expectations that their societies disseminate. As Harrison and Price (1996:1) argue, "tourism is a service industry" based mainly in exploring environmental natural resources and cultures "which differ from" the one where the tourists habitually reside and, as such, are "commodities sold by the industry". It is within this context that Bazaruto Island has a commodity value because it is a quiet and remote area which differs significantly from the environment from which the tourists come.

Culture is a complex issue that is difficult to define. According to Cooper et al. (1998:169), culture as a social phenomenon has "socio-cultural impacts on tourism which are manifested by a wide range of aspects such as arts and crafts, through to the fundamental behaviour of individuals and collective groups". However, for better understanding of the context of the discussion in this chapter, the highlights focus mainly on cultural tourism. These include tourists who come to observe the daily social life of the indigenous islanders: economic and leisure activities, lifestyles, ideologies and customs, soaking up the atmosphere of Bazaruto Island, or simply enjoying the local food. The consumption of popular entertainment thus becomes part of the cultural tourism sphere as well (Mathieson and Wall, 1982:158; Richards, 1996:26). These

³³ / A language spoken on the gold mines of South Africa.

authors add that, in general, culture includes issues such as local construction style, dress, monuments and historic buildings, archaeological sites, arts, traditional dances and ceremonies, mass movements, events, identity and authenticity.

The tourism resort complexes on Bazaruto Island offer all facilities and services required by tourists, ranging from traditional architectural-style thatched-roof huts and square-shaped chalets. Their interiors are adorned with some locally made handcraft. Porters, maids and tellers are often Mozambican nationals, dressed in the native costume. The island possesses some cultural monuments that form part of its history and the roles they play as tourist attractions vary according to individual tastes. There are clear signs that some of these monuments, like the Bazaruto Lighthouse, are simply neglected and receive none or very little attention from the tourism sector and from the Ministry of Culture. Along the west coast, in the middle of the island, at Mulidza, south of the Zenguelema area and close to Indigo Bay Resort, there are ruins of the structure of the extinct *Companhia de Pesca de Pérolas do Bazaruto*, the Bazaruto Fishing Pearls Company, created on 19th April, 1892 and dissolved on 5th April, 1917. The site lies where there is a coconut plantation dating from the same period (Gomes e Sousa 1936:39; Mello 1949:24-26).

The Bazaruto lighthouse, a remarkable landmark for local tourism, is a very beautiful old monument. It is a magnificent and useful structure, constructed in 1913 under the Portuguese marine authorities. It serves as a navigation beacon, located on a peak at 120 meters above sea level on the north end of the island. With a square-shaped format, it has basements where there are rooms to accommodate workers, offices and other separate compartments (Gomes e Sousa 1936:39; see Plate A2, picture 4a).

35° 25'E

35° 30'E

Map 5

21° 30'S

BAZARUTO ISLAND

TOURISM INFRASTRUCTURES AND THE SECTOR WORKERS SETTLEMENTS

LEGEND:

- Archaeological Site
- Bazaruto Lighthouse
- Garbage landfill
- Primary School
- Coral reefs - diving sites
- Cyclone eroded area

Inhabitants/km²

	167-1735
	120-167
	66-120
	40-66
	1-40
	0-1

21° 35'S

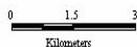
21° 40'S

21° 45'S



MOZAMBIQUE CHANNEL

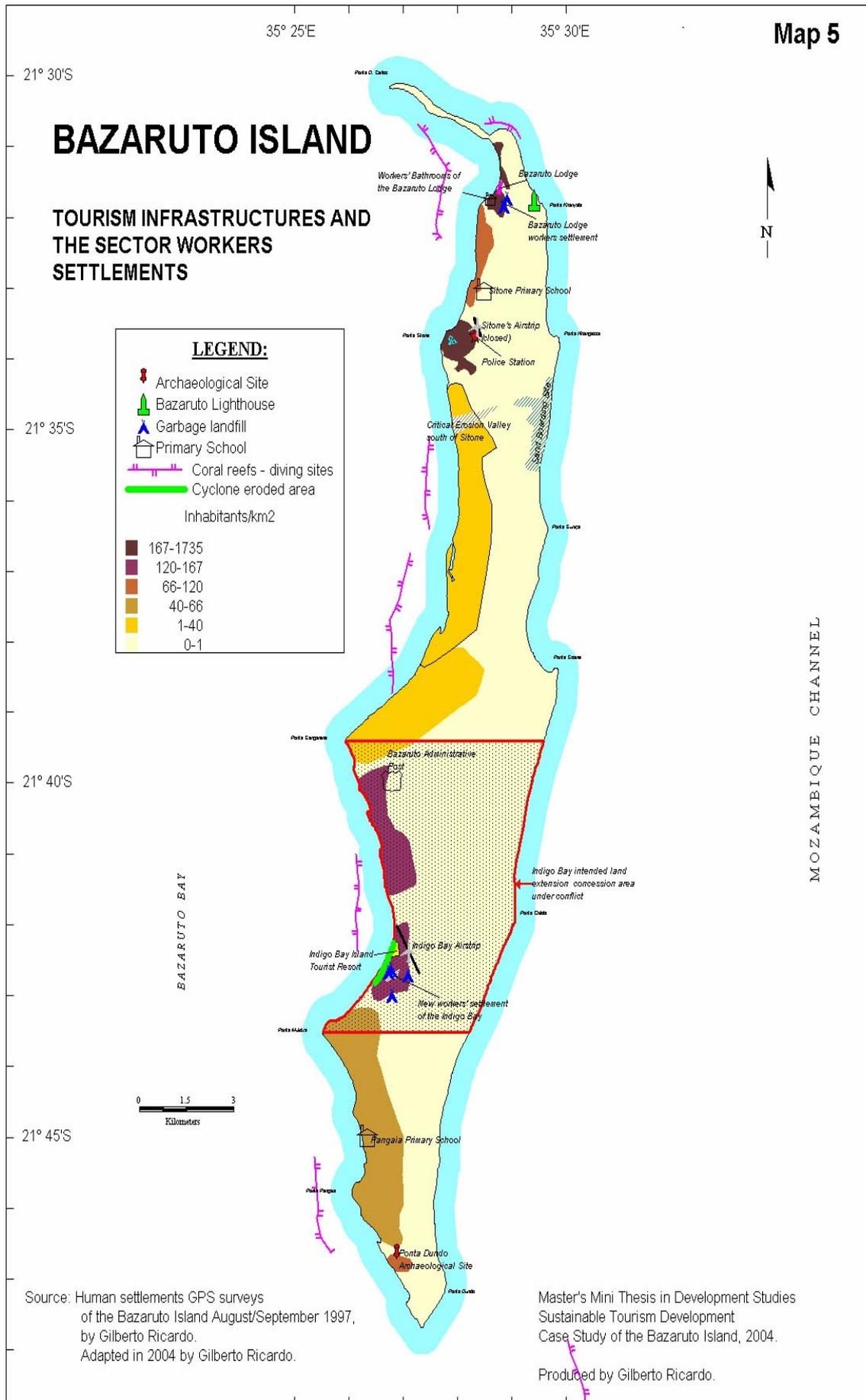
BAZARUTO BAY



Source: Human settlements GPS surveys of the Bazaruto Island August/September 1997, by Gilberto Ricardo. Adapted in 2004 by Gilberto Ricardo.

Master's Mini Thesis in Development Studies Sustainable Tourism Development Case Study of the Bazaruto Island, 2004.

Produced by Gilberto Ricardo.



At *Ponta Dundo*, south of the island, some pottery objects and several shells of molluscs are scattered over a wide area, being a true testimony of the first human settlement on the island (see Map 5). These are important archaeological sites on the island that are partially used for sightseeing by tourists. The role of the tourist attraction sites could be enhanced to explore more cultural tourism for those tourists interested in this type of product.

4.4 Fading of traditional dances as a consequence of culture globalisation and tourist package activities on the island

The growth in FDI in the tourism sector in Mozambique is a trend endemic to the globalisation of culture. Cultural globalisation has resulted in cultural erosion in the Mozambican society in general and the fading and subsequent extinction of cultural traditional dances. “Globalisation refers to the increasing movement of goods, people and ideas across space and time” (Williams, 2001:367).

Cultural globalisation consists of “proliferation of individualized values, originally of Western origin, to ever larger parts of the world population” (Chase-Dunn 1999:191). Moghadam (1999:367) defines cultural globalisation as a “worldwide standardization as in ‘Coca Colonization’ and ‘McDonaldization’ – but also to postcolonial cultural pluralism, and ‘hybridization’”. Bergesen (2002:454) states that “cultural globalization may also be a spasm of cultural spread of a particularly symbolic nature that leads people to believe that we are in a unique period, when in fact, we are just going through a cyclical undulation”.

A new perspective of culture and globalisation is brought to bind both definitions. It reads, “A global culture approach focuses on the problems that a homogenizing mass media-based culture poses for national identities. It is complementary to the global society approach, which focuses more on ideas of an emerging global consciousness and their implications for global community, governance and security” (Sklair, 1999:150).

As a consequence of culture globalisation, in the Inhambane Province, in particular, most of the original cultural characteristics have been Westernised through a process of assimilation and integration in the Portuguese social lifestyle since the time of colonisation. The revolution in the music-production, television and video industries that

continuously present Western cultural values results in many local people preferring to dance to Western music. The remaining traditional dances which survive, such as the *timbila* dance of the Chopis of Zavala and also of the Homoíne, the *ginavhalatane* of the Pales in the same district, and the *zorre* of Gihengueni, in the Inhambane district, are generally not part of tourist attractions, except for the *timbila* dance.

The *timbila* of Zavala is the most famous dance and has attracted tourists mainly from Portugal, Norway, Sweden, Italy, Poland, Holland, and the USA, but also from other countries. The *timbila* dance is one of the most highly-developed ancient forms of music/dance from Africa that has withstood the test of time. According to Weltmusik (1999), the earliest written description of Chopi music, which includes the *timbila* dance, goes back to 1562, when a Portuguese missionary [André Fernandes] classified it as unique in Africa and “played in large orchestras, together with dancers and singers.” Since 1960, Venancio Mbande, a master musician among the Chopi people, has promoted this dance, taking it as far as the University of California. It has subsequently been recorded for the International Library of African Music.

Timbila, or *marimba*, means both the name of a percussion instrument and a dance³⁴. The instrument is made of a special wood only endemic in the Inhambane eco-region. It has a historical significance in local culture tourism. It consists of hollow calabashes of different sizes under the keys, which serve as a sound box. These instruments are also manufactured in large quantities at Mapinhane in the Vilankulo district and sold to tourists in the Bazaruto Archipelago. This is the main source of income for local manufacturers as well as retailers.

Traditional dances, ceremonies and other cultural events in other regions of the world are huge cultural tourist attractions and sources of income for the tourism industry, such as the Maori tourism in New Zealand. According to Zeppel (1998:67-8), in New Zealand, cultural heritage incorporating carvings, action songs “*haka* and *poi* dances, the so-called *hangi*” (feast), attracts more than 400,000 tourists per annum”. If *timbila*, *ginavhalatane*, *Zorre* and other dances were offered to tourists visiting Bazaruto Island, they would possibly contribute both to the promotion of cultural tourism and to the rejuvenation of dances. Thus far, there has been little impact from local culture on Bazaruto Island if it were to be compared with Maori tourism in New Zealand.

³⁴ / In Chope Local Language.

The development of sustainable tourism on the island must deal with globalisation. This is fundamental in order to sustain the natural systems as well as the cultural, historical places and assets of the local native islanders. Strategically, Bazaruto Island tourism tends to focus almost exclusively on localised, relatively small-scale development-project investment, drawing local, regional and a small segment of international tourist flow, a clear manifestation of globalisation.

4.5 Tourism and preserving traditional dances in the context of cultural change

Islanders have reported in interviews that tourist development on Bazaruto Island does not involve traditional dances. The native community is not invited to come and play aboriginal cultural music and perform dances for tourists. If the native island traditional dances were to be performed for tourists, this would boost the islands' status, create demand, and garner praise for their cultural dances similar to that given to the Chopi *timbila* dancers of Zavala and the Maori of New Zealand. The present cultural erosion and abandonment of the traditional dances, as mentioned before, might lead to the weakening of local traditional dances, and consequently to their disappearance.

Native islanders' statements were accurate, but did not reflect that tourism based on the island is disengaged from traditional cultural dance promotion. Bazaruto Lodge, conversely, had reversed the fading tendency to promote local traditional dances on the island. It was observed by the researcher that this resort has stimulated traditional dance in another way. Guests are called for dinner by playing of traditional drums and the performing dances. It is exciting and attractive to watch the scenario of a well-dressed group of lodge waiters performing the dance to please guests before supper.

However, in the cultural tourism literature, the presentation of dances similar to the one the Bazaruto Lodge does at suppertime is criticised as "image-building". It is regarded as traditionally non authentic, and as merely an effort to market Bazaruto Island tourism by the commodification of local traditional dance. Commodification is "the process by which objects and activities such as heritage, culture, sports, designing and branding clothing, equipment and other things come to be evaluated primarily in terms of their exchange value in the context of trade, in addition to any use-value that such commodity might have" (Judd and Fainstein, 1999:26).

In this process of commodification, dances, goods and services are transformed into an exchange relationship in terms of providing packaged service attractions, which need to

be purchased so that the consumer can be identified with the leisure pursuit in question (Johnston, Gregory, Pratt, and Watts, 2000:444; Judd and Fainstein, 1999:29).

One would like to see many more native islanders becoming involved in tourism activities such as the performance of traditional dances for tourists, including the supertime welcome at Bazaruto Lodge. Currently, traditional dances at Bazaruto Lodge are not done by the native islanders, which suggests that they are performed by “outsiders” and are “imported” to the island.

Tourism managers of Bazaruto Lodge seem to follow the rationale of using the workers they have employed efficiently and in order to offer a quality tourist product. The very same tourism workers are also traditional dancers of *Semba*; hence, they are preferred over the native islanders, who are not recruited for the supertime dances because they are not part of the tourism staff.

The dance performance is the original Bazaruto *Semba* dance performed by the tourism workers who come from the mainland just a few miles from the island, closer to the Vilankulo and Inhassoro mainland. The dancers perform the traditional dance of the local culture but enriched by the dancers’ appearance in specially designed costumes, which make the dances even more beautiful.

According to Cooper et al. (1998), the development of tourist products will somehow be determined by the type of tourism activities that occur. These activities and the socio-economic characteristics of the tourists partially determine the nature of their destinations. This principle is reflected in the type of international tourist attracted to Bazaruto Island as a destination. Being an international destination, it has great economic and sociological impact on its native community as a host. International tourism routes are partially determined by the type of tourism products offered (ibid. 170). Tourism activities on Bazaruto Island are dependent, socio-culturally, economically and, to some extent, politically, on external globalised tourism. This is not unique to Mozambique, where it results from the economic dependence of the country. Similar research from the perspective of the ‘dependency theory’ frequently quotes the economic dependence of tourism development of the Caribbean and the South Pacific regions.

The researcher interviewed 14 tourists on Bazaruto Island, enquiring about their educational background and the motivation for travelling to the island, in order to

determine typology of tourists as a method of sociological investigation. The finding, while not conclusive given the small size of the sample, showed that 85% had higher education with university degrees or were specialists. “The typology method seeks, in this case, to classify tourists according to a particular phenomenon, usually motivations or behaviour” (Cooper et al. 1998:170; Mathieson and Wall, 1982:163) to tour to certain places such as Bazaruto Island.

However, only a small and non-random sample of tourists could be interviewed, given the policy of the tourist-sector managers, which is not to disturb their privacy. The qualitative content of the questionnaire complements the researcher’s previous empirical study in 1997, which was about tourists’ motivations for visiting the island, and is extremely relevant to this study.

General tenets of the typology classification, according to Cooper et al. (1998), are that:

- package tourists usually demand Western amenities, and are associated with rapid growth rates which often lead to restructuring of the local economy.
- independent tourists usually fit in better with the local environment and social structures and are associated with relatively slow growth rates but often lead to local ownership (see Table 6 below).

The types of tourists who visit Bazaruto Island, as suggested by the data, appear to be both explorers and drifters who easily adapt themselves to the environment and try to understand the islanders’ customs and interact with native community members. Records obtained from the guest book of the Indigo Bay Resort indicate that political, national, regional and international elites have visited Bazaruto Island resorts, confirming the statements of the typological method.

Portuguese package tourists were met and interviewed at Bazaruto Lodge, and it was confirmed that they socialise little with local hosting communities, which leads to meaningless intercultural impacts. One of the tourists interviewed said that it was not on his agenda to visit local native villages. However, individual tourists, also guests at Bazaruto Lodge, walked on foot more than 3km, visiting native communities, and the researcher met some while collecting data. A couple of German tourists were also interviewed and reported taking a tour through the island.

Table 6 Typology of tourist roles

Type of tourist	Number of tourist	Adaptation to local norms
Explorer	Very limited	Accepts fully
Elite	Rarely seen	Adapts fully
Off-beat	Uncommon but seen	Adapts fully
Unusual	Occasional	Adapts somewhat
Incipient mass	Steady flow	Seeks Western amenities
Mass	Continuous flow	Expects Western amenities
Charter	Massive arrivals	Demands Western amenities

After Cooper et al. Source Smith (1989).

4.6. Tourism and socio-cultural structure of the native island communities

The unsophisticated nature of the native community of Bazaruto Island constitutes its source of cultural enjoyment. The culture comprises the traditional lifestyle of adults and children of the islanders, such as their behaviour, settlement patterns, architecture and activities (fishing, goat and sheep breeding). Local culture is embedded in the social structures of the traditional wedding, the paying of a dowry (*lobolo*), polygamy, inheriting widows, and traditional beliefs. However, these traditions are being affected by cultural changes, as suggested by Oppermann and Chon (1997:119-120) and Williams (1998:167) who stated that employment created by the tourism industry results in women gaining financial benefits and emancipation from traditional social structures and provides their independence. An emancipated woman will insist on more egalitarian social treatment because of her whole perspective on life.

In rural settlements, as Bazaruto Island is, the social status of a villager can be gauged by whether he/she works for the tourist resort. Hence, despite the fact that very few islanders are employed in the tourism sector, the status enjoyed by resort employees has a social impact on other islanders and causes changes in those employed. These changes occur essentially in style of dress, self-care, food habits and style of cooking, as well as the way those islanders employed by the tourism industry compare themselves to the remaining non-employed natives.

Significant shifts in local socio-cultural structures regarding traditional systems of marriage on the island are subject to change because women will start voicing their opinions, discussing or challenging the order created at home by their husbands, or even opt to become single. Evidence from visual, participative observation and interviews suggested that on Bazaruto Island, as in other traditional agrarian societies, certain groups of people may not normally work for remuneration, for instance, women. The

opening of resorts has benefited some young local people. These beneficiaries were helped to obtain both financial independence and partial or total release from the traditional social control of the elders, whose values are strongly based in the lineage of their families.

On Bazaruto Island, it is also true that the employment opportunities created in lodges favour those women who originate essentially from the mainland. Many of them are unmarried (Ricardo 1999). Lack of formal education hinders many native islanders, especially women, from working in the local tourism industry. Nevertheless, evidence from participatory observation in the area indicates that there are very few female islanders employed in the two resorts of Bazaruto Island. Although the women's salaries are low, the fact that they are earning a wage has a tremendous impact on local family structure.

4.7. Impact of demonstration effects of tourism and moral drift in the culture of the local community

Cultural changes which occur on Bazaruto Island are explained, according to Williams (1998:150), within the context of increasingly globalised and uniform contemporary lifestyles of developed countries, from where most of the world's international tourists and investment in the tourism industry come. The convergence of tourists brought people from diverse regions together from societies that usually are characterised by varying degrees of cultural differences. The appeal of local cultures, with their particular traditions, dress, handicrafts, food, music, art and architecture, has never been strong enough to withstand the international influence.

Price and Smith (1996:6) share the same viewpoint, stressing:

In today's shrinking world, economic, social and cultural isolation are increasingly difficult to sustain, as globalisation has increased in momentum. 'Sustainable development' has become the key focus of development studies, a focus as relevant to social structures and cultures as to the relationship of human society with the wider environment.

Tourists from different societies with superior material possessions visit Bazaruto Island, which is in a developing country. Visitors display a different way of living from that of the host community, which might be positive if it stimulates certain behaviours,

attracts or inspires local people to work for things they lack, such as clothing, or imitate styles exhibited by visitors. According to Williams (1998:152) and Oppermann and Chon (1997:117), this is termed the theory of the demonstration effect and is grounded in the existence of visible differences between visitors who are wealthy and hosts who are poor, suggesting that changes in the hosts' attitudes, values or behaviour patterns may occur simply through their observation of tourists.

Manifestations of demonstrated effects of economic implications on Bazaruto Island consist of local people's "gradual weakening of traditional culture" in favour of the "so termed coca-cola society within the indigenous lifestyles" (Mathieson and Wall 1982:161), imitating evidently rich tourists by shifting local consumption patterns towards "Western" products. Instead of consuming local beverages (*sura*, *ndjebua*, *thonthontho*, and cashew juice) they tend to import Coca-cola, wine, Castle and Black Label beer, and fashionable clothes and use different cooking utensils.

The impacts of cultural changes on Bazaruto Island tend to be big, because the island community is very small, unsophisticated, and isolated, and the influence of levels of influence between tourists and islanders is remarkably different. The local youth on the island are vulnerable to the demonstration effect, leading to the accusation that tourism generates new social divisions between the indigenous community elders and the youth, and that it undermines traditional authority. According to community members interviewed, moral values have changed as follows:

First, the type of dress of the youth has changed. The way tourists dress was reported by many of the respondents to be indecent and an insult to the islanders' moral codes of conduct (see Plate A3, Picture 9b). The new generation of island children imitates the way tourists dress. Girls wear transparent clothing that scandalises their parents at home. When asked to desist from these practices, they say that generations have changed and parents are outdated.

Williams (1998:157,163-5) reported similar findings in his study in the Mediterranean Northern European tourist destinations, emphasizing that tourists consumed too much alcohol, showed atypical dress codes and semi-nudity, and demonstrated a spontaneous sense of freedom, which was considered to be an immoral form of behaviour; hence, they were rejected by the elderly in the host community. The youth imitated what they considered to be a fascinating lifestyle that the tourists projected.

Second, banditry has increased amongst the youth on the islands. The community blames technological evolution and the presence of tourists on the island for changes in social order. Islanders interviewed stated, “On the island there were no video movies. Since the introduction of so-called ‘Western culture’, the young people now refuse to work; they are heavy drinkers and smokers, they do not want to get married, and there is theft. Teenagers start to drink at the age of 12 years, whereas, in the past, adults started drinking between 22 and 30 years”. Prostitution and premature pregnancies are reported to be higher among teenager islanders. “Our daughters drink and sleep out of home without parents’ permission” (Mutondo, Cuhanha, Chavane and others, 08/2003).

Even though banditry has increased in the community, this does not imply that tourists are targeted, although there were incidents reported of vendors of shells harassing tourists whilst they were on the beaches (Dutton and Zolho, 1990:52). There are no statistics to back Dutton and Zolho or the researcher’s observations either. However, these observations were made when the researcher was collecting data in 1997 and remained on the island for over two months. During that period, the Symphony Cruise ship came from Durban in South Africa to the island at least four times, bringing thousands of tourists. The islanders used to come to see the ship and sell their goods to tourists and interacted very harmoniously with them. Furthermore, in 2003, the researcher was there for a month. On none of these occasions did he see a tourist being harassed.

Third, the islanders interviewed by the researcher assumed that there was a lot of money and a variety of drinks circulating among the islanders. Children of the island earn money by selling fish which they catch, but unfortunately, they misuse the excess of money in buying alcoholic drinks and, after that, they are involved in wrongdoing. No law exists prohibiting children from consuming alcohol.

A theory explaining cultural changes is the ‘accumulation theory’ which states that when two cultures come into contact for any length of time, an exchange of opinions and products will occur that, through time, produces varying levels of convergence between the cultures. In other words, they become more similar (Williams, 1998:153). On Bazaruto Island, manifestations of this theory demonstrate that a globalised culture is being introduced, whereby Western values are being adopted by native islanders. The island receives many tourists of different nationalities and hence the culture of the

islanders cannot become similar to any one culture. As changes take place, the islanders' culture will become hybrid, as is shown in detail in Table 7 below.

Table 7 Some actual or potential major changes in the cultural environment of the islanders due to tourism

Impact aspect	Consequences observed and potential effects identified
History	<ul style="list-style-type: none"> • Loss of artefacts by unscrupulous sales people
	<ul style="list-style-type: none"> • Enhancement of monuments and greater interest in cultural attractions not observed, but it could be done by restoring the Bazaruto lighthouse.
	<ul style="list-style-type: none"> • Change in cultural landscape: observed the moving away from weaving sleeping sacks (<i>vumba</i>) to using mattresses and beds and the use of blankets; moving away from traditional rounded hut dwellings to building square-shaped huts with brick walls, using Western architecture.
Traditional art	<ul style="list-style-type: none"> • The development of sculptures and crafts: has increased production from local craftsmen in Sitone, the northern part of the island.
	<ul style="list-style-type: none"> • Traditional music and dance to a limited extend practised by the natives and explored by tourism entrepreneurs.
	<ul style="list-style-type: none"> • Renaissance of traditional festivals, veneration, rituals and other cultural and artistic events, is not observed.
Language	<ul style="list-style-type: none"> • Change in vocabulary of language: There is an increasing use of English and sometimes <i>Fanakaló</i> terms by youth in the north of the island, near Bazaruto Lodge and Zanguelema south close to Indigo Bay Resort.
Religion	<ul style="list-style-type: none"> • Increased religious practices: Zion or Dhanki observed, especially in Sitone and '12 Apostles' in Zenguelema and Pangaia.
Traditions	<ul style="list-style-type: none"> • Change of the traditional economic order: There is a change from traditional reliance on fishing, goat and sheep breeding to youth looking for formal employment in resorts and working as tourist guides.
	<ul style="list-style-type: none"> • Pressure to adopt western rather than traditional clothing: very prevalent, especially 'indecent' dressing practices by girls.
	<ul style="list-style-type: none"> • Dominance of leisure time: increased watching of Western video movies and the use of cellular phones.
	<ul style="list-style-type: none"> • Variety of food tastes and cooking styles by natives: are observed, and particularly associated to natives islanders employed in the tourism sector.
	<ul style="list-style-type: none"> • Growth in availability of standardised drink products and alcohol is observed and prevalent all over the island..
Values and norms	<ul style="list-style-type: none"> • Change in family structures and values. Youth no longer get married at an earlier age.
	<ul style="list-style-type: none"> • Adoption of servile attitudes towards tourists by the islanders' youth.
	<ul style="list-style-type: none"> • Increase in prostitution observed among island youth.
	<ul style="list-style-type: none"> • Increase in criminality: very little observed.

Source: Gilberto Ricardo 2003; after Hunter and Green 1995:35).

4.8. Influence of tourism in arts production of the native community islanders

Tourists and the native islanders do not meet regularly. The distance between resorts and community villages dictate the levels of involvement and limits encounters. Tourists and indigenous islanders meet during activities such as snorkelling, scuba diving, deep sea fishing, saltwater fly fishing, relaxing on the beach, traditional dhow trips and dolphin-sighting sailing tours, as well as:

- When tourists arrive by cruise ship and the islanders go to see tourists and sell their local goods.
- When tourists and islanders share the same natural environment, such as the beach, or when tourists hire boats from the islanders for sailing; when tourists watch islanders pulling their fishing nets, or when tourists take a drive to do bird watching or to see crocodiles at Mbite Lake. Tourists meet native islanders while taking a drive for sightseeing in the mangrove forest, on the sand dunes, or in the caves, and when tourists go to the best diving spots on the island at the Lighthouse Point, Greek Temple, 12-Mile Reef, Whale Rock, Two-Mile Reef, Zenguelema Point, Manta Reef and Rainbow Runner Dive.
- When tourists, mainly from Indigo Bay Resort, do the community village tour to Pangaia as part of a cultural attractions package. According to Hitchcock (1996:6), activities at these tourist destinations “may include...visits to native homes and villages, observation of dances and ceremonies, shopping for primitive wares and curios”.

On Bazaruto Island, the number of contacts between indigenous communities and tourists is influenced by spatial proximity to the resorts. Therefore, there is a diffusion of culture from the centres of tourism to the nearest native community village. This influence is named the ‘diffusion spectrum’ and it decreases from the centre of the resort to the periphery (more distant island communities).

The diffusion spectrum is applied to analyse the number of contacts between native islanders and tourists. The conclusion yielded is that the native islanders’ cultural integrity declines as distance from the resorts decreases. When the distance from the resort to the periphery increases, the integrity of the native islanders’ culture increases. Hence, some

locations, such as northern Zenguelema and southern Pangaia, remain untouched by tourism with minimised social and cultural impacts from tourism.

Cultural change and its spatial diffusion are equally very stressed in cultural rejuvenation. The spatial diffusion of cultural change is used to assess handicraft production. Visual observation showed that handicraft production was more developed in Sitone, in the north of the island, where tourism first emerged. All six craftsmen are from there and live in that zone. These craftsmen have spread their skills quickly as they teach each other. In 1997, there were only two craftsmen, and in 2003, their number had increased to six.

Objects crafted by islanders are drawn from the surrounding environment, a tendency “towards naturalism according to desires of tourists” (Mathieson and Wall 1982:168). Crafted items are animals and objects ranging from cruise ships, sea turtles, sailing boats, dolphins, flamingos, and dugongs, to airplanes and fish.

Tourists coming to Bazaruto Island buy these arts and crafts as souvenirs. An increase in the tourists’ demand for local crafts stimulates the emergence, renaissance and creativity of the local arts-and-crafts makers. Craftsmen demonstrate improvement in the quality and artistic design of crafts over time. Within the resorts on the island, arts and crafts and handmade batik clothes are widely sold.

4.9 Concluding remarks

This chapter concludes that the moral code of conduct of native islanders has changed. Changes have occurred in girls’ dressing patterns, while boys start drinking at an early age. Tourism has rejuvenated arts’ production and started to build bases for traditional dance revival and the integration of the native community into the tourism sector. The on-going cultural changes on Bazaruto Island can be partially attributed to tourism development, but are essentially due to cultural globalisation.

CHAPTER FIVE

THE ENVIRONMENTAL IMPACT OF TOURISM DEVELOPMENT INVOLVING THE USE OF NATURAL RESOURCES ON THE ISLAND: LANDSCAPE, FISHERIES, GAS, FIREWOOD AND WOOD CONSTRUCTION MATERIAL

5.1 Introduction

This chapter analyses the environmental role and economic impact of the natural gas supply and use in sustainable tourism development on Bazaruto Island. The discussion looks at issues such as the use of local timber and grass in construction of huts for tourism workers and native islanders, as well as for firewood. It also discusses the effect of cyclones on tourism, environmental degradation from tourism litter production, and other environmental impacts of some tourist sporting activities.

This chapter analyses and demonstrates the extent to which the combination of natural resources such as marine resources, natural gas, and firewood, physical management of the environment and the attitudes of the local community towards the environment can impact tourism sustainability.

The United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992, identified six fragile ecosystems: “deserts, semi-arid lands, mountains, wetlands, small islands, and certain coastal areas” (Harrison and Price, 1996:3). Bazaruto, as a small island, does indeed qualify to be called a fragile ecosystem. Generally, it is semi-arid land with very active mobile sand dunes, lakes, and wet lands that are prone to constant inundation. The Sitone landing strip, for instance, is closed to air traffic due to consecutive inundations from the 1997, 1999 and 2000 floods on the island. Cars cannot transit on firm land due to inundation in many other parts of northern Sitone, so they have to go along the shoreline and end up compacting beach sand.

5.1.1 Local communities care about the environment

To minimize negative environmental impact, the local community held a meeting which decided not to clear the bush for cultivation. Cultivation was to be done only in valleys. To improve the environmental management of the island, a set of activities, such as vigilance in guarding against uncontrolled wild fires that destroy the natural ecosystem, had to be established. Consequently, the local community was advised against: (i) making fires that burn beyond a hundred meters; (ii) cutting down big trees because they act as windbreaks that safeguard landscapes from strong winds, including cyclones; (iii) catching small sea animals, as this is sabotage to the marine resources; (iv) destroying sea rocks which act as natural habitats for marine animals and also protect the coastal shore line from marine transgression and regression. It was also decided that these goals would be achieved by increasing the number of guards of fauna and flora. The native traditional leader of northern Sitone provided these details to the researcher³⁵

Bazaruto Island has an ecosystem that is characterised by unique plants and animal communities, which are particularly vulnerable to damage by human activity. All ecosystems such as the vegetation along the sand dunes and slopes, the dugong colonies, and the coral reefs can be damaged or destroyed by human activities. However, those which are slow in growth suffer considerable destruction due to their low powers of regeneration and recovery. Wetland vegetation such as the mangroves and those in the lakes and swamps are also considered to be fragile communities in that they require very specific conditions of wetness and pH for their survival (Harrison and Price, 1996:3).

5.2 Degradation of natural resources as environmental impacts of tourism on Bazaruto

5.2.1 _ The impact of marine fishing

The Natural Resources Management (NRM) development objective refers to breaching the resource degradation, which has developed into a poverty trap due to interrelated unfavourable biophysical and socio-economic conditions. The development objective is aimed at both sustainable use and/or management of natural resources, and improved and sustainable livelihoods. Every ecosystem has its carrying capacity, a notion that can

³⁵ / In interview on the 23/08/2003.

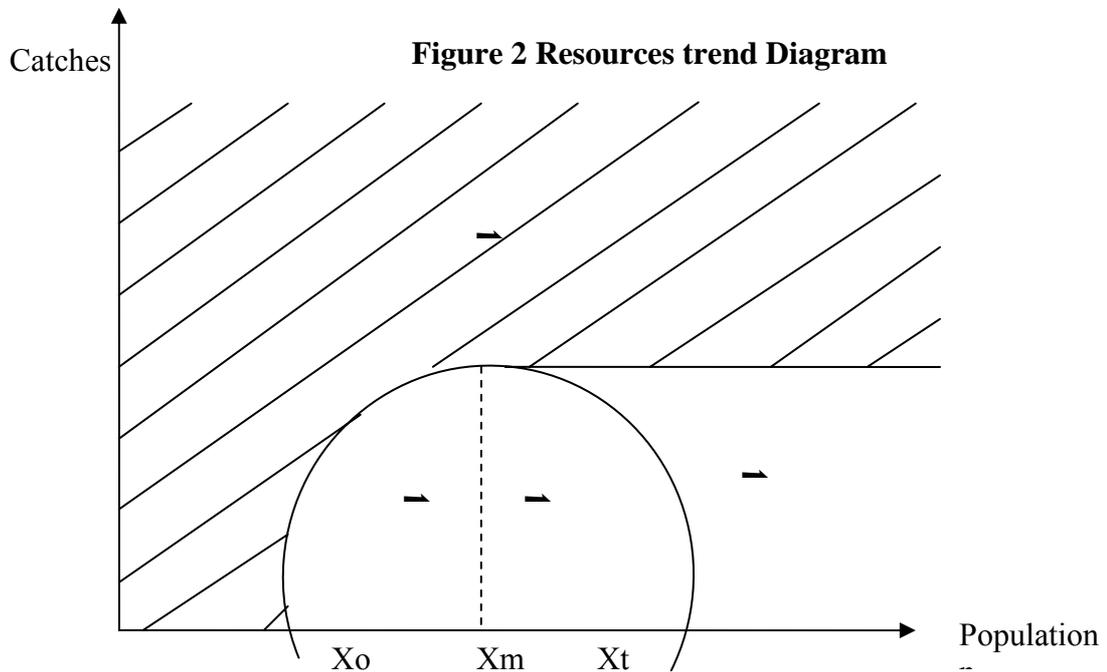
be defined in the present context as the amount of natural resources that can be exploited without endangering the regeneration of the ecosystem. Reproducibility or conservation is directly related to the notion of carrying capacity. In other words, reproducibility refers to “the ability of a system to maintain its productivity when subjected to stress and shock. The key is to reduce resource degradation and the associated stresses and shocks to a level where the natural processes and functions of the agro-ecosystem can counteract them” (Barbier, 1989:441).

The concept of reproducibility is a stricter criterion, in that it requires the resource base to be preserved. This concept has a definite advantage over that of sustainability since, in some instances, it has an operational content, which is lacking in the concept of sustainability. The concept of reproducibility helps to characterize human intervention in an ecosystem.

According to Baland and Platteau (1996), management of renewable resources such as animal population and forests, and the concept of reproducibility, can be illustrated with the help of the well-known diagram below, which was first developed to analyse fisheries. The crucial feature of a renewable resource is the natural growth law. According to the law, the growth of a resource is a function of its stock, assuming that the latter is the only variable affecting the growth of the resource. Furthermore, the environment has a carrying capacity for the resource, a maximum level of population beyond which the growth of the resource is negative. Before this point, however, the growth-population curve takes on the form of a logistic curve, as represented in Figure 2.

In this diagram, X_c represents the maximum population the environment can sustain, i.e. the carrying capacity. X_0 represents the minimum population size below which the growth of the population is negative, and then the population dies out. For many natural resources, $X_0 = 0$. However, for some animal species, X_0 can be strictly positive, either because, below this level, the population is too scattered to assure its reproduction (whales or elephants might be examples), or because it lacks the necessary genetic diversity. Between X_0 and X_c , the growth curve takes on a bell-shape, with a maximum in X_m . This level is often called 'maximum biological yield'.

When human intervention is introduced in the form of fishing in which fish is caught, and killed, it changes the population size, as measured and shown on the vertical axis in Figure 2.



Source: Baland J.M. and Platteau, J.P. (1996) Halting degradation of natural resources.

The curve can be derived from the growth-population curve. It represents the relationship between the stock of population and the maximum amount of fish which can be caught while keeping this stock constant. This level of catches is called the equilibrium level. A given level of catches is compatible with a conservationist objective. It is called reproducible if it is located on the catch-population curve. Any level of fishing, or catches in that area, allows the population stock to be maintained. An amount of catch located below the curve allows the population stock to grow (as indicated by the arrows) and is also compatible with a conservationist objective. Sustainable catch lies beneath the shaded area despite the changes in population that it may bring about; the level of catches can be maintained forever. However, human intervention by catches brings down the equilibrium stock from the nil state (Baland and Platteau, 1996; see X_c in Figure 2).

On the island, the local community and tourists fish for different purposes. Tourists visiting the island enjoy game fishing as a controlled sport in which hooks are used. Game fishing is done in resort boats, always with rods, and in specific restricted areas.

These tourists prefer competing in the catching of fishing species like *Espadarte-sombra* or Black marlin (*Makaira indica*); others include *Atum* tuna (*Euthynnus affinis*), and *Xeréu* or (*Scomberomorus commerson*) (Dutton and Zolho 1990:90; Smith 1991; King [sa]; Australian Museum online: 2003)³⁶ (see a more detailed list in Table 15, Appendix VIII). Although tourists practice the catch-and-release technique, this does not guarantee that all fish caught, survive. Studies related to catch-and-release methods provide strong evidence to support this assertion. According to Lukacovic (2001)³⁷ and HMS/ FMP (2002)³⁸, in recreational fishing, high angler participation in a catch-and-release fishery, even with a low mortality rate among released fish, can result in a significant number of dead fish. However, there is growing evidence that fishing techniques in which the fish are hooked in tissue other than around the edge of the mouth cause higher death rates, above the estimate of 10%.

A study examining the striped-bass catch-and-release fishery on the Roanoke River, North Carolina, determined the mortality rate of released fish to be 6.4% and 5% for salmon. An experiment conducted on motor mooching found mortality rates of 26 %, with most of the deaths occurring in fish that were hooked deeply in the mouth. While another study held in the Atlantic Ocean on blue-fin tuna indicates that immediate fishing mortalities in recreational hook-and-line caught juvenile blue-fin tuna can be substantial (29.2 %) due to injuries or predation. The study reduced mortality rates by using professionally trained personnel with extensive experience in fish handling techniques (Lukacovic, (2001); HMS/ FMP (2002).

Death often occurs ten minutes or longer after the fish is released under normal circumstances. Injuries may not be readily apparent to the angler and seemingly minor capture injuries may be related to substantial internal injuries. It is believed that the mortality rate may be much higher than 26 %, especially for poorly handled fish.

There are two main factors that influence the survival of fish that are caught and released: physical injury and stress. Fish can be physically damaged from hook wounds and during handling and release. They can be physiologically stressed by the exertion from the fight or from tagging. The blue marlin survival rate is low due to death or

³⁶ / In: <http://www.amonline.net.au/fishes/fishfacts/fish/mindica.htm>

³⁷ / Lukacovic, R (2001) MD DNR Fisheries Feature Story, Recreational Catch-and-Release Mortality Research in Maryland. In: <http://www.dnr.state.md.us/fisheries/recreational/articles/crmortalityresearch>.

³⁸ / HMS FMP (2002) <http://www.pcouncil.org/hms/draftfmp/chp5.pdf>.

damage during capture when fishing (Gardieff)³⁹. For instance, data from the Atlantic Ocean on blue-fin tuna showed that the extreme stress of rod-and-reel angling did not cause immediate post-release mortality in larger blue-fin tuna of 50 to 150 kg. Many causes that lead to the death of released fish include temperature variation between that of the water in which they live and the external water temperature to which they are subjected when caught and later reintroduced to the ocean. The handling effects such as showing friends, taking pictures, tagging and removing the hook take more time, thus increasing the probability of fish dying and should be minimized to increase the likelihood of survival (DFO/DO-03, 1998⁴⁰; PFCRC⁴¹, 2002).

The catching of small fish is another way that tourism affects fishing resources. When tourists go fishing, they buy small fish from the local fishermen to use as bait. This suggests that the local fishermen are prompted to catch small fish for selling to tourists who use them as bait in fishing for fun, such as game fishing. Other potentially damaging water sports are scuba diving and snorkelling on protected reefs and tag-and-release fishing. Ramsay (1995:46) argues that these sorts of tourist activities on the island are not environmentally friendly and reflect ecological concerns. Tourism certainly increases "demand for such delicacies as crayfish and crabs and for souvenirs like shells and starfish".

The tourism industry seems to have adopted conservation rules towards reducing the ecological concerns mentioned previously. Tourist resorts issue regulations which state that tourists are not allowed to use Jetski's, which have strong motorized engines, water sports may not be conducted in deep-sea fishing areas, shells or anything else may not be gathered from the sea around the island. They also may not collect flowers and plants from the islands' lakes, but may only walk, observe and swim.

Water sports are handled by huge strategic departments within the tourism resorts of Bazaruto Island. These departments have their own personnel, equipment, daily programmes and management, which provide enormous income to the industry. For

³⁹ / <http://www.flmnh.ufl.edu/fish/Gallery/Descript/BlueMarlin/BlueMarlin.html>

⁴⁰ / DFO Science, Eastern Canada, Stocks Status Report, DO-03 (1998) Historical research into the effects of hook-and-release angling on the Atlantic salmon, In: <http://www.dfo-mpo.gc.ca/csas/Csas/status/1998/d0-03e.pdf>

⁴¹ / Pacific Fisheries Conservation Resources Council (PFCRC) (2002). Background Paper No. 1999/1d. Selective Fishing Initiatives Source: <http://www.fish.bc.ca/>.

instance, at Bazaruto Lodge, fishing is conducted under an enterprise named Gonna Fishing. At Indigo Bay, there is no separate name for the water sports' department.

The islanders' system of using seine nets as a fishing method affects tourism sustainability because of their effect on the sea rocks. Such nets break the sea rocks that are the habitat of exotic fish, while they also affect the scuba diving and snorkelling, by means of which tourists admire the sea environment. Tourists come to Bazaruto Island, not so much because of the terrestrial wildlife, but for the marine biodiversity which they enjoy observing when diving and fishing on the island. According to Fernando Mutondo (23/08/03)⁴² “the Bazaruto National Park has been promoting the protection of this biodiversity, and adult islanders themselves are educating children to preserve this natural wealth, so that they can also pass this knowledge to their children”.

5.2.2 Waste and sewage disposals as a negative impact on tourism in Bazaruto

Environmental degradation on Bazaruto Island results from natural and human causes which are direct or indirectly related to tourism development.

a) Natural environmental degradation

Tourist activities on Bazaruto Island are responsible for waste production and dumping which affects the vegetation. According to Mathieson and Wall (1982:101-2) “Vegetation is one of the major attractions of many destination areas....Excessive dumping of garbage which is not only unsightly but also changes the nutrient status of soils and can be ecologically damaging by blocking out air and light”.

While on fieldwork on the island, the researcher observed that the production of waste occurred in two different situations, which could be classified as occasional and regular. The occasional situation is caused by such phenomena as cyclones, where millions of trees are knocked down along the beach and thus present a dirty view of the landscape along the beach, close to the hotels where tourists enjoy the sand, sunbathe, play games and indulge in other beach activities. While these are not predictable events, it is necessary to make a plan to keep the beach clean and attractive.

Substantial evidence was collected from community islanders, tourism workers, tourists and tourism managers who were interviewed. The results obtained from questionnaires

⁴² Interviewed by the researcher in the Bazaruto Island.

were as follow: According to 44.3% of tourism workers, hurricanes constitute the major natural phenomena affecting their buildings, and their concern is shared by about 42.1% of community members. Wind erosion contributes to about 23%, according to tourism workers, while the figure is reduced to 15.8%, according to native community members. Floods of the year 2000 were regarded by 14.8% of tourism workers as a major concern, a feeling shared by 7.9% of native community members interviewed; whereas 3.3% of tourism workers mentioned soil erosion as affecting the places where they had built their houses. Less than a quarter (14.8%) of tourism workers and 34.2% of the native community members, respectively, mentioned other natural phenomena as a major concern affecting the places where they had built their houses. However, these natural events that cause land degradation affect the aesthetic integrity of Bazaruto Island, which is also the major tourist attraction bringing money to the island. Therefore, this forms a major concern for all stakeholders.

Tourism, which is the only industry on the island, while contributing to preserve biodiversity of the Archipelago and Bazaruto Island in particular, has also been a major contributor to environmental pollution through waste production and disposal. Similarly, environmental degradation through disposal of untreated or partially treated sewage water in the sea was reported as occurring at Rimini in Italy, a resort on the Adriatic coast, in Fiji, Jamaica and other tropical resorts which face degradation of mangrove swamps, sea-grass beds and coral-reef ecosystems (Hunter and Green, 1995:19).

The release and dumping or spillage of oil, petrol, and inorganic and organic wastes from tourist boats was not significantly noticed along the beaches. When tourists go fishing or on outings using boats which cater for the resort, it seems they put solid waste from food consumption in plastic bags and bring them to be buried on land.

These phenomena do not occur on Bazaruto Island, because sewage disposal here is recycled and reused to irrigate vegetation. Most important here is that the waste selection and treatment practised is intended to minimise negative environmental impacts. On Bazaruto Island, thousands of tons of garbage are produced every year by the two resorts. The waste produced by the resorts can be classified into two categories: (i) biodegradable and (ii) non-biodegradable.

The solid waste produced regularly by both resorts is treated using a procedure that follows these steps: (a) waste is taken to a dumping site and sorted, (b) the non-biodegradable waste is subdivided in two lots: cans, bottles, plastic materials, tins, metals, and glasses and are put in one lot and taken to a landfill in the Vilankulo area on the mainland, whilst the other lot, composed of cardboard boxes and paper material, are burnt in an incinerator. Matter which decomposes slowly, like bones, cardboard and tree stumps is burnt in an open field (see Map 4). (c) The easily biodegradable waste made of remainders of food, fresh vegetables, meat and fish, and recyclable paper are buried in a landfill that is covered every day with a thin layer of sand to form compost. The compost is used in the community gardening farm project in the Zeguelema Valley (see Plate A1, Pictures 3a and 3b).

Garbage regularly produced in the scheduled activities of the resorts follows the management process described in the previous paragraph. However, the procedure of garbage treatment was not established to deal with spontaneous huge quantities of litter resulting from cyclones. Many trees were knocked down when the cyclone struck the island in February 2003, and were still lying along the beach in January 2004. To deal with this sort of garbage, tree trunks were either burnt as firewood or thrown on garbage dumps and burnt in areas controlled by the resorts. Given the geographical location of the island, the researcher concluded that the adverse weather phenomena affecting the island will always be a problem. Therefore, it is necessary to have an environmental management system with a contingency plan to mitigate the effects of cyclones.

The island must be cleared of all solid waste produced by the tourism industry, as was established in the Management Plan of the Archipelago of Dutton and Zolho (1990). Within the context of implementing this principle, the researcher witnessed the delivery of about 50 50kg⁴³ bags of empty beer and cold-drink cans or cans from other beverages and various other bottles that were transferred from the island to the mainland in a motorboat named *Jabulane* on the 13/08/2003. This solid waste would be compacted or embedded in a larger space.

b) Human environmental degradation

Human environmental degradation associated with tourism includes compaction of soils by cars driven along the coastline, vegetation loss due to car or foot trails in the bush,

⁴³ But that was not the weight of each sack, in fact they weighted less than 15 kg.

with the consequent emerging erosion, accelerated wind erosion due to cars driven in sand-dune slopes, resorts producing waste, vegetation loss due to firewood harvest and collecting wood for building materials by tourism workers and native islanders. These environmental impacts of tourism on the island are negative, but other impacts may be positive and these will be discussed later.

5.3 Environmental impacts of tourism on landscape

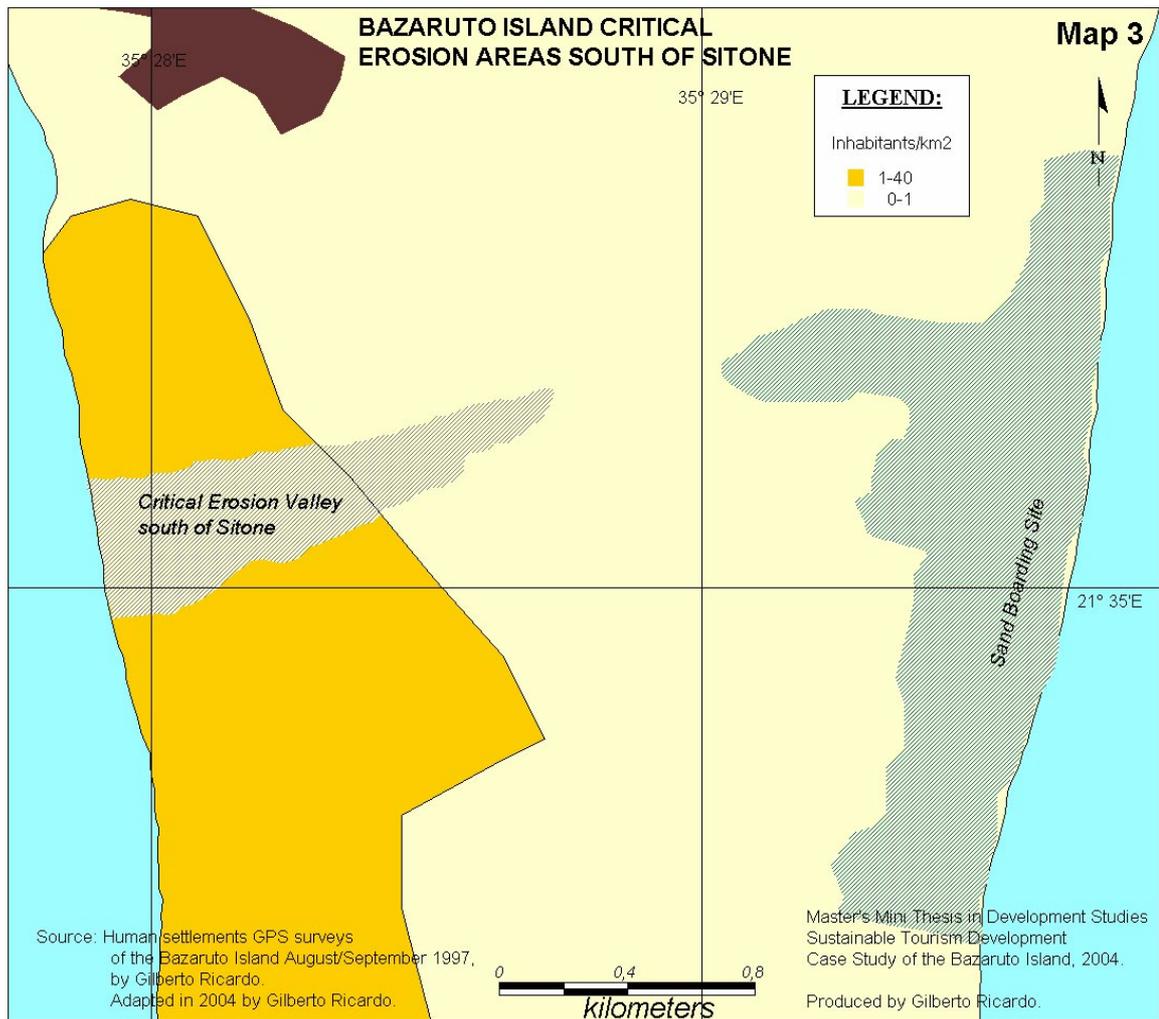
5.3 1_ Tourist's use of sand dunes and associated environmental impacts

Pye and Tsoar's (1990) study on aeolian and sand dunes, argued that both active and stabilised sand dunes have for long attracted attention of humankind for different purposeful use. These ranged from grazing by nomadic herds, agriculture, mining, and water supplies to urban centres, recreational activities, important natural sea defences and ecological sites.

This has been the case on Bazaruto Island, which has been experiencing soil and wind erosion for centuries that has resulted in the formation of mobile sand dunes, responsible for the loss of vegetation cover. The tourism industry has also used sand dunes as an attraction to provide entertainment to tourists. Nevertheless, tourism managers have done nothing to curtail negative environmental impacts of sand dune mobility and vegetation destruction. Their statements, when they are interviewed, reveal both lack of willingness to control sand dunes and lack of knowledge on the issue as they say "nothing can be done to manage them".

These sand dunes are part of the package tourist attraction for sand boarding, hiking, horse riding and driving tours. However, such recreational activities disturb the stabilisation of sand dunes, preventing further consolidation and the growth of vegetation on their slopes. Indeed, practice of these activities, unless otherwise prescribed, is against Point 1, Article 9 of the Law 20/97, which stipulates that "it is not allowed in national territory...the practice of any activity which can accelerate erosion, desertification or deforestation or any other form of environmental degradation beyond

limits legally established⁴⁴ as depicted in the related pictures (see Plate A3, Pictures 8a, 8b, and Map 3).



Several authors approach the topic of sand-dune stabilisation techniques. Pye and Tsoar (1990:294) assert that attempts to limit the damage caused by sand-dune movement through planting of dune grass are historically rooted, dating back to the Middle Ages on the European Coast, to control the movement of desert sand in the Nile Valley, and in parts of northern China for millennia. In the late 1970s, many sand-dune stabilisation programmes on coastal beaches are also reported to have been implemented on the northwest English coast, between Liverpool and Southport.

Such measures to combat sand-dune expansion, similar to those desired on Bazaruto Island, are aimed at meet the following objectives:

⁴⁴ / Boletim da República (BR) 1997:200—(21), I Série _ Número 40, 3º Suplemento. Imprensa Nacional de Moçambique, Maputo.

- (i) Conservation – to maintain the dune system as a natural sea defence;
- (ii) Landscape maintenance and renewal -- to maintain the quality of the dune landscape and restore it in those areas that have been degraded;
- (iii) Woodland management – to maintain the continuity and quality of woodland cover, extending it in some areas to screen unattractive developments;
- (iv) Nature conservation – to maintain and, where appropriate, widen the diversity of habitats and the wildlife they contain;
- (v) Visitor management -- to deal with recreational demands in such a way as to minimise damage to the dune system and its habitats while continuing to allow public enjoyment of the area. (Pye and Tsoar, 1990:352)

Several techniques for sand-dune stabilisation are reported across the world. According to Faroda (1998:37), most sand-dune stabilization programmes include “(a) protection of the area from human and livestock encroachment; (b) creation of micro-wind breaks on the dune slopes, using locally available shrubs either in a checkerboard pattern or in parallel strips; (c) direct seeding or transplantation of indigenous and exotic species; (d) plantation of grass slips or direct sowing of grass seeds on leeward side of micro-wind breaks; (e) management of re-vegetated sites”.

The techniques used for sand-dune control include: surface stabilisation by mulches, physical barriers to airflow, restriction of human activity in potential sand source areas, sand fences, sand ditches, vegetation plantation and combined stabilisation methods (Pye and Tsoar, 1990:294-308).

The discussion addressed above shows that tourism on the island cannot develop sustainability while using sand dunes yet not implementing any of the abovementioned techniques to control the sand dunes’ progress.

5.3.2 Negative environmental impacts of weather conditions on sustainable tourism

Mozambique has a coastline of about 2,500km along the Indian Ocean, all of which is subject to tropical storms and cyclones. A cyclone, by definition, “results from raised water levels known as storm surge and highly energetic waves induced by extreme winds. Combined with high tides, storms may result in catastrophic damages such as

those that occurred along the North Sea in 1953” (Eurovision, 2004:11). According to Ballegooyen (2001:12)⁴⁵, “the average occurrence of cyclones in Mozambique is more than three per annum”. Dutton and Zolho (1990:18) point out that in a period of fifty years, twelve high intensity cyclones and thirty-eight medium intensity cyclones were witnessed in the country. According to them, the Archipelago falls just outside cyclone paths and thus is occasionally subjected to cyclones. In October 1989, a violent but brief windstorm, which cut a 40m-wide path through the Bazaruto Lodge complex, was experienced.

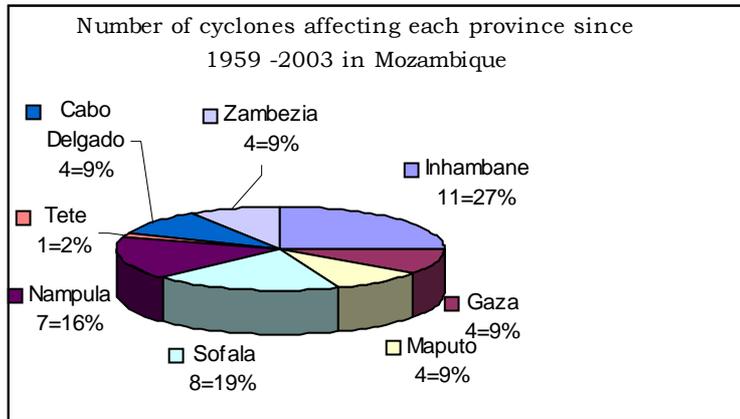
The argument of Dutton and Zolho seems not only confusing, but also unrealistic when they say the Archipelago is located out of reach of cyclones. The definition of a tropical cyclone, and the conditions necessary for its occurrence, are described by Landsea, (1997), who states that:

Tropical cyclone is the generic term for a non-frontal synoptic scale low-pressure system over tropical or sub-tropical waters with organized convection and definite cyclonic surface wind circulation. This type of cyclone derives its energy primarily from warm waters that fuel the heat engine to more than 26.5° C throughout an adequate water depth of (> 50 m). The water evaporates from the sea in the presence of high winds and lowered surface pressure and the associated condensation in convective clouds concentrated near its centre. Once tropical cyclones reach wind speeds of at least 17 m/s they are typically called a tropical storm and assigned a name.

In the last 44 years, several cyclones have hit Mozambique (Blaikie et al., 1994; Steinbruch, 2003:24), and 11 cyclones, representing 27%, hit the Inhambane Province. Most of them might have reached Bazaruto Island, which is part of the Archipelago. This is a clear indication that the island is within the range of cyclones (see Table 14 Appendix VII and Graph 2).

⁴⁵ Quoting Tinley, K. L. (1971) in Determinants of costal conservation: dynamics and diversity of the environment as exemplified by Mozambique coast. Proceedings of SARCCUS Symposium, Government printer; and Dutton, P.T. and Zolho, R. (1990) Conservation Master Plan for sustainable development of the Bazaruto Archipelago, Republic of Mozambique. www/SANF Report.

Graph 2 _ Number of cyclones affecting provinces of Mozambique since 1959-2003



Source: Steinbruch (2003:25), based in (INAM, Imprensa Nacional _ Mozambique).

The most recent cyclone on Bazaruto Island was that of February 28 to March 3, 2003, and became the subject of research during the field survey for this study. Data was collected by means of participant observation, audio-visual recording for further analysis, description, and taking pictures. The results showed that the cyclone did not only destroy the beach physically, including the near shore and the shore, but also altered the beach face and berms, drawing a new coastline. Aesthetically, the landscape, comprising the shore, the coastline and the coast, had lost its attractiveness. The effects were experienced all along the west coast from north to south. Damage to tourist coastal structures was experienced and storms caused beaches and dunes to retreat by tens of meters. The level of destruction, which was severe, especially on the west coast, undermined cliff stability as a result of both transgression on and regression from the land by sea water, with consequent soil erosion. The devastation ranged from vegetation damage to huge economic losses to tourist resorts, as well as damage to native community houses and fishing camps. This was one among the many cyclones that struck Bazaruto Island. The erosion caused by cyclones on Bazaruto Island produced a coastal profile similar to the one in Figure 3 below (see also Plate A3, Picture 9a).

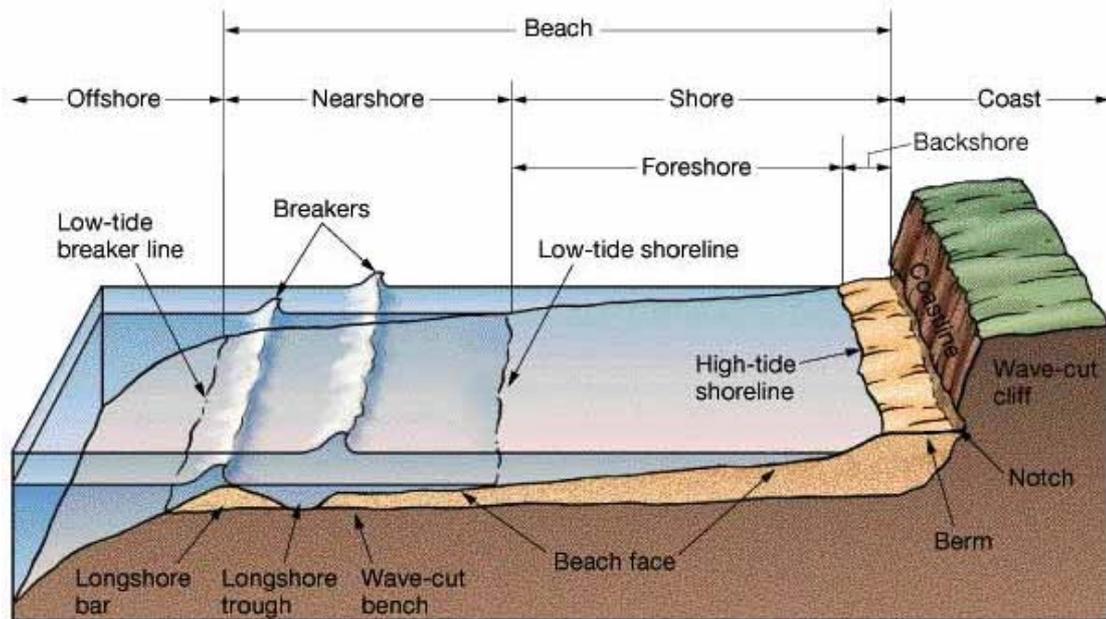


Figure 3. Terminology to describe the cross-shore beach profile, which is a part of the coastal zone eroded during the cyclone in the Bazaruto Island, from 28 February 2003 to March 3. Source: Euroision May 2004.

Indeed, Hunter and Green (1995:45) mentioned that, according to climatologists, “certain low-lying tropical islands, such as the Republic of Maldives in the Indian Ocean and the atoll of Tuvalu in the South Pacific, may even face extinction before the end of the next century. The increased occurrence of hurricanes in many parts of the world is due to the rise in sea temperatures”. Bazaruto Island is facing a similar risk with some zones in northern Sitone which were submerged by the floods of 1999.

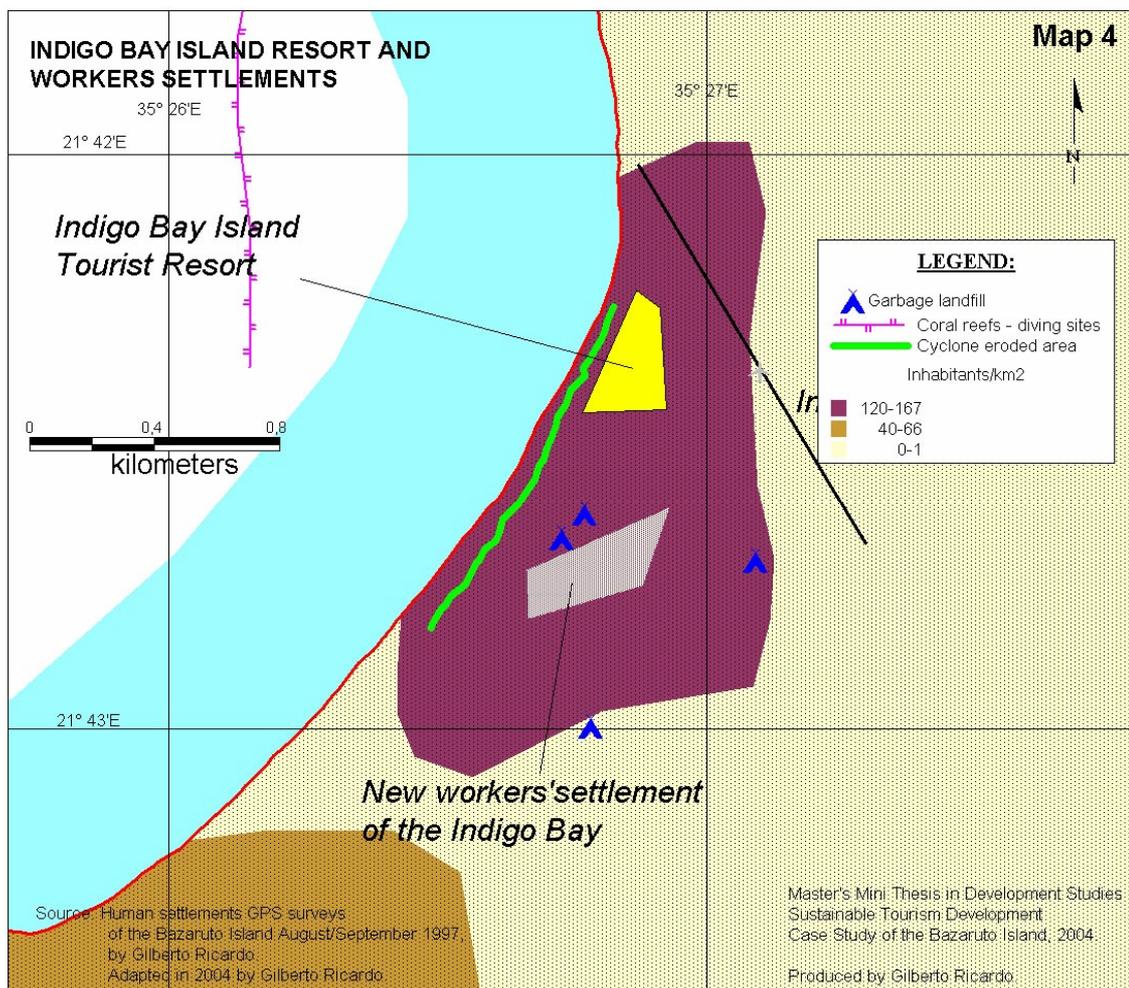
For comprehensive interpretation of certain terms used in marine geomorphology, the definition of “coastal zone” is offered and encompasses the following:

- those areas visually connected to the shoreline and those areas that form an integral part of the coastal landscape, such as sea cliffs, dune fields, lagoons, marshes and estuaries;
- the transitional area between coastal waters and terrestrial systems in which there are physical features, ecological or natural processes that affect, or potentially affect, the coast or coastal resources; including areas utilised for human activity related to the coast (Eurovision, 2004).

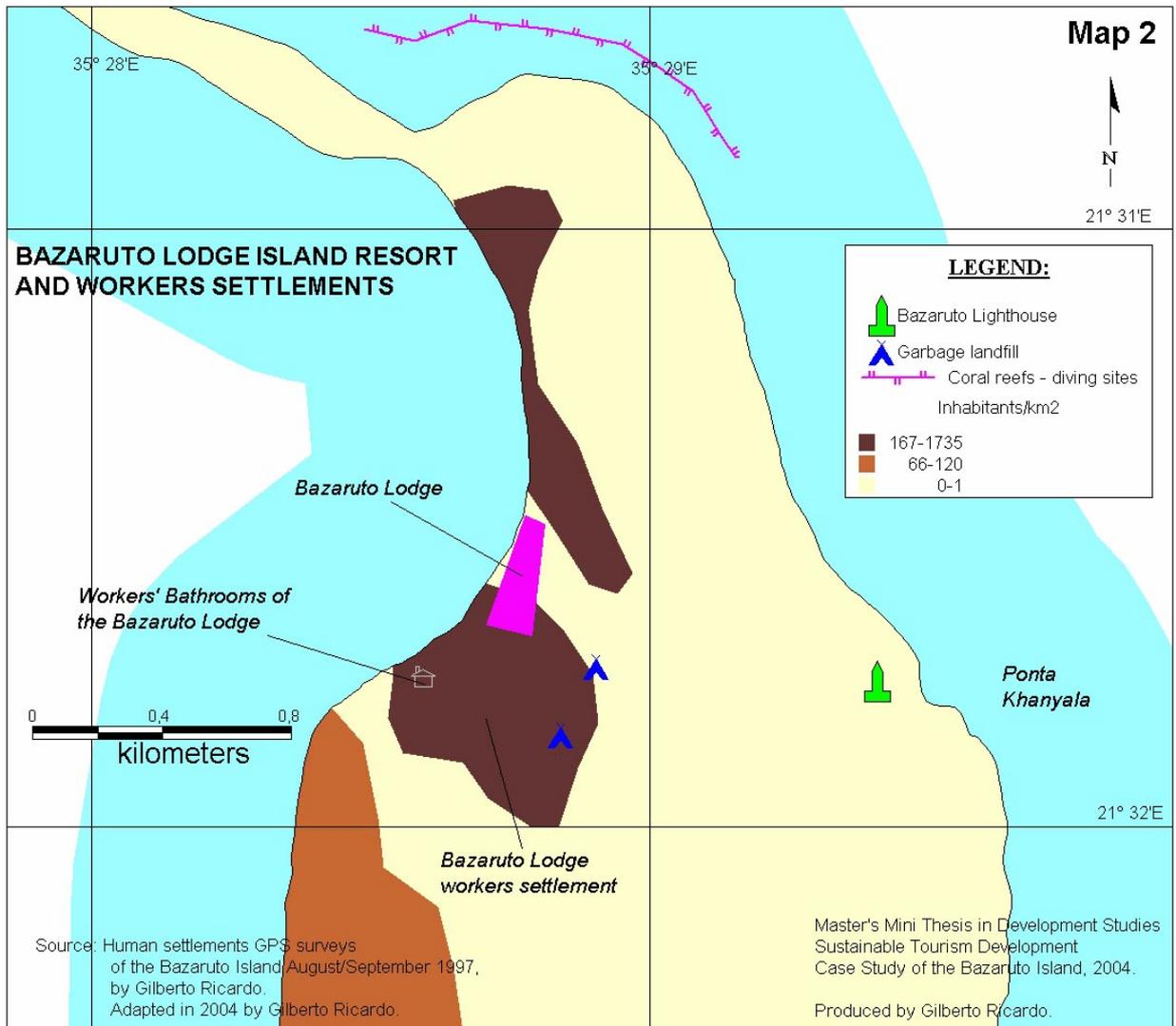
Bazaruto Island is also at risk of splitting as a result of severe soil erosion. The recent cyclone of February/March 2003 opened a huge valley and destroyed, or buried, most of the vegetation along it in the south of Sitone, at an area centred in the Coordinates

21°34'.930"S and 035°27'.887"E (see Map 3). Cars driven along that valley combined with incoming tide and mobile sand dunes coming from the east towards the west coast, and the wind, when blowing in the same direction, exacerbate the sand dunes' movement and increase land degradation. Mathieson and Wall (1982:102) observed that there is a strong direct negative impact on vegetation of vulnerable ecosystems, such as sand dunes where pedestrian and vehicle movement is intensive.

In the south of Sitone, seawater coming from the west coast rises towards the east coast. Neither people nor cars can move along the beach at high tide. A similar scenario is observed between Machulane and the Bazaruto National Park headquarters, close to the Sitone Primary School. On the Indigo Bay Island Resort premises, land and loss of property were extensive, and these threats still continue affecting the beauty of the landscape and the attractiveness of the beach and resorts. In an attempt to evaluate the environmental impact of land lost to sea, the researcher took six measurements in an area of approximately 600 metres, and the minimum transgression observed was 6.7m, whilst 20.9m was the maximum, giving an average of 13.55m (see Table 8 and Map 4).



The sea's transgression into the land was also observed as impacting negatively on the tourism infrastructures of Bazaruto Lodge in the north of Sitone (see Map 2).



The two resorts on the island are located in coastal regions and are built in a semi-circular configuration. Analysis of the influence of this shape reveals that the cyclone moved from the southwest to the northeast at high tide, and the landform acted as a wind-catcher and contributed much to the damage on the land and to the structures thereon. The instructions of managers of the Indigo Bay Island Resort to workers to break the coastal rocks greatly contributed to the level of destruction along the beach in front of Indigo Bay Island Resort as they were unaware of the environmental role of coastal rocks. The Bazaruto Park managers, when alerted, stopped this environmental mismanagement. Meanwhile, at the coastline, such as between the north of Pangaia and Mulidza, where there are plenty of coastal rocks, the researcher noticed that sea rocks

played an important role in defending the coastline against sea transgression, thus limiting the erosion beyond two metres.

Table 8 Marine regressions and transgressions on Bazaruto Island due to cyclone effects from 28 February to 3 March 2003.

Reference place	Coordinates		Distance invaded
	Latitude	Longitude	
Radio antenna South limit	21°42'.719" S	035°26'.571" E	12.8 metres
Fallen coconut tree	21°42'.577" S	035°26'.668" E	13 metres
First suite Chalet South	21°42'.522" S	035°26'.699" E	6.7 metres
Water sports Centre	21°42'.267" S	035°26'.827" E	18,5 metres
South of the beach bar			17,1 metres
North extreme of the Indigo Bay	21°41'.923" S	035°26'.819" E	20,9 metres
Average distance eroded			13.55 metres

However, neither the Ministry of Tourism Affairs nor the tourism operators nor the Bazaruto National Park management took any action towards solving the problem of erosion on the island. When asked whether they had any plans to deal with this problem of erosion, the Bazaruto National Park administration and other tourism operators replied they had none, and that “you cannot fight nature”⁴⁶.

Tourism operators on the island seem to be unaware of the importance of protecting the physical integrity of the island. They say, “you cannot protect the entire island because, on one hand, it is not feasible and, on the other, nothing can be done against the force of the nature. However, it is practical to protect investments as much as possible through building retaining walls. As the preceding facts show, nature destroys and nature is capable of severe destruction as much as it is also capable of self-healing. Resorts are reclaiming the beach and they are due to put up stone walls along the areas prone to cyclones”.⁴⁷ The Department of Agriculture and Forestry had carried out the monitoring of the impacts on corals in order to preserve other ecosystems. Therefore, attention is being given to maintaining and not destroying the environment, resort managers added.

The researcher strongly disagrees with the approach of tourism resort managements and the Bazaruto Park managers who feel that nothing can be done, as presented in the paragraph above. The researcher claims that man can manage and mitigate the effects of

⁴⁶ / (Tourism and the Bazaruto National Park managers interviewed by the researcher, Bazaruto 23/08/2003).

⁴⁷ / Hotel managers in the Island in interview with the researcher, 22/08/2003.

some natural phenomena such as sand-dune movements. There are many erosion control plans being formulated in many parts of the world. Many techniques are currently used to mitigate coastal erosion damages. For instance, seawalls and bulkheads, just to mention a few, are among methods used to “protect banks and bluffs by completely separating land from water. Bulkheads act as retaining walls, keeping the earth or sand behind them from crumbling or slumping. Seawalls are primarily used to resist wave action. Design considerations for these types of structures are similar. These structures do not protect the shore in front of them, however” (Eurovision, 2004:34).

According to Azevedo (2003:9), the Pestana Bazaruto Lodge only reopened to the public in June. When it was ready to restart its functions, after a short break, on the 28th of February, 2003, the cyclone Japhet struck Bazaruto Island with winds that reached 180km/h, severely damaging the resort. Sea waves reached the height of 1.5 meters at the restaurant, bedrooms and swimming pool zone, leaping over and destroying the coastline and many other structures in residential areas. The sand, which accumulated in the hotel to a height of about 1.5 meters, and amounted to about 50 tons, took 7 days to be removed with the aid of all workers of the Lodge. More than 100 coconut palms, planted in 2000, were destroyed by the sea waves.

This shows the importance of the indigenous grass. Grass is also a natural resource serving as pasturage for sheep and goat herds, and also as a natural habitat for several birds. The serrated sedge, in particular, is important for thatching, not only for the local communities and tourism workers but also for tourism complexes. The recovery of the Bazaruto Lodge Resort, for instance, “used about 20,000 bunches of serrated sedge straws for thatching and more than 200 bags of cement. Over 100 trips by sailing boats were made for the replacement of the white sand of the gardens”⁴⁸.

Severe coastal storms demonstrate the dynamics of vulnerability, clearly establishing an intimate link between vulnerability, livelihood strategies, the tourism industry, and the complex and shifting pattern of differential class, culture, and ethnicity in more specific ways. Unprotected, poor-quality, urbanised eco-tourist infrastructures, and poor-quality communication networks linking tourist resorts are features that are basic in vulnerability to hazards associated with severe storms, wind, floods, malaria and erosion.

⁴⁸ In Mendença, S. 2003.

5.3.3 Soil erosion due to runoffs associated to walkways caused by tourists and by islanders' wood gathering

Dutton and Zolho (1990:42 and 57) recommended that the use of indigenous vegetation for firewood should be discouraged. The forestry department, too, should be advised to create small plantations near the main concentrations of island people and resort complexes. Additionally, these authors recommended that small plantations of Casuarinas be planted in areas surrounding tourist establishments, in order to provide firewood for outdoor cooking purposes, and to satisfy the needs of the workers. These authors' viewpoints took into consideration the fact that any socio-economic development on the island should predict and prevent landscape degradation deriving from destruction of vegetation cover.

To assess the level of environmental care based on the amount of vegetation cover, respondents were asked to state whether they had planted any indigenous trees on the island. All the respondents reported not having planted any indigenous trees, while at the same time, they admitted to cutting natural vegetation for several purposes. This illustrates that there is a lack of alternatives to timber resources, which impacts on environmental sustainability in tourism development on the island. Indeed, none of the resorts, including the Bazaruto National Park, had undertaken a reforestation programme towards production of firewood in the island.

According to Mathieson and Wall (1982:100), "tourism has provided an impetus for the conservation of natural resources". To achieve this goal on the island, there is a need to place emphasis on community involvement and participation in environmental preservation and management. The utilisation of natural resources, especially energy resources, is the most important component of a sustainable tourism development strategy. Therefore, priority should be given to the native communities' development of basic needs such as relatively high levels of education, water supplies, health care, and social empowerment, together with combined private and communal management of natural resources. However, tourism in the context of subsistence and tourism economy for native local communities over the goals of improving social development, are difficult to achieve.

Studies of tourism in Nepal showed that the use of firewood had indirect physical negative environmental impacts. Direct impacts were caused by intensive demand and

usage of natural resources by tourists, transforming the landscape. A similar example was reported in Matabeleland, in the northern part of Zimbabwe, where the greatest woodland depletion and soil erosion occurred in areas with high population density and the longest duration of primary land settlement (Oppermann and Chon, 1997:119-120; Katerere and Hill, 2002:258). These phenomena are also observed in some parts of the island, particularly in Machulane in northern Sitone. Certain species of vegetation preferred and harvested by the local communities grow very slowly along the coastline of the island. Any usage beyond the regeneration capacity of the area results in loss of the vegetation that covers soils and normally prevents both wind and soil erosion.

The Bazaruto lighthouse is a three-storied structure erected at the peak of the island, at an altitude of 120 metres above sea level. From its top, tourists can view the magnificent landscape of the whole island, which is one of the reasons why tourists are attracted to it (see Appendix A2, Picture 4a).

There is a hiking trail to reach the highest peak, where the lighthouse is built. However, this hiking trail leading to the lighthouse has been severely damaged by soil erosion due to footsteps trampling on the vegetation, and worsened by rain runoff. Dutton and Zolho (1990) recommended that this pathway be arranged in such a way as to avoid soil erosion. This was ignored, and soil erosion has worsened.

The field survey that the researcher conducted with native community members consisted of asking whether there was a hiking trail specially built for access to the lighthouse in the Bazaruto Island. About one-quarter (26.3%) of the respondents said yes, while virtually half (47.4%) responded no, and about one-fifth (21.1%) did not know. The large percentage of negative answers to the question suggests that many islanders ignore the tourist role of the lighthouse and the environmental degradation of the hiking trail.

According to some native islanders interviewed, there was previously a well-designed pathway from the bottom to the top of the hill, before Mozambique's independence in 1975. The pathway was constructed with poles and steps in order to protect vegetation cover that stops sand movement and stabilises dunes. Currently, there are no steps along the path; thus, soil erosion due to runoffs and footsteps is rampant, clearly indicating the lack of effective environmental management strategies. The researcher measured the

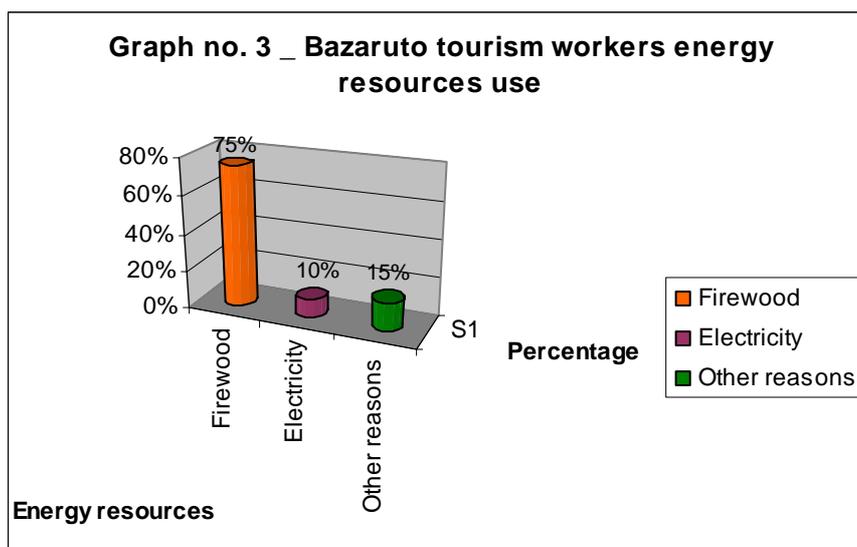
excavated pathway during data collection in August 2003 and found that the depth ranged from 50 to 120cm.

5.4 Environmental impacts on vegetation

5.4.1 Use of natural resources as firewood by the local communities and tourism workers as a negative environmental impact of tourism on the island

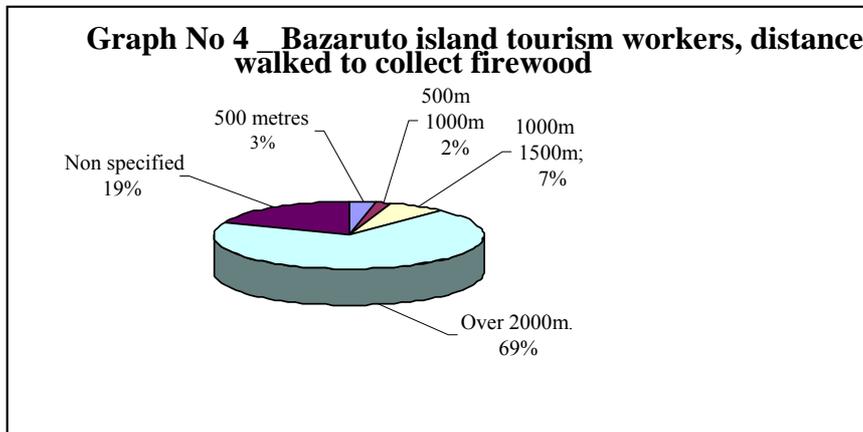
Over 95% of households on the island are poor and unemployed and will thus continue to use firewood for cooking and heating. Firewood is an important energy source for this group. Despite the fact that plenty of natural gas is available in Mozambique, its exploitation is neither environmentally sound nor developmentally sustainable. Certain population groups living on the island are directly attached to the natural environment and since they lack alternative energy sources for their subsistence, they use firewood, which leads to deforestation.

The most used energy resource by tourism workers is firewood, according to three-quarters of the respondents, while one-eighth claimed to be using electricity. These were the workers who did official cooking for the resorts. Three-quarters of respondents said that tourism workers gathered firewood from the local forest or simply bought wood from native islanders who collected firewood and sold to tourism workers; while 8% said that they brought firewood from the mainland and another 15% gave other reasons (see Graph 3).



The pattern of firewood harvesting shows the occurrence of change from 2002 to 2003, and 67% of respondents said that they had changed the place where they collect

firewood. Sixty nine percent of respondents stated that they collected firewood over 2000 meters from their homes, especially in the Machulane zone, where Bazaruto Lodge has been based for more than 15 years (see Graph 4).



According to 85.2% of respondent tourism workers, there were many people who collected firewood for their necessities. Equally, 82% of respondents reported having collected firewood for more than two years. Indeed, 77% of respondents believed that firewood becomes exhausted, while only 16% said that there was still plenty of firewood. Since it was obvious that the native islanders had always used firewood as a primary resource in their life, this question was not put to them. Visual observation around the island showed that the firewood harvesting was selective, as firewood collectors harvested firewood mainly from the dry, dead trees, although in some cases they cut from live trees.

The effective use of scarce energy resources such as firewood on Bazaruto Island by the native and non-native communities could result in lower marginal costs, for instance, by reducing the cost of transporting firewood from the mainland, and it also guarantees long-term sustainability of energy resources to avoid land degradation. Careless or reckless uses of firewood resources during the food preparation processes can add to social resentment of tourism development by the local community (Cooper et al. 1998:153). This hinders future sustainable development and will certainly detract from the effective use of resources. To assess the overall environmental impact, it is necessary to take into consideration the consequential impact brought about by direct productive tourism activity.

When multinational corporations control key resources, such as energy, the islanders will be left with no alternative but to buy charcoal, cut down trees for firewood or use

paraffin for cooking or boiling water. The consequence of such a policy on the island is environmental degradation through over-use of forestry resources. This has happened because the Pande and Temane natural gas exploitation policies were not designed to meet the local population's needs. In addition, growing a tree until it is big enough to be cut as firewood or charcoal takes more time than the time needed by human beings for cooking food using energy resources. Cole (1987:49) supports the assertion that "growth in human population is outpacing the growth of new trees - not surprising when the average user burns as much as a ton of firewood a year".

Combined lack of modern social lifestyle and lack of financial resources among the Bazaruto islanders' community to afford gas for cooking makes sustainable tourism development, in reality, difficult to attain. The level of improvement of the quality of life for the islanders is restricted by spatial inequality in tourism development. However, empirical research has revealed that, generally, those who are directly committed to tourism tend to view it favorably, whereas those who depend less on tourism, either for income or for employment, are unfavorable or less favorable to tourism (Sharpley, 2000:11). Those indigenous islanders of the south of Zenguelema staying closer to the Indigo Bay Resort benefit more by working for the resort.

5.4.2 Tourism as a source of immigration labour force to the Bazaruto Island, and the use of vegetation

The tourism sector brings a lot of workers from outside the island. According to this study, 25% of the tourism workers came to Bazaruto Island during the war period, 1980 to 1992, and 69% came after 1992, when the war had ended. When tourism workers were asked what made them come and live on the island, 57 (93%) respondents said that they came to look for employment in the tourism industry.

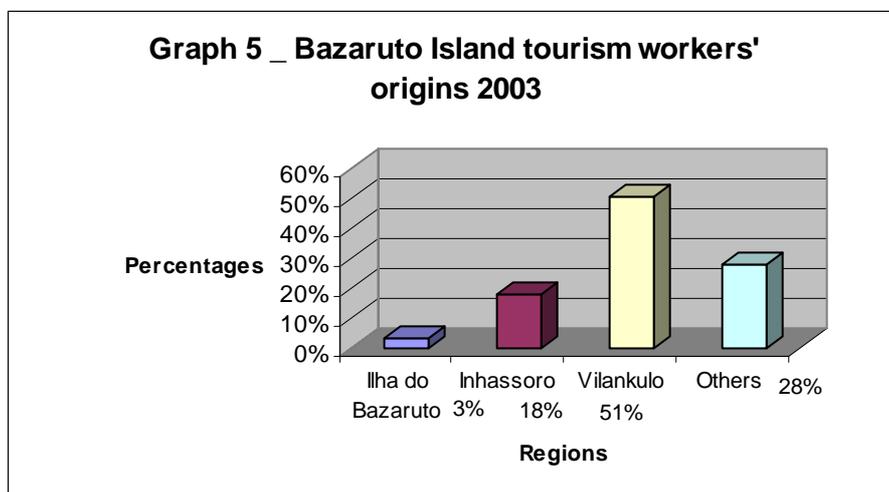
These immigrants increase the demand for wood and for building material. However, this demand is guided not only by the availability of such materials but also by better-quality, longer-enduring poles. Hence, some native islanders also buy poles for construction on the mainland and transport them to the island. Such initiatives slightly reduce the levels of local demand for timber building materials on the island. The expectations of conservation authorities were that it would contribute to a positive extent on environmental preservation.

Evidence suggests that there are clear similarities in environmental impact of tourism between eco-tourism in Bazaruto Island in Mozambique and eco-tourism in Tortuguero, Costa Rica. Though more environmentally benign, eco-tourism has contributed little to the sustainable development of local rural communities. Therefore, the national policy remains focused on large-scale, coastal tourism development. Tourism on Bazaruto Island also appeared sustainable at the beginning, but the use of firewood and construction materials harvested from the local forest by tourism workers and the local native community has contributed to environmental degradation.

Collected data among those interviewed showed that two (3%) respondents among the workers are natives of the island. According to the data from the human resources departments, 16% of the total 173 workers at Indigo Bay Island Tourist Resort were originally from Bazaruto Island, while at Bazaruto Lodge, together with those of Gonna Fishing, of the total 69 workers, only one was born on Bazaruto Island. A total of 68% of workers were from the sub eco-region (51% from Vilankulo and 18% from Inhassoro). The remaining 28% came from elsewhere, such as Sofala, Inhambane, Gaza and Maputo Provinces (see Table 9 and Graph 5).

Table 9 Bazaruto Island tourism workers' origins

Origin	Percentage	Respondents
Bazaruto Island	3%	2
Inhassoro	18%	11
Vilankulo	51%	31
Others	28%	17
Total		61



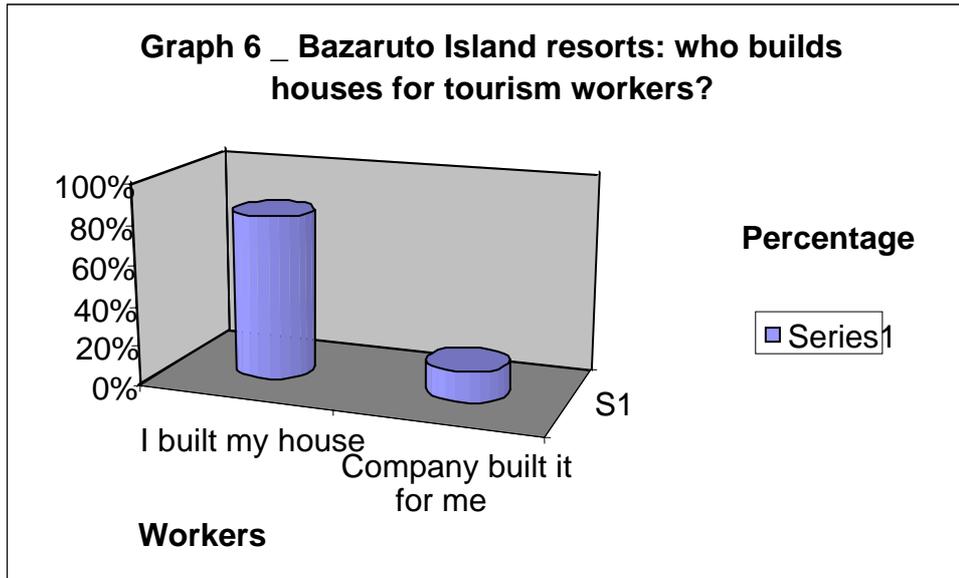
The majority of the native community members (76%) were born on Bazaruto Island, while 18% came from the mainland, namely Inhassoro and Vilankulo, as a result of marriage to islanders or for other reasons, and 5% came from the neighbouring island of Benguerua.

The researcher's assumption was that a tourism worker would live in inadequate places on the island, contributing therefore to exacerbating erosion. When asked about how suitable the places where they built their houses were, tourism workers believed that the places where they built their houses were suitable and secure. This feeling was expressed by 84% of respondents, while 16% thought that their houses were in unsuitable places. Equally, native community members (74%), when asked the same question, felt that they live in suitable places, while 21% responded that the places where they built their huts were not suitable for living.

Meanwhile, in an attempt to control the overflow of immigrants to the island, Bazaruto National Park Management declared that non-indigenous people should not settle on the island. Workers of the resorts who finish their contracts have to leave the island and return to their native land, on the mainland (an islander on Bazaruto Island 14/08/2003).

5.4.3 Environmental impacts on housing and harvesting vegetation for building materials

The majority of tourism workers (82%) built their own huts using local, precarious material such as poles, twigs, reeds, and serrated sedge for thatching huts (see Graph 6). The influx of people seeking benefits from tourism such as employment and food is the main reason for convergence in tourist resorts of low income societies. This is very noticeable in the tourism sector on the island. Unplanned settlements developing around the two tourist complexes of Bazaruto Island have resulted in the emergence of shanty towns (see Appendix A1, Pictures 2b).



The indigenous vegetation cannot withstand the heavy demand for firewood and building material collected by tourism workers and the native community. Poverty promotes the exploitation of cheap labour resources, poor living conditions, and low salaries due to low level of formal education. A tourism worker is faced every day with a continuous challenge from the tourists he/she serves, the environment he/she works in, and the place he/she lives in (see Appendix A2, 3; Pictures 5a, 5b, and 7b, 8b).

Workers agreed to build many huts using local building materials in 2002, and 44% respondents said over 30 huts were built, while 25% said that 10-30 huts were built in that period. Fifteen percent said that fewer than 10 huts were built, while another 15% did not know the number of huts built in the same period. Usually, each worker builds at least two huts; one main room for sleeping and keeping valuable assets and the other as a kitchen. In addition, some Zimbabwean workers who were involved in the construction of the Indigo Bay Resort complex, and had finished their contracts, destroyed their houses, whereas those who remained erected other new ones in other places. Therefore, the impact of forestry use for building seems to be greater than if such houses had been preserved and used by those who remained (see Appendix A2, 3 Pictures 5a, 5b).

The native islanders of Bazaruto have lived for centuries in traditional round-shaped and thatched-roof huts. The fact that tourism workers and native community islanders use materials which have only a short lifespan for building their huts causes a lot of pressure on natural ecosystems, especially when the intention is to preserve nature and the integrity of such ecosystems. To assess the empirical awareness of forestry preservation,

native islanders were asked if they used recyclable building materials. Of the respondents, 89.5% did not use recyclable building materials. That is why there is a lot of demand for poles cut from trees for building huts as the population grows.

According to respondents who were asked if the tourism company built houses for low-ranking national workers, 83.6% said no, claiming that the tourism company did not build houses for low-standard national workers.

Regarding the fact that building huts either for tourism workers or for native islanders involves cutting down indigenous trees, 41% of workers admitted that they harvested building materials in the local forest, while 48% said that they did not harvest building materials in the local forest. To assess the degree of environmental awareness, workers were asked if they have ever planted any indigenous trees used as building material. To this question, 97% responded that they had never planted any of those types of tree. Workers (92%) also claimed that despite the fact that there are regulations prohibiting harvesting building materials, they had no other alternative than to cut trees to build their huts. The areas in the bush where cutting of trees for construction poles takes place are widespread. Therefore, the immediate negative environmental impacts cannot be assessed at once.

Similarly, native community members did not use compost or recyclable materials to improve soil productivity in small gardening, as shown by results from the questionnaire. Over three-quarters (76%) of respondents said they did not use such techniques.

There is divergence in the opinions of the workers about environmental protection systems against pluvial erosion issues related to the public and individual houses on the island. More than half (53%) agree that there is an environmental protection strategy; while 43% say there is no such protection. Environmental protection systems were said to be grass and vegetation or sacks with sand (35% of respondents), and 43% mentioned other environmental protection systems.

Tourism workers further said that there were some adequate techniques that could be used for building which did not impact negatively on the environment and were resistant to erosion on the island. This was expressed by 82% of the respondents, while 18% said that there were no such techniques.

5.5. The environmental impact of tourism on the use of energy resources

5.5.1 The utilisation of natural gas by the tourism sector

Energy resources are essential for any country's development. According to Cole (1987), since 1980s, among other commercial energy resources, natural gas worldwide has supplied 20% of the demand for energy. The consumption of commercial energy per inhabitant is generally much lower in developing countries, due to low industrialisation, and is lowest at Bazaruto Island, due to tourism being the sole industry.

The Temane and Pande natural gas deposits cover the Inhassoro, Govuro and Vilankulo districts, and natural gas has significant importance in the tourism sector of Bazaruto. This importance is based on the fact that tourism is a major consumer of the energy supplied to industries (Roche, 1992:565). Indeed, the pipelines transporting natural gas to the island would have some significant negative environmental impacts on the ecosystems and on the tourism industry. Negative environmental impacts identified in this project include risks of spill of condensed gas, affecting the tourism sector with loss of landscape and marine life habitats and reduction of fish catches (Van Ballegooyen, 2001:24).

Many authors of studies consider natural gas use to be “environmentally friendly” because it is a much cleaner, safer and more “cost-effective energy source” (Pretorius, 2002:19) compared to the firewood and charcoal mainly used by the local population on Bazaruto Island. Elgas controls the supplies of natural gas for power generators to holiday resorts such as Bazaruto Island, Magaruque, Benguerua, and Santa Carolina in the Bazaruto Archipelago. Elgas is a Mozambican-registered company established by Eskom Enterprises. It has also obtained the rights to manage and operate the existing natural-gas distribution network from Pande gas fields to three northern districts' headquarters of the sub eco-region (Inhassoro, Nova Mambone and Vilankulo) which generate electrical power from natural gas (Pretorius, 2002:13). Electricity brings benefits to the tourism industry by preserving fresh foods shipped to Bazaruto Island.

The majority of the inhabitants living in rural areas in Mozambique are poor, unemployed peasants who lack financial resources. The local community members of the island are part of this social segment. Firewood is the primary energy source used by the indigenous islanders and “women in rural areas are the collectors and users to satisfy

their household energy needs” (Pretorius, 2002:19). These people cannot afford to use gas supplies.

The Temane and Pande natural gas deposits are a giant investment handed over to a group of multinational corporations like SASOL and its partners, such as Grinaker-LTA, Hall Longmore, Ulusha Projects (South Africa), McConnell Dowell (Australia), CCIC (Lebanon), Zainveste and Focus 21 (Mozambique), Europipe (Europe), Itochu and Kawasaki (Japan), Salzgitter (Germany) and Foster Wheeler, who have little concern for the specific basic needs of rural Mozambican people. According to ILRIG (2002:5)⁴⁹, Mozambique is thought to be “one of the poorest countries in the world”, and thus falls under constant dependence on South Africa in terms of the World System Theory economic framework.

Elgas, under unfair terms of trade, accumulates wealth through the World System Theory by selling natural gas to the Bazaruto Island tourism industry. No reasonable explanation is convincing for paying a lot of foreign currency to a foreign company to buy a locally produced natural resource, which is also consumed locally. This argument is supported by the following facts:

First, the foreign direct investment (FDI) in the Temane-Secunda gas pipeline is calculated to be equal to 20% of Mozambique’s GDP. Over the 25-year lifespan of the project, it has been estimated that the Mozambican Government will earn about R210 billion for selling gas to SASOL, while SASOL together with the South African Government gets a share profit of R212 billion. This means a surplus of R2 billion more than its Mozambican counterpart. Second, it was not feasible to undertake such a big investment for supplying gas to low-income households’ consumers, because they cannot afford to meet the investment costs. Furthermore, in Mozambique, there are few households in the rural areas that are well-equipped to using natural gas.

The following data was collected in the field to demonstrate the expenditure on natural gas. Indigo Bay Island Resort possesses two electricity power generators; one uses diesel and the other uses natural gas. The one using diesel works as an emergency generator in case the natural gas one breaks down. This resort uses 15,000 litres of gas to generate 6,000 kWh of electrical power.

⁴⁹ / ILRIG _ International Labour Resource and Information Group (2002), Energy for all or Energy for the few? A Case of the South Africa-Mozambique gas Pipeline. Cape Town.

When using Diesel, the resort uses 1,200 litres per day. Each litre of diesel costs, at the time of this research, 15,000 Mt. This corresponds to 18,000,000.00 Mt. One US dollar is equivalent to 24,000 Mt. Therefore, the total amount spent for the diesel power generator is equivalent to US\$750 per day. The natural gas power generator spent US\$800 per day to generate the same 6,000 kWh of electricity (see Table 10). At the same time, the resort runs other marginal costs for the natural gas power generator, as its maintenance is done by an enterprise named MEX, while Elgas supplies natural gas only. The kitchen and the laundry were identified as the sectors of the resort which used most of the electricity.

Table 10 Diesel and natural gas usage in generating energy in the Indigo Bay Tourist Resort

Diesel				
Quantity/day	Costs/litre/Mt	Cost/day	Total spent/month	Eq./US\$
1,200 litres	15,000,00 Mt	18,000,000.00Mt	540,000,000.00 Mt	22,500
Natural gas				
Quantity/day	Costs/litre/Mt	Cost/day	Total spent/month	Eq./US\$
15,000 litres	1,280.00 Mt	US\$800	576,000,000.00 Mt	US\$24,000

The resort technicians carry out maintenance services to the diesel power generator. The maintenance consists of buying oil, filters, and paying the labour force. Therefore, it may be much cheaper to use diesel than natural gas. However, using the diesel power generator has two main risks, one economic and another environmental. Economic risk relates to fuel being lost while pumping it from the refuelling station to 200-litre drums, in Vilankulo, during the transporting of drums to the island.

From the filling station on the mainland up to the power generator on the island, drums of diesel are loaded and unloaded from trucks into boats, and into trucks again, often being dropped on the ground with some fuel losses. Thereafter, the fuel is pumped into a generator. During these processes, there are losses of fuel. Economically, it is noticeable that a difference between the use of natural gas and the use of diesel is US\$1,500 a month, which can be considered small. But, if added to the costs of transporting fuel from Vilankulo to the island, the cost of diesel on the island is almost the same as buying natural gas on the island.

Environmentally, during the process of pumping fuel from a tanker in Vilankulo into drums, and while unloading drums on Bazaruto Island, fuel leakage pollutes the seawater, puts marine life in danger and degrades the quality of the beach. Therefore the use of diesel in the tourism industry is not environmentally friendly. Furthermore, the process of transportation of fuel from the mainland when it is bought until it reaches the power

generator is not only time-consuming but also labour intensive. This analysis of power energy sources indicates that despite the leakage effects from buying natural gas from Elgas, the tourism industry on the island is more environmentally sustainable while using natural gas rather than diesel power generators.

5.5.2 The case of Bazaruto Lodge

All tourism workers at Bazaruto Lodge live in a self-built compound. This resort seems to follow Dutton and Zolho's (1990:57) recommendations that "construction materials, other than sand, must be imported from the mainland". Attempting to mitigate negative environmental impacts caused through cutting trees to obtain poles for construction of huts, this resort provided timber construction materials to its workers, mainly poles. These statements were confirmed through the questionnaire assessment, in which 59% respondents said that they bought or received building materials donated to them by the company. Thirteen percent of respondents collected materials themselves from the local forest, and 12% bought materials from the local community members on the island. The other 16% gave other methods of how they get building materials.

The workers had to find extra building materials in the local forests of the island. This resulted in the native islanders cutting twigs of small trees on the island and selling them to tourist workers in order to complement the shortage of building materials. However, participatory observations, interviews and responses to questionnaires revealed that tourist-complex workers and islanders still cut construction materials from the local forest on the island.

Meanwhile, the fact that Bazaruto Lodge does not offer any meals to its workers, when compared to Indigo Bay Resort, showed that Bazaruto Lodge workers use firewood much more intensively than those of the Indigo Bay Resort. When responding to questionnaires, workers reported going over 3km to look for firewood. This could be explained by the fact that Bazaruto Lodge has been long established and its workers have since been using firewood. Therefore depletion of forest resources, and hence the negative impact on the environment, is ever increasing as workers have to cover longer distances looking for firewood. At Indigo Bay Tourist Resort however, which has been recently established, the forestry resources are less depleted, with relatively less negative impact on the environment.

5.5.3 The case of Indigo Bay Tourist Resort

Endogenous development should be considered within the context of the global tourism production system while the achievement of development objectives with particular focus on environmental protection should, at the same time, consider that the native communities are reliant on the use of firewood. Although fragmented, diverse and having to compete with a multitude of small businesses, tourism is becoming increasingly dominated by international chains. These tourism commodity chains exercise great power and have the ability to influence tourists' and tourism operators' attitudes and behaviours. For instance, Rani Africa International, apart from owning the Indigo Bay Resort on Bazaruto Island also owns the Pemba Beach Hotel and the Matemo Island Resort, both in the Cabo Delgado Province of Mozambique.

To assess the levels of demand for biomass material and construction timber that affects the quality of the environment, a questionnaire was administered to workers of the two resorts involved (28.5% of the 242 workers of the tourism industry based on the Island). The basic assumption was that tourism workers are the people who cause great negative physical environmental impacts by using more firewood in their daily life, because they have more money to buy food than to the native islanders do. According to Hunter and Green (1995:11), "the natural environment includes such features as air, water, flora, fauna, soil, natural landscape (including geological features) and the climate".

In 2002, the Indigo Bay Resort displaced a workers' shack settlement of the same company from a piece of land where they lived and relocated the workers to another one, where they have now constructed their new houses (see Map 4). Workers were allegedly transferred from the plot of land they were occupying previously because it belonged to the resort complex, while the area where the workers moved to is part of communal land (Tourism worker on the Bazaruto Island, 14/08/2003).

When this decision was analysed, together with the fact that the workers had to look for other precarious materials in order to erect new and more constructions, it was clear that it had negative repercussions on the environment. Negative environmental effects resulted from the harvest of more vegetation for building materials. Vegetation cover is under constant reduction due to growing demographic pressure, mobile sand dunes, overgrazing and desertification.

However, the existing two resorts on the island have foreseen and tried to mitigate these negative environmental impacts in the following ways:

The Indigo Bay Island Tourist Resort offers meals to all its workers. This measure results in the following positive environmental impacts:

i) On the environment:

a) Supply of cooked meals reduces the demand and use of firewood to prepare food, thus benefiting more than 170 workers who would otherwise have to cook at home. Workers see no necessity for cooking and are going to continue not to while sustainable policies of supplying meals from the resort prevail.

b) Less firewood is used to heat bath water or water for washing clothes, because tourism workers have access to warm water from facilities available at the resort.

c) As a consequence, fewer trees are cut down to obtain firewood and, therefore, the biotic ecosystem is relatively well preserved.

d) When workers use less firewood, the volume of smoke produced is minor, thus reducing air pollution. Conversely, local community members rely only on firewood for everyday, energy resources and thus produce more air pollution, although this cannot be attributed to tourism activities.

e) Workers representing 15% of respondents reported that senior, middle and some essential low-status staff members of the resort were accommodated in a very modern residential complex, in which every basic need for a human being (bed, hot water, barbecue stand, swimming pool and a garden yard) are made available. All these facilities make the manpower accommodated in the above-mentioned premises less reliant on energy which is a natural resource, with direct implications for less degradation of the environment. The allocation of rooms for the workers depends greatly on their status and key operational position in the resort.

ii) On the economy

Strategies to reduce negative environmental impacts previously mentioned concerning the Indigo Bay Resort have resulted in economic and socially positive impacts such as:

- a) bigger financial savings since workers would not incur direct expenses for feeding themselves.
- b) better health protection through an improved, regular and balanced diet. The cost of living would not be easy to bear if workers were to buy their own food, taking into account the fact that Bazaruto Island is an isolated area that faces transport problems to the mainland, making manufactured commodities quite scarce. The cost of living is high in Mozambique.
- c) Workers use little physical energy walking to the workplace because they live close to the resort and do not need to walk a great distance on foot or to wait for the transport.
- d) Meals are prepared and served in neat hygienic conditions that would not be possible for individuals to imitate in their own houses.
- e) Individual workers enjoy better health because they are less exposed to the smoke of the burning firewood which not only pollutes the lungs of the people who cook but also harms their sight.

5.5.4 Vegetation preservation by Indigo Bay as a positive environmental impact

The central west coast of the island where the local islanders used the land according to their customary activities was covered by bush up to the 1990s. However, construction of the Indigo Bay Resort brought a significant change to the local environment where positive impacts indicate the sustainability that can be translated into:

- 1) Natural preservation of grass, in some parts substituted by lawn, essentially in the communal areas and the surroundings of bungalows, those areas close to restaurants, and the areas near the aquatic sports centre. The lawn is watered with grey and black recycled water, which is enriched with nutrients. A recycling plant situated on a high place is used to treat the sewage water that is then pulled and pumped by gravity to a tank with the capacity of about 15 thousand litres.
- 2) Other types of natural vegetation ornamenting the resort are trees and other common indigenous plants such as: *Xitlhangua*, Red spike thorn (*Meytenas Senegalensis*), *Ngokho*, coconut palm (*Cocus nucifera*), *Ximhuu*, Baobab (*Andasonia digitata*), *Nlhala*, Spiney Monkey orange (*Strichnos Spinosa*), and *Ntchindzu*, wild data palm (*Phoenix*

Reclinata). Apart from being kept and treated, these plants are also being increased, bestowing on the place the most natural environment possible. This is a desirable environmental conservation strategy for the island that Dutton and Zolho (1990:64) had suggested, saying “prominent trees, provided with name tags for the visiting tourists” should be preserved (for a more detailed list, see table 16 in Appendix IX). The Indigo Bay Resort is a place worthy of being visited by ecologically motivated tourists and scientists.

3) As a way of protecting vegetation within the resort, there are wooden pass ways serving for transit on foot, supported by props and impregnated with oil and varnish, throughout the resort, which do not cause either damage to the lawn or to people who have physical contact with them. This avoids direct removal or vegetation damage through trampling by tourists walking within the perimeter of the resort premises.

For vehicles transporting tourists from the landing strip to the resorts, or for tour drives, a tire belt was laid. In this portion of the car trail, no more loss of vegetation cover, which is frequently accompanied by soil loss, has been noticed.

5.6 Discussions and concluding remarks

5.6.1 Environmental sustainability of tourism on Bazaruto Island

The fundamental principles underlying sustainable tourism development policies are that natural, social and cultural resources upon which tourism is based should be preserved and enhanced. Resource sustainability is dependent on all sectors, namely, tourism entrepreneurs, tourism workers, local community members, tourists visiting Bazaruto Island, and government institutions and NGOs like the WWF, which are involved directly or indirectly with the tourism sector through marine and wildlife preservation, working towards common objectives. The following points deserve consideration in terms of tourism.

First, it is generally agreed that national and international cooperation should exist to facilitate the adoption of sustainable tourism development strategies, especially those regarding enhancement of the quality of the environment. Meanwhile, the complexity of political structures and the fragmented nature of the tourism industry promote special competition for maximisation of profit. This philosophy suggests no interest in

investing money for the preservation of some eroded parts which threaten the physical integrity of the island or for the control of erosion.

Second, despite the fact that the International Hotels Environmental Initiatives (IHEI) propose many practical environmental policies, they have not produced any significant changes in tourists' (consumers) attitudes backed by the willingness to pay for better environmental quality, which seems not to exist for the local Bazaruto Island resorts, except for the immediate premises surrounding their development. The demands of the 'green' consumers do not necessarily mean that they are met with increasing behaviour-conscious participation in ecotourism. There is little possibility that most of the tourists possess sufficient knowledge of ecotourism to adopt a new, sustainable tourism lifestyle.

Managers of the tourism sector on Bazaruto Island seem to know little about theories of environment-friendly policies. This can result in not adequately advising tourists about care of the natural environment. The managers of one of the resorts, when asked if they knew any environmental principles set by the IHEI, showed by their responses that they knew nothing about those principles. The manager of the other resort replied that his resort was a member of the 'green' consumers and that their principles stated that "the natural resources that tourism operates in should be preserved and whatever activities tourists are involved in should not endanger the ecology of the place"⁵⁰. However, in practice, by not taking into consideration the concerns of the indigenous communities who depend on the use of the natural resources, the resort's management fails to achieve tourism sustainability.

The tourism industry based on Bazaruto Island, when assessed according to the International Organisation for Standardization (ISO) 14001, showed that neither of the two resorts possessed the code of practice of Environmental Management Systems (EMS). Neither of them had an environmental policy, nor a based officer responsible for implementing such policy. Due to its extreme relevance, the following quotation is extracted from the ISO code:

4 Environmental management system requirements

4. 1 General requirements

⁵⁰ / A resort manager on the island in an interview with the researcher, 18/08/2003

The organisation shall establish and maintain an environmental management system, the requirements of which are described in the whole of clause 4:

- a) is appropriate to the nature, scale and environmental impacts of its activities, products or services;
- b) includes a commitment to continual improvement and prevention of pollution;
- c) includes a commitment to comply with relevant environmental legislation and regulations, and with other requirements to which the organization subscribes;
- d) provides the framework for setting and reviewing environmental objectives and targets;
- e) is documented, implemented and maintained and communicated to all employees;
- f) is available to the public. (ISO 14001, 1996:2).

The above quotation demonstrates that there is no total compliance with the environmental management policy practiced by the tourism sector on the island. The researcher, while doing his fieldwork, asked the tourism operators of Bazaruto Island to hand in any environmental code of conduct, if they had one.

5.6.2 Concluding remarks

In conclusion, there is a great problem of environmental management in order to achieve sustainable tourism development on Bazaruto Island. Despite the fact that the tourism sector is trying its best to keep the environment preserved, in some areas it has not achieved the international standards of environmental protection. The tourism sector preserves only its own investment, whereas the rest of the island faces the natural phenomena of environmental degradation by sand dunes and marine transgressions. Indeed, local people continue to cut down trees in order to have a meal, despite the fact that there is natural gas that could be used as a clean source of energy.

CHAPTER SIX

COMMUNITY PARTICIPATION AND POLICY PROPOSALS FOR SUSTAINABLE TOURISM DEVELOPMENT OF THE BAZARUTO ISLAND

6.1 Introduction

This chapter analyses the integrated use of coastal fauna, flora and cultural resources in order to assess how community participation and strategies are currently being implemented in the tourism developments on Bazaruto Island. The section that follows discusses participatory approach strategies elsewhere in the world and compares them to local practices. At the same time, new participatory approaches towards bringing benefits to the local native community members are suggested to the community leaders, tourism operators, park management, the government and bodies related to tourism at all levels.

6.2 Participatory approaches: Community participation and tourist development.

Current strategies to approach sustainable development in tourism focus on participation of local communities in the implementation of coherent policies, programmes, and plans. Participation in this context means the involvement of people, especially the local communities, in organisations directly related to decision-making that affect their lives, interests and the implementation of tourism development (Roodt, 2001:469, Tembo, 2003:24). However, a more specific participatory approach that fits the Bazaruto Island case is termed the 'pro-poor tourism' approach, and is based on the United Nation's Millennium Declaration, as documented by Neto (2003:12), which states that for tourism to be sustainable, it "should not only seek to minimize local environmental impact, but also give greater priority to community participation and poverty reduction. This means that more emphasis should be directed at placing poverty at the centre of the international and local development agenda, so that sustainable tourism development can go beyond the promotion of broad socio-economic development, and give greater priority to poverty reduction at both national and international levels".

Developmental approaches are divided into two categories, namely, growth and people-centred approaches. The growth-centred approach is criticised because it tolerates

inequality between people. It is also grounded on the argument that an equitable distribution of the benefits of development reduces the pace of economic growth or leads to negative growth. The approach further implies that the need for economic growth is used to justify political oppression and denial of basic human rights, such as the ownership of land (Monaheng, 2001).

The “people-centred development” (PCD) approach (Roodt, 2001:474), and theories of human development, also called “alternative development” (Sharpley, 2000:6) place people at the centre of the developmental process. These theories suggest a broader ‘bottom-up’ strategy, where economic growth should be endogenous, thus contributing to the satisfaction of people’s needs and not as the ultimate goal of development. The case of Bazaruto Island coastal tourism growth has been a socio-economic mobilisation of financial resources through top-down investment packaging.

In order to successfully achieve meaningful development, Bazaruto Island’s native community has to be integrated into the tourism development process. This would maximise gains and minimise wastage of resources and avoid breeding conflict. Monaheng (2001) argues that an integrated rural development strategy can promote better standards of living for people in their local communities, especially the disadvantaged people, who are the centre of the community development paradigm. Within the same context, it may be accepted that this approach can bring about active integration and participation of Bazaruto Island’s native community in the local tourism economy.

6.3 Social impacts of tourism on Bazaruto Island

Tourism in Third World countries, of which Mozambique is one, has both negative and positive consequences. The former need to be reduced while the later need to be enhanced by long-term planning (Dutton and Zolho, 1990:52; Cooper et al., 2000:151). However, tourism development on Bazaruto Island is unlikely to be pro-poor tourism (PPT) given the fact that the establishment of tourism was not planned in that way. In support of this argument, the following needs to be mentioned:

First, when tourism was introduced, the main idea was not to involve participation of the local native community, as evidenced by lack of interest in building their capacity in decision-making. This meant, therefore, that the capacity the locals had was rooted in their indigenous knowledge and cultural value systems. If that basis was considered,

then participation would have formed part of the learning process to equip the local native community with wisdom to fit in with the changes imposed by the market economy based on tourism.

Second, “participation has to involve a shift of power, if those [communities] denied the opportunity to have a share in influencing change have to be genuine participants” (Tembo, 2003:25). A public debate with community members on the island revealed that people do not consciously share power with respect to issues of tourism. Considering the private nature of tourism investment, native community members tend to be numbers rather than active role players.

Third, adequate planning for rural sustainable development of tourism involving active participation would have involved construction of houses to accommodate the majority of tourism workers. The absence of this development strategy gave room to the emergence of ghetto situations, specially accentuated at Bazaruto Lodge, which had not constructed houses for workers. While the problem is less acute in the case of the Indigo Bay Resort, its small staff village does not accommodate more than 40 workers. This state of affairs leads to tourism workers working in luxurious places while living in poorer accommodation that consists of huts constructed by the workers themselves.

Fourth, the tourism sector does not provide sufficient jobs for the natives of the island. At the same time, restrictions are imposed on a free system of access and use of natural resources. The argument for imposing restrictions on the use of natural resources is that the community will damage tourist attractions. The combination of lack of sufficient jobs and restrictions of access to the use of natural resources with variable forms of subsistence activities, namely, traditional fisheries, wild fruit collection, and craft work explains their substitution by poverty and discontent in the local communities (see Plate A2, Pictures 5a, b).

Bazaruto Island has a high malaria prevalence. In a previous study on this island, Ricardo (1999) found that native community members relied on witchdoctors or traditional healers for the treatment of even the minor sicknesses, due to the lack of hospitals on the island. Conversely, workers in the tourism sector have Health Centres that cater for their medical needs. The tourism sector also fumigates the resort perimeter, making it safer for tourists and the resort workers. The community members, however, are left out of the health-care system. As a consequence, many native islanders

die of malaria, as this sickness cannot be healed by a traditional healer. Resorts also equip the guest rooms with mosquito nets, as well as other mosquito repellents. However, Indigo Bay Tourist Resort started a programme in 2003 in order to assist native community members in supplying them with subsidised impregnated mosquito nets, sold at 30,000 Mt, equivalent to about US\$1.25.

Other activities to assist the native community in health care include:

- Extension of the Zenguelema Community Centre to include a clinic with a maternity ward supplied with the necessary equipment and medication, in cooperation with the Inhassoro Health Department, which will deploy a nurse.
- Visits of the Primary Health Care and Vaccination Team to the island every three months. The Indigo Bay Community Services (IBCS) and the Indigo Bay Resort, in cooperation with CARE, have introduced malaria control, HIV/Aids awareness, sanitation and hygiene, as well as micro savings schemes.

6.4 Community participation and integration in tourism

For tourism sustainability on Bazaruto Island, the local community should be integrated in the planning and management process. According to Correia et al. (1998:12), the integration of the local community in management projects in order to use and preserve natural resources in a sustainable manner started in 1989 through the maintenance of subsistence and recreational activities by the local communities. These activities resulted in the recovery of degraded habitats. However, Correia et al. (1998) do not point out which areas of the island had been recovered.

Participatory observation done in field work shows that ploughing along the slopes of sand dunes has been reduced, but community islanders still set wild fires. The island's community can be considered integrated into tourism only if three critical parameters are fulfilled, as follows: (1) community awareness, (2) community unity, and (3) control of power relationships, from within and outside the local community (Mitchell and Eagles, 2001:6). Building awareness, unity and control of power relationships in tourism allows the native community members to build their self-reliance and have local control of the tourism sector. Community awareness is to be regarded as an authentic participation "process through which stakeholders influence and share control over decisions and resources that affect their lives" (Tembo, 2003:30). If this stage is achieved, the local

community would have undergone a social transformation in which they are empowered against the complexities and potential impacts offered by tourism development.

The native community of the island need a social transformation termed empowerment, a crucial stage for their meaningful participation in tourism development. This concept has been referred to as:

The process by which people, organizations or groups who are powerless (a) become aware of the power dynamics at work in their life context, (b) develop the skills and capacity for gaining some reasonable control over their lives, (c) exercise this control without infringing the rights of others and (d) support the empowerment of others in the community. (Tembo, 2003:25)

At an earlier stage, when tourism re-emerged on the island after Mozambique had gained political independence, the natives were involved in such activities as the building of the Sitone airstrip in the north of the island. According to the local community statements regarding the restarting of tourism on the island, the local community did the construction work in exchange for clothing, blankets and cigarettes. This work was initiated and conducted by a South African entrepreneur nicknamed *Provincia* or *Lombane*⁵¹, also known as Jan Lombard, in 1983, in the midst of the severe drought. Lombard acted as a social provider, facilitator, educator and planner who brought the community together and kept it united in that work.

The strategy initiated by Lombard would be considered a specific mechanism to enhance the participation of and provide employment opportunities for the native community. Unfortunately, it was halted by the change of resort management. The new administration that came to run Bazaruto Lodge barred native community members from coming close to the tourism complex.

This decision went against one of the three key requirements of the PPT approach which specifies that equipping poor people with skills in tourism improves and enlarges their access to employment and business opportunities, while maximising economic returns (Neto, 2003:9; Ashley, Goodwin and Roe, 2001:1).

Community members regarded the decision to prohibit them from passing in front of Bazaruto Lodge as an insult, and a conflict emerged. Furthermore, Bazaruto Lodge tourist entrepreneurs in the Sitone Zone decided that “the natives should be removed

⁵¹ As the local community called him.

from places where they were living for centuries, closer to the tourist complex and be settled at other places” (a native islander interviewed in the Bazaruto 23/08/2003). In 1993, the Sitone community challenged and won the battle against the decisions by the administration of Bazaruto Lodge to remove them from their homes and prohibit them from moving around in front of the lodge.

Subsequently, the community leaders held a meeting where statements such as “we, the owners of this land, cannot be restricted in our movements on this land”⁵² were released. The matter was taken to the local, regional and national government levels, from which the community was given the right to retain their homes. “The tourism entrepreneurs interested in removing people from their cultural homes have to first buy land in the proposed relocation places, build new houses, and grow trees until they start producing fruits. Failing to comply with these conditions would rule out any chances of relocating people from their homes.” (a native islander interviewed in the Bazaruto, 23/08/2003).

This attitude of the tourism entrepreneurs from Machulane, in the north of Sitone, showed a lack of strategic vision for PPT tourism development, thus hindering the harmonious integration and equitable sharing of socio-economic benefits with the local community initiated by Lombard.

The current state of tourism development on the island only benefits a few individuals from the community. Those who have boats can now be hired by tourists, and those who have fishing nets can also sell fish to the tourism sectors. The beneficiaries support tourism investment, while the rest of the community remains indifferent, or even antagonistic, towards the tourism sector. A successful participatory strategy to include the local communities in the promotion of tourism would reduce the conflict between community members and the tourism sector’s interests and concessionaires. However, Mitchell and Eagles (2001:6) believe that local development is generally determined by the market-oriented decisions of individual private entrepreneurs in the community.

Bazaruto Island is very similar to Taquile Island in Peru, in terms of the population size, 2300 against 1850 inhabitants respectively, and also in terms of political administration, combining modern and traditional systems (Mitchell and Eagles, 2001:9). On both Bazaruto and Taquile Islands, foreign tourists began arriving in the mid 1970s. In

⁵² / (A native islander interviewed in the Bazaruto 23/08/2003).

Taquile, the local community established a vibrant participation strategy by creating a family member cooperative sailboat. This scheme consisted in sharing boat ownership and management responsibilities to meet the growing demand of tourists in early 1978.

On Taquile Island, the community controls 79% of the tourism service administration, and tourism is closely connected with local politics and is an important part of daily life. When tourists arrive, a reception committee assigns them accommodation with a local family in a mud-coated hut. While on Bazaruto Island, it is still a shame to receive a tourist in a mud-coated hut. On Taquile Island, many working committees of islanders help to manage the daily tasks, such as housing, cooking, weaving and transportation. The islanders have improved their skills in handicraft to such an extent that it has become a major component of their livelihood and lifestyle. The craft production involves men, women, teenagers and children over the age of seven years, who earn money by selling crafts. The craft production and selling is controlled by a cooperative. An associate member represents each household on the cooperative. The cooperative prohibits individuals from selling crafts directly to the tourists (Mitchell and Eagles, 2001:11-17).

The tourism industry has built different levels of economic benefits among native community members. These impacts vary greatly from zone to zone. At Sitone, perhaps because it was where the first tourist lodge was established, the community is much more active in craft skills. Native artists have emerged with at least six boys producing and selling woodcraft. These commodities are the few which are provided to tourists by the local community against a much larger piece controlled by private tourism operators. Northern Zenquelema interacts little with tourists and has not yet produced any craftsmen, whereas in Pangaia there was no community interaction with tourism.

Participation in tourism on Bazaruto Island, when assessed on a gender-based hierarchy, shows that men dominate when compared to women. Men have more authority than women in dealing with specific tasks such as owning and rowing boats for fishing or being hired to transport tourists. This scenario gives more income benefits to men than to their female counterparts.

Given the weaknesses of the community's role in tourism affairs, although there are community management committees for natural resources such as community tourism committees, no relevant decision has been made that would impact positively on the

private programme. Qualitative research conducted on the island through group interviews and a public debate produced evidence that the local community does not sell any foodstuff to tourists or accommodate tourists in their homes.

6.5 Local community benefits and the distribution of tourism income and employment

According to Hunter and Green (1995), positive economic impacts and potential benefits of tourism to the local community on the island depend on the continued existence of the marine and wildlife park, Bazaruto National Park. Meanwhile, tourism industry on the island does not provide direct economic benefit to the local community. Islanders do not have either a share, partnership, or any word to say on a private tourist investment according to their responses to interviews with the researcher.

Comparatively, on Taquile Island, every community member received an average annual income that ranges from US\$187 to US\$400 in 1996. This money was remuneration for their contribution in handicraft sales or providing lodging to tourists (Mitchell and Eagles 2001:18). Similarly, the Namibian Community-based Tourism Association (Nacobta), has been successful in introducing the PPT-based approach to support those poor local communities that have inadequate skills or no access to financial resources, in their efforts to develop tourism enterprises in the country (Neto, 2003:12).

On Bazaruto Island, this is not the case. If every community member within a household in Bazaruto were to get an annual remuneration for providing their services to tourists, then the industry could be said to provide an equitable share of earnings. Natural resources that could be used as raw materials exist on the island, and these include such things as straw to weave sleeping bags, baskets, chairs, tables, hats, etc. Other materials could be brought from the mainland, especially those that are scarce on the island. At Taquile Island, there is a clear perception by the local community of direct individual economic benefits from tourism, whilst at Bazaruto there is no such perception.

The evidence of native community members lacking economic benefits from the tourism sector was shown through group and individual interviews and a public debate with the islanders. A further question asked natives whether they participated as tourist guides and if they were being paid for that. They responded that they did not participate in such activities as tourist guides. However, they also added that some

fauna guards act as tourist guides now and then. While lack of chance to be a tourist guide is strongly justified by the fact that islanders do not speak English, the language barrier is an unfortunate hindrance to social improvement and needs to be addressed. Furthermore, the majority of tourists do not speak Portuguese, the official language in the country.

To find out about more relevant sources of revenues from tourism, native community members were asked if they were allowed to sell any of the goods they produced to tourists in the tourist resorts or elsewhere on the island, and if so, what sort of goods they sold and how regularly they procured and sold them. In this regard, native islanders said that they only sold fish, squid and crabs to the resorts when they were lucky enough to catch them.

The number of fishing camps on the island may vary according to social conditions at the time. In 1997, 45 fishing camps existed (Ricardo, 1999), but more recent studies reported 36 fishing camps on Bazaruto Island, of which 30 sold fish and squid on an irregular basis to the tourist resort workers, absorbing between 10 to 15%. Tourist resorts buy 5 to 10% of the fish. A minor portion of the remaining 60% is either dried or used for own consumption, whereas the mainlanders purchase the greater part.⁵³ The line fishermen operating on Bazaruto Island were estimated to be 14, producing approximately 150 kg of first-class fish (big fish) per month each, trading 40% of their catch, using the minor part of the remaining 60% for self-consumption, and selling the major portion on the mainland (Engdhal et al., 2002:15).

Lobster and crayfish harvesters supposedly made bigger profits if the quantity of the catch was plenty. Participatory observation on the ground indicates that the lobster catch has decreased drastically. This observation is backed by evidence according to which “lobster harvesters on average sell 25 kg of lobsters per month at a price of US\$ 3.5 (70.000 Mt) per kg. This equals an average of US\$87.5 (1.750.000 Mt) per month” (Engdhal et al., 2002:15). This fact results in a reluctance by the islanders to eat lobster, which is traditionally done for simple pleasure, because market forces prompt them to sell the lobster instead. It is more worthwhile to sell lobster to the tourist resort and earn money from it and then to eat fish or other fish products, rather than to eat the lobsters.

⁵³ / (Engdhal et al., 2002:15).

The resorts, not the native fishermen, dictate the price at which fish is sold. Tourist resorts refuse to pay 20, 000.00 to 25,000.00 Mt and only pay 10,000.00 Mt/kg, equivalent to ZAR2.86 per kg for first-grade fish, which is not regularly caught. Fish have become scarce on the island. Sometimes it takes the fishermen two weeks to catch the fish which they sell to the resorts.

In both cases, the tourism industry is not directly the main buyer of fish or consumers of the total production by the islanders. However, it constitutes the major indirect supplier of consumers, the tourism workers. During participatory observation on Indigo Bay Tourist Island Resort, it was possible to observe first, that over 45% of meals of the senior and middle staffs were essentially composed of fish products, while over 55% of lower-rank staff meals were composed of fish.

Second, tourists from both Bazaruto Lodge and Indigo Bay Resort consume at least 15% of sea food. Over 80% of tourism workers are from the mainland and have regular and more income than the natives, which they use to buy fish products from islanders. When these workers are on vacation, they take fish products which they have bought from the island fishermen with them to the mainland. Third, some workers have established strong connections with their relatives from the mainland, who come on a regular basis to collect fish products for commercial purposes when the sea is at ebb. This strategy has worked positively for both the islanders and the workers in order to supplement their income.

Direct foreign investment (DFI) on Bazaruto Island is a result of the free market economic policies implemented by the Mozambican government. The free market economy in Mozambique started in June 1987 when the World Bank agreed to allocate US\$90 million credit to the Mozambican government to implement a structural adjustment programme with the objective of “securing the country’s macro-economic balance and debt repayment”. The intention was to heal the country from an economic crisis, resulting from the destabilisation war of 1976-1992. Socially, this programme was aimed at achieving sustained economic growth, considered to be essential for poverty alleviation, but currently growth has been prioritised at the expense of poverty reduction (Abrahamsson and Nilsson, 1995).

In its implementation on Bazaruto, the free market policy has had negative impacts because it inhibits opportunities to establish community-based tourism. This is mainly because the

native local community members are poor, with limited access to land rights, no access to financial institutions, are unskilled and illiterate, and cannot find the money to start a tourist development project.

Meanwhile, in reality, such policy reforms cannot contribute to the PPT-based approach component which, in practice, aims to enhance “participation of the poor in planning, development and management of tourism activities that are pertinent to them and thus removing some of the barriers for greater participation by the poor, and encouraging partnerships between government, [FDI and the community]” (Neto, 2003:12).

According to Correia et al. (1998:115), there are no legal mechanisms in the Archipelago that allow retaining of locally-generated revenues to benefit local communities and to cover operational costs of Bazaruto National Park. Correia et al. (1998), propose that, in future, the maintenance of the park in general should benefit the local communities, and this depends on retention of part of the revenues generated by the local tourism industry. For this strategy to be considered positive, the researcher argues that an entire community cannot live for generations on a percentage of revenue shares, especially when they are tiny and unreliable, like the one of Bazaruto Island, where Bazaruto Lodge refuses to pay out.

To offset the current problem in the tax payment system, it was proposed that the Bazaruto National Park and the Management Committee of the Archipelago, together with the tourism operators, would exercise control of the entrance and exit of tourists into the lodges. In the first month of each year, the lodges would transfer taxes collected from revenue accrued from tourists’ payments to the park.

A strategy to retain part of the generated revenue for the local beneficiaries would be based on the percentage of revenue shares. This money will be used to guarantee self-sustainability and preservation activities as proposed by the table below:

Table 11 Proposed revenue share percentage

Beneficiaries	⁵⁴ Revenue shares	⁵⁵ Revenue share proposed
Local community	30%	50%
Park Administration	30%	25%
District and Provincial Authorities	25%	15%
Agrarian and Rural Development Promotion Found	15%	10%

Source: Correia et al. 1998:116.

⁵⁴ / As suggested by Correia et al. in 1998.

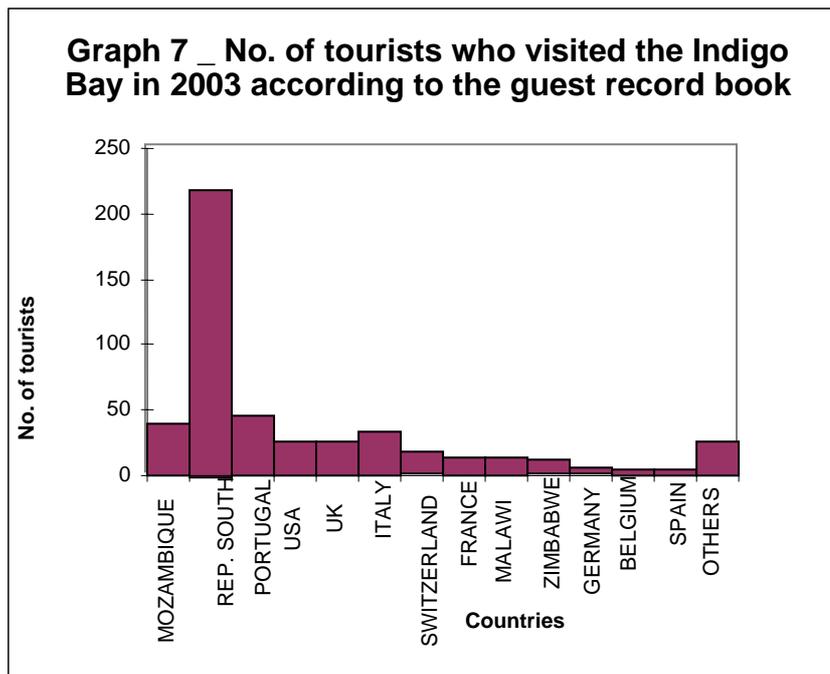
⁵⁵ / As suggested by the researcher of this study in 2004.

The table proposed by Correia, which is in use currently, shows gaps, since it does not state whether the proposed distribution of shares is only from the amount given as entry tax by tourists, or whether it refers to the total annual revenue collected from the private tourism development owners. Analysing the proposed sharing of entry tax shows flaws in principle as the Bazaruto National Park receives equal amount of shares as the community members. The researcher suggests that the share in entry tax fees should be as shown on the righthand side of the table above. The basis for this viewpoint is that the park is a minority group which has other sources of income such as donations, while the community has no other sponsorship and is in the majority, which is made up of the inhabitants, who need the money from the park more.

6.6 Community partnership and integration in tourism industry; cost-benefit analysis, informal and formal tourism

Community partnership and integration is a strategy to consider so that the “sustainability of tourism would be attained in a global political, socio-economic and ecological perspective” (Shrapley, 2000:8). The preceding statement leads to the understanding that the community members of Bazaruto Island, who include thousands of people, are faced with restrictions in their use of natural resources, assuming that they are ecologically desirable. In this regard, sustainable tourism is considered as a balanced relationship incorporating the hosting community, holidaymakers, the local tourism industry and other stakeholders who interact in such a manner that would not disturb the environmental equilibrium. Within the PPT-based strategy, a set of components such as those quoted by Neto (2003:12) that include socio-economic and ecological measures “deal with the social and environmental impacts of tourism development, particularly the above-mentioned forms of social exploitation, as well as excessive pressure on natural resources, pollution generation and damage to ecosystems”.

Bazaruto Island, as a tourist destination, belongs to a tourism system in general, as defined in the holistic approach to tourism development. Within this context, Bazaruto Island needs to be sustainable, exclusively product-centred, with relatively small-scale development and investment, and integrated into the Vilankulo to Bartolomeu Dias zone, according to the National Policy of Tourism in Mozambique. It is prioritised to be the most important short-term development strategic zone serving the Southern Africa Regional (South Africa and Zimbabwe) as well as part of the intercontinental tourist catchments (see Graph 7 below).



On Bazaruto Island, fishing and goat and sheep breeding constitute the dominant economic activities for subsistence for the majority of the community. In the 1990s, the island had become famous due to its idyllic tourist attractions and, more importantly, because it offered opportunities for maximizing economic benefits for tourism investors, which also improved the standards of living of some native islanders.

Currently, there is a tendency to over-depend on tourism development, which has become the dominant economic activity on the island. Even when tourism is developed within a sustainable planning framework, its potential marginal costs for the native communities can be felt. However, the role of tourism as a sustainable developmental strategy on the island is rarely questioned. Despite the fact that it yields nothing for the average community member; the aim remains the sustenance of tourism itself. Sharpley (2000:8) argues that these issues are a “lack of attention paid to a balanced relationship between the two main economic activities, which results in tourism competing for rather than sharing resources. The other extreme is that the activities of other economic sectors are seen as an attack on tourism”.

The level of integration of tourism development in Bazaruto Island should not only be based on the PPT but also on the PCD principle, which stresses the involvement of the majority of the native population of islanders, especially the groups who are being excluded from tourist developments by being denied jobs. Such integration is conditioned

by three main factors; namely, illiteracy of the community members, spatial proximity to the tourist complex location, and willingness of the local tourist operators.

The spatial arrangement of settlements and proximity of tourism on Bazaruto Island are characterised by enclavic-style developments which, according to Oppermann and Chon (1997:40) and Mathieson and Wall (1982), does not reduce the existing socio-economic regional disparities within the developing countries. Rather, they say, tourist reception facilities and services reinforce these disparities through their concentration into a small number of complexes or enclavic tourist structures, generally named 'ghettos'. According to these authors, the owners of the businesses and local political authorities safeguard a certain degree of spatial and social separation and conceive these enclavic tourism structures intentionally. By isolating the tourists and discouraging them from going beyond the tourist facilities, such organisations ensure that tourists spend the maximum money without sharing it with poor local people.

Vested political and economic interests in the tourism project make it almost certain that sooner or later the land in the area around Indigo Bay Resort will be allocated to Indigo Bay tourism operators, resulting in the native communities losing their rights to their land. In order to integrate native islanders into the tourism benefits, this study proposes a new participatory approach, that is, a partnership involving Indigo Bay Tourist Resort and native community members in the proposed 14km² extension area.

This new approach would serve to compensate for the evictions of all islanders living within the 14km² extension area, who would be given a 10% shareholding in Indigo Bay Tourist Investment for the present and future generations of the islanders. This proposal is based on the fact that current practises of the tourism industry give no benefit to most of the native islanders living at any distance from the lodges, who have minimal or no contact with tourists (Engdall, Bjerner and Enosse, 2003:20).

Ashley, Goodwin and Roe (2001), emphasise that PPT achieves better success where tourist resorts are developing well, especially in remote areas like on Bazaruto Island, where the poverty impact may be greater, even though tourism itself may be conducted on a limited scale. Actions outside tourism, such as land tenure, small enterprise, and representative government are also essential for the success of PPT strategies. If the proposed strategy is implemented, tourism on the island will be ecologically sound, ensuring that future generations will also benefit.

Poverty has been defined as

a condition of systematic disempowerment whereby implied structural conditions keep the poor, and confine their needs to social power, to the level of day to day survival... therefore, calls for the transformation of social to political power and a politics capable of turning political claims into legitimate entitlements (Tembo, 2003:26).

The proposed land extension concession to Indigo Bay Resort in order to accommodate tourism development, as it does not include community members as stakeholders, is perceived not only as a perpetuation of poverty but also a long-term snare for the native islanders. It would lead to their eviction from the land they have lived on for generations, without any compensation. According to Moisy and McCool (2001:348), social and political systems such as the ones at play here do not guarantee achievement of tourism sustainability; therefore, if these islanders are excluded on the basis of gender, social status or ethnicity, sustainable tourism on the island loses its legitimacy. Tourism, through PPT strategies, can bring about social and economic changes in communities that are dependent on traditional small-scale fishing, goat and sheep breeding and social-political roles.

6. 7 Community consultation and decision-making as a process of participation

According to Moisy and McCool (2001:349), community participation takes place only through those who are positively involved in tourism ventures. Sustainability of tourism becomes the main objective, instead of a general focus on community sustainability and resilience. Because of this, community participation through consultation and decision-making is examined in this study of Bazaruto Island tourism. Evidence on the ground suggests that the local native community is seldom consulted. Consequently, through neglecting consultation with stakeholders, tourism lacks the important attributes of the real participatory approach. Kindness of the local community, for example, is lost, and anti-tourism attitudes and behaviours emerge. Furthermore, without participation, communities not only lose their identity, but solidarity and direction with regard to sustainability also weakens as well as a sense of ownership of the land and place.

The process of empowering disadvantaged communities such as women and the uneducated, in decision-making, improvement, conception and implementation of strategies in situations of poverty will foster tourism development, inclusion and participation in the indigenous people. In Bazaruto the islanders have a representative

body, the Management Committee, which has the task of coordinating all tourism issues through working with the resorts in such a way as to reduce disobedience of the native community members. People at grassroots level have elected a committee and this committee is consulted before any decision is implemented. For this purpose, they meet with the entire community to discuss problems of great social impact. It is in this way that the islanders express their opinion to the government in the planning and execution of a process for a tourist development program.

The committee meets at the Bazaruto National Park Headquarters four times per year, depending on the subject to be discussed, which may be tourism issues or the use of natural resources. At the end of the meeting, the representative committee members take home reports and instructions to their different communities on what is supposed to be done regarding tourism and other issues. It is within this context that a general meeting was held earlier in 2003 which involved the majority of the native community members, where they received money (about US\$4,200) from the entry tax fee collected at the Indigo Bay Resort. At that meeting, it was decided that the money was to be used to buy food to be shared by all islanders.

Evidence from collected data indicates that during the period January to July, 2003, an estimated 7,181 tourists had been accommodated at the Indigo Bay Resort, and would have produced over US\$56,273 in entry fee taxes. The community members confirm having received only US\$4,200, without knowing exactly what percentage of visiting tourists it represented (see calculated values table 18 in Appendix XI). Therefore, it appears that the native community islanders do not have control of how much money was collected from tourist tax fees.

The sustainability of tourism on the island requires preservation of culture and natural heritage in which there is a combined bond of culture and environment with one type of economic development. It lays a negotiated base, and having reached an agreement upon the outcome of the collaborative process, involves all interested and affected participants in an open and fair manner so that a clear vision of sustainable development objectives can be used to conduct future development decisions. Table 12 shows indicators of how communities are integrated in tourism management.

Table 12 Community integration indicators in managing tourism on Bazaruto

(1) the extent of a broad-based, equitable and efficient democratic process is still limited;
(2) the number of participating citizens is still small;
(3) the degree of individual participation (i.e. influence) in decision-making is still weak;
(4) the amount of local ownership in the community-based tourism sector is nonexistent; and
(5) the degree of long-term involvement in planning and management by local communities is nonexistent.

Source: Adapted from Mitchell & Eagles, (2001:5).

The level of participation in tourism is assessed comparatively in detail in Table 13 below:

Table 13 Comparing the major themes identified by key informants, of Taquile and Bazaruto Islands.

<i>Theme</i>	<i>Taquile Island</i>	<i>Bazaruto Island</i>
Catalysts	Several local and no-local figures, including three foreigners and three local residents	Several private foreigners included and local native islanders excluded
Types of tourists	Mostly foreigners; mixture of backgrounds of backpackers and conventional tourists	Mostly conventional foreigner tourists mixed with few backpackers
Tourism changes	Started in mid-1970s, highest levels reached in 1990s; tourism has increased to near mass proportions	Started in early-1970s and reached highest levels in 1999, with disruption from 1982-86, and restarted in middle 1986.
Tourism plan or strategy	No formal plan but collective and basic strategic decision making	Formal private planning by entrepreneurs; no decision-making by the local community as stakeholders
Participation in tourism	Diverse, high participation; collective decision-making; equitable participation highly encouraged	Private run business, non collective decision making existent, the "Thomba Yethu" equitable participation was not yet recognized
External factors	Puno travel agencies; Fujimori-led development	Pestana Salvour Hotels and resorts, and Rani Africa International
Tourism control	Formerly high control had decreased to moderate level partly due to privatisation and ineffectual leadership	High control of tourism expansion due to the existence of a marine park and big tourism investments by private entrepreneurs
Community unity	Strong but declining unity linked to diminished control	Weak, but becoming strong when it is to defend a common interest mainly against suppression of freedom by lodge entrepreneurs
Social effects or impacts	Modernisation due to demands of tourism have affected traditional lifestyles; emergence of individualism; some begging by children	Highly modernised due to demands of tourists at private-level investment; but life standards at community level going down, unemployment and hunger experienced
Environmental effects or impacts	Increasing litter affecting consumer demand; neglect of agriculture due to handicraft production	Increasing litter; agriculture discouraged due to sand-dunes erosion; little growth in handicraft production; an increase in firewood and construction poles harvest and lobster catch
Economic changes	Most residents benefiting; opportunism linked to high revenues for the shrewdest islanders; Puno agencies blamed	Private tourism entrepreneur benefit and most natives do not benefit individually, few skilled handicraft producers get any money
Future of local tourism	Highly optimistic, but concerned to maintaining traditional ways; regaining control, training youth as guides, educating tourists important.	Highly promising at private level, needing important strategy change to integrate local community members to gain control; training local youth in tourism skills is important.

Source: Adapted from Mitchell & Eagles, (2001:15).

6. 8 New participatory strategies to bring community economic benefits from tourism

“Sustainable tourism is among the gentle forms of tourism, smaller in scale, sensitive to cultural and environmental aspects and respects the involvement of local people in policy decisions ...yet there is much to be done to be more sustainable particularly in energy and water management” (Moisy and McCool, 2001:345). On Bazaruto Island, local communities and tourism workers still use firewood as a source of energy. They still use untreated water obtained in wells that they dug themselves. These practices reflect poor standards of living in the communities and are unsustainable for tourism development of a fragile ecosystem like Bazaruto Island.

Tourism on Bazaruto Island, in order to meet the sustainability strategies according to Addison (1996:298), should work towards: (1) reducing economic inequalities (2) developing in an integrated manner, with the full participation of native islanders as host communities (3) improving the quality of life of both native islanders and tourism workers, (4) protecting and preserving the environment, both built and natural, and other natural resources such as marine and wildlife, and contribute to the world conservation strategy of sustainable development.

From 2003, Indigo Bay Resort established an adequate management strategy to deal with the concerns of the native islanders' communities. One year later, in 2004, tangible effects in the native community culminated with the Indigo Bay Community Services (IBCS) coordinating efforts which led to the building of a community well in the Pangaia zone to provide better quality water to the islanders. Additional achievements were in:

a) Education

- One more classroom and refurbishing of another one at Pangaia.
- More school benches are being made by a carpenter in Chitsotso on the mainland for the Pangaia Primary School.
- The Pangaia people are producing traditional crafts for sale to guests during the cultural tour.
- Sponsoring of scholarships for paying school fees for 47 children of the Pangaia Primary School on an ongoing basis.
- The Mozambican Smelting Aluminium Company (Mozal) Community Development Trust (MCDT) has agreed to cooperate with the Indigo Bay Community Services (IBCS) in upgrading the facilities at Pangaia Primary School. Through MCDT funding, it will be able to improve the two classrooms with a cement floor, build ablution facilities, sink a borehole for drinking water and provide a manual pump, and build new houses for the Pangaia teachers.

b) Community gardening

Against all odds, such as unsuitable agricultural soil, erratic rainfall and scorching temperatures in summer, the community vegetable garden, “our small farm”, is now producing lettuce, chillies, tomatoes, etc. (Community Adviser on Bazaruto Island, August 2004).

6.8.1 _ The role of Thomba Yethu in empowering the natives community and managing tourism benefits

The emergence of community-based organisations on Bazaruto Island is not unique. It is similar to many PPT-based strategies elsewhere in the world. For instance, the Dzanga-Sanga protected area complex in the Central African Republic (CAR) is one such case, where the local population created a non-governmental organisation (NGO), the Bayanga Development Committee as a local structure to represent them in negotiation with any concerned stakeholders (Blom, 2000). On Bazaruto Island, which is a Marine Park, the *Thomba Yethu* must be legalised in order to play an active role as a valid voice

representing all the native community members for better self-organisation in the three zones, namely, Sitone in the north, Zenguelema in the centre, and Pangaia in the south.

Considering the fact that the native community on Bazaruto Island plays an active role in environmental preservation and still generates income, the *Thomba Yethu* should start to run and manage limited community-based tourism, using their skills and local materials to build beautiful huts, where they would accommodate their guests. However, a limited number of 10 huts in each of the three zones should be allowed. The use of cheap and environment-friendly technologies such as solar panels to pump potable water should be encouraged in these places.

Native islanders should also use their own boats to transport tourists interested in experiencing this sort of cultural tourism on the island. A step towards meeting this goal has been made. A ten-metre dhow is being built by a local boat builder, which will be utilized by the fishermen from Neptune's nursery as a business opportunity, offering sunset cruises and snorkelling trips, thus giving them an alternative source of income to fishing, while at the same time improving the fish stocks at Neptune's nursery.

In community-based tourism, community members would hold exhibits of their traditional cultural dances to tourists visiting these points. In this manner, the rich culture of the islanders would be revived and promoted, especially the local craft production. At present, neither local cultural festival events are taking place nor are any sacred places being visited, and the *Mafa* traditional wedding is already fading. These could all be revived and presented to tourists.

The Indigo Bay Tourist Resort has started exploring the use of a wide variety of forms of local native culture and its abundant potential. In August 2003, the resort created the group *Matsakisse*, formed of native child cultural dancers. *Matsakisse* is growing strong, doing regular performances, learning about tourism, and saving. António Cuhanha, a native islander, has taken over training and management of the group. These efforts enabled the resort to create cultural tours to Pangaia, which are felt to be a real success, with more and more guests enjoying this unique experience and all proceeds going into the community fund.

The native community would also design an itinerary to take tourists and show them cultural places on the island. The revenues gathered in this PPT-based strategy would be shared directly by local community members, while the tourism industry based on the

island would provide expertise in tourism services in co-ordination with the Bazaruto National Park Management.

The new PPT strategy for sustainable tourism development within the island should include cultural attractions such as the Kanyala Sanctuary at Machulane in northern Sitone, the archaeological site of the first human settlement in *Ponta Dundo*, in the Pangaia south zone. The tour to the archaeological site would use the new car trail built from Indigo Bay to Ponta Dundo, in the middle of 2004, to improve local transport needs and facilitate National Park Management.

The mutual-aid share in fisheries, and the breeding of marine turtles by the native community that had been abandoned, should now be renewed and presented to tourists. The breeding of goats and sheep must be used to enhance production of hanging ornaments using hides of these animals. Handcrafts such as weaving hats, baskets, mats, and the sleeping sacks named *vhumbha*, and historical attractions like the Bazaruto Lighthouse monument, which is almost abandoned, should be restored (see Map 5). Then, the skills of the local youth would have to be developed or improved so they could serve as tourist guides as an alternative to fishing, thereby reducing pressure on fishing resources.

According to Moisy and McCool (2001:346-47), tourism operates within a complex, interwoven social, ecological and economic system. This would mean that in order for sustainable tourism to occur on the island, it needs to be seen and defined within a new strategy consisting of mutual power division among three major institutional partners in decisions: (i) public agencies such as the Bazaruto National Park, the Bazaruto Administrative Post that manages the land and natural resources and ensures their long-term existence; (ii) the tourism industry based on the island such as the Indigo Bay Resort and the Bazaruto Lodge, which provide an array of services to tourists; and (iii) the traditional authorities and their local community members whose culture should form part of the tourist attractions.

6.9 Discussion

According to Mitchell and Eagles (2001:20), tourism development involving community participation requires a slow process of community building, especially when conventional stakeholders that include residents, entrepreneurs, politicians and tourism advocates do not see it as a productive activity. On Bazaruto, while the *Thomba*

Yethu is not yet legalised and community-based tourism is not established on a conventional basis in which formal tourism operates, the majority of the community does not act as stakeholders in the tourism industry. Therefore, it will take time to create such a conscience that will allow the native community to gain access to the economic advantages of tourism.

If community-based tourism is implemented on the island, private operators may consider it as a dishonest competitor intended to make a few financial investment resources that can offer cheaper tourism accommodation to poor tourists, and it will obviously not be welcome. This view agrees with an argument which maintains that “greater integration and sharing of economic benefits may not be desirable from the perspective of the earlier tourism pioneers and (now) established guides in the region, clearly reluctant to share their higher levels of economic earnings” (Mitchell and Eagles, 2001:23).

The researcher’s argument is that community members will become more aware of and responsible about the environmentally destructive effects of setting wildfires and other unsustainable activities caused by their mismanagement of natural resources. Evidence suggests that Bazaruto Island has not yet incorporated community tourism awareness in a relatively integrated form. Since its beginning in 1972, tourism at Bazaruto has never been participatory, and that goal has not yet been attained.

The main reason for failing to integrate the community rests in three key factors: First, the government units in charge of tourism development seem to lack sufficient knowledge of PPT strategies in order to better integrate local communities in sustainable tourism economy. Second, tourism entrepreneurs and managers also do not possess the understanding of how a pro-poor potential that is labour intensive; inclusive of women, children and the informal sector; based on natural, cultural assets, skills of the poor; and suitable for poor rural areas like Bazaruto Island, can accommodate communities in the tourism economy, in order to generate income for self-subsistence, while using and preserving existent natural resources. Third, tourism entrepreneurs running a private investment embedded in a free-market economy place more emphasis on maximising profits for their own businesses and care little about the real standards of living of native community islanders.

Bazaruto Island is in a rural area with a similar environment to Dzanga-Sanga, most of whose inhabitants rely mainly on basic agrarian activities for subsistence and where tourism is also developed. If compared to “Dzanga-Sanga of the Centro African Republican, the difference is that while in Bazaruto Island very few chances of integration and participation are offered for the poor native community; in Dzanga-Sanga of the Centro African Republican, poor rural people are incorporated into the modern tourism industry which offers many opportunities to observe wildlife, palm wine ‘tapping’, river boat trips, accompanied by local BaAka pygmies, forest hikes, medical plant gathering and net hinting” (Blom, 200:179).

On Bazaruto Island, tourists can watch marine life, bird and wildlife and enjoy sand-dune boarding and hiking, sea fishing, and mountain hiking to Bazaruto lighthouse. Despite the fact that wine tapping from wild palms also occurs (although with restrictions) and there is boat construction and seine net fishing practised by the local community, few tourists have been guided by the local community to see or to taste the palm wine or to enjoy any of these activities unless through individual initiative. This amounts to inconsiderateness towards the local people and their culture. The *Batsonga* islanders have not yet started to fully explore the multiple effects of tourism or to develop their skill towards maximising the possibilities of selling more things made locally to tourists.

Some native islanders interviewed do not know of any local benefits of tourism. The only economic benefit they know is the use of land for pastoralism, collection of wild fruits, harvesting of forestry materials, and the use of sea for fishing and navigation, “in their struggle to survive”(Briedenhann and Wickens, 2003:72).

A closer analysis of the desires of these natives suggests that they wish to be integrated and have more economic benefits from tourism development than the few they have now. However, they tend to neglect “other more general tourist issues such as awareness, training, management, and industry growth” (Addison, 1996:308).

A greater level of economic benefit to the indigenous communities depends directly on the level of participation in the tourism business. However, there are some limiting factors on participation to be considered, as outlined below:

Combined factors thought to be limiting community participation in the tourism industry include the lack of formal education, business experience

and support from lending institutions, insufficient awareness and understanding of tourism industry opportunities, and activities of the government agencies in protecting their own investments and those of established private sector businesses (Addison 1996:308), and additionally inappropriateness of programmes offered, render many rural communities ill-equipped to offer a quality tourism experience. (Brieddenhann and Wickens, 2003:75, 77)

The native community members were also asked what their role was and what sort of benefit they would get within a private tourism business on the island. To this question they answered that they have no role and they gain no individual benefit from it. Apparently, their statement is true, but when thoroughly analysed, such a statement proves to be incorrect. First, the local community members have a strong role to play in the tourism sector. The simple fact of being a peaceful, humble community, who do not harass tourists or steal goods from them, makes the island an attractive spot for tourists. The pacific native community therefore contributes to building a positive image of tourism and to the growth of tourism on the island.

Second, the islanders earn their living by fishing. Some of these native fishermen want to fish under the coral reefs to catch certain types of fish which live there. But, if they fish in coral reefs and destroy them, kill dugongs, marine turtles, whales, dolphins and wildlife and litter the island, tourists will not feel motivated to travel to Bazaruto Island; (see Map 7, Appendix XIII B).

Third, the Indigo Bay Tourist Resort has more than thirty islanders working in their company. Most of these native workers are heads of households, or are part of an extended family link, and, on average, each family has about six members (Ricardo, 1999).⁵⁶ This means that about 180 islanders benefit materially from wages earned by their relatives working in the tourism sector. Such economic benefits are reduced by the fact that the Bazaruto Lodge has only one islander worker.

There is little evidence suggesting that the Bazaruto Lodge has offered employment to many native islanders, based on empirical experience of the researcher on his first visit in 1989, a few years after this resort complex opened. It failed to hold the few islanders who were employed, probably for two reasons: First, the islanders were not accustomed to working long hours and adhering to a scheduled timetable and it took time to build this discipline. Second, salaries offered by the local tourism industry are very low when

⁵⁶ / Anexo 3 Levantamentos GPS dos Povoamentos na Ilha do Bazaruto.

compared to what a fisherman would gain if he catches a regular amount of fish and sells it every day.

6.10 Concluding remarks

This chapter explained that there are fundamental tensions regarding public participation of native islanders in the control of tourism, which indicates that:

- (1) the degree of citizens' involvement, defined as both numbers of islanders and the degree of individual participation in tourism, is very low;
- (2) equity in participation providing reasonable decision-making and efficiency of participation achieved little influence on decision making or planning by the native islanders. Community involvement is only at the beginning stage.

First, the number of people involved in participation in tourism decision-making and administrative control is very low, or almost non-existent. Second, there is no parity in community decision-making and sharing of economic benefits or in management of tourism services. Third, in regular community meetings to discuss tourism issues, women are excluded. Finally, Bazaruto islanders, if consulted on issues that may affect their livelihood, traditions or values, find their opinions and concerns seem not be considered.

On Bazaruto Island, evidence indicates that the majority of native islanders with no formal education are neutral towards tourism growth. Their indifference is due to the fact that they are not integrated and do not maintain any degree of control of visitors and their activities; thus, natives islanders are not part of the tourism economy. In particular, individual benefits from tourism activities in each household are very insignificant. As illustrated by the answers to the question: "how much does an individual community member get monthly in their household from a tourist resort that exists in their area?" they responded by answering 'Absolutely nothing'. Such perceptions and attitudes do not contribute positively to sustainable tourism development.

The native islanders' craftsmen act in their traditional solidarity of brotherhood when it comes to sharing skills in craft production. This tends to break individualism created by fervent scrambles for easy money in a globalised market system of tourism. However, the bulk of native islanders feel themselves excluded from benefiting from tourism. This

supports the argument that if the citizens feel that they are left out of the process, they may not contribute to its potential success.

Native islanders have never been given any training opportunity or an overall investment in human resources development; thus, the island has no training centre. Tourism is a quality service which demands a corresponding training specialisation. Economic benefits from tourism would also be a consequence of some degree of quality service provided by any community-based tourism initiative. The current emergence of schools on the island which are not focused on tourism implies that tourism awareness will need time to produce the desired effects.

Dishonouring local agreements intended to share the least economic benefit among stakeholders, as in the case of Bazaruto Lodge, which refuses to hand the entry tax fee to the native communities, not only brings despair to poor and vulnerable rural communities like the islanders of Bazaruto, but also contributes to overstress of natural resources, thus contributing to unsustainability in tourism development.

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

This study presents the following conclusions:

Tourism development on Bazaruto Island is a system incorporating several components such as biodiversity in marine and wildlife, and including livestock, forest preservation, cultural identity and heritage, air traffic services and energy resources utilisation (i.e. natural gas). These components interact together with different intensity. The major components of the system are aesthetic landscape, the lonely beaches, cleanliness and marine life. This is different from the natural gas supply and use which also contribute to environmental sustainability.

Tourism development on Bazaruto Island is an export industry consumed locally, which it is essentially owned by foreign investors such as Rani Africa International, the Salvour and Pestana Groups, together with a small group of Mozambican partners, but with no native islander shareholders.

Community-based tourism, hand in hand with formal tourism offered by tourism resorts on the island, is an appropriate form of economic development for indigenous islanders. It is through this pro-poor tourism strategy that islanders would acquire knowledge about tourism while accumulating economic benefits from it. Tourists visiting community-based tourism sites would provide an opportunity for indigenous individual islanders to supplement their family incomes by sporadic business and the sale of art and craftwork while pursuing their traditional economic activities, namely, fishing, goat and sheep breeding and boat transportation. This would simultaneously make the islanders give value to natural tourist attractions which draw tourists to the island.

Tourism development on Bazaruto Island is far from reaching sustainability. This is because only 18% of native islanders are employed in its working force. The most flagrant case is the Bazaruto Lodge, where the native islanders do not represent even 2% of the working force. The tourism operators have, to a certain extent, discriminated against the local native islanders on the basis of their lack of adequate formal education. However, it has been noticed that this discrimination is not valid because other illiterate workers from the mainland are employed in preference to native islanders.

Tourism sustainability development will also not be attained while native islanders are denied their share of the entry tax fee by Bazaruto Lodge in what should constitute a compensation for the opportunities they have lost, which has led to resentment towards tourists and tourist resorts. At the same time, they are restricted from using the land and the resources the way they used to, and from enjoying them according to their traditions. Legally, it is deemed a moral obligation of the tourism operator, the Park and the government to strengthen the sharing of revenue collection with the native islanders in an accountable, participative and transparent manner.

Socio-economically, the ugly shacks surrounding beautiful chalet resorts is evidence of a strong, direct correlation between lower wages, professional occupations, low academic levels and subsequent poor living conditions of the workers and their families; thus, few workers can enjoy a better life.

The management of the Indigo Bay Tourist Resort has devoted some financial and human resources in creating Indigo Bay Community Services to provide community social services for the native islanders. In addition, Indigo Bay Resort has opened a basic economic opportunity through building a boat which will be run by some islanders. This is a step towards upgrading the community members' standards of living within the economy of tourism. Further economic benefit to the native islanders could be enhanced by creating opportunities to sell their goods at informal tents, even in local currency. However, tourists are partly conditioned and controlled to avoid contact with local communities through being encouraged to take guided tours by tourism operators.

Tourism development cannot be sustained in a small island facing demographic pressure, mobile sand dunes, destruction from cyclones, and other adverse weather conditions. Unfortunately, tourism operators and conservationists on the island have no strategy to tackle these issues. Environmentally, the tourism sector has made some effort to preserve their own investments within their premises.

Although tourism on the island manages solid waste, tourism is still the major producer of solid residues. Furthermore, it lacks total compliance with the national environmental management policy and legislation. Piles of cans and bottles still remain to be transported from the island to the landfill somewhere on the mainland. Remnants of food taken to a landfill in a native community facing starvation constitute a danger to human safety. Indigenous communities have used them for their own consumption.

Although the use of natural gas in the tourism industry is environmentally sustainable, economically it is unsustainable. This is because buying a commodity which is locally produced using foreign currency from a foreign company contributes to the increase of the leakage effects of the tourism industry.

Depletion of vegetation for construction of dwellings and firewood is exacerbated by the tourist industry. A tangible solution could be introducing reforestation programmes and finding alternative energy resources, such as natural gas and electricity. Native islanders could be integrated into these reforestation programmes as part of the labour force and owners of forestry resources.

As stressed earlier in the discussion, conflict of interests in the mutual use of resources will continue between native islanders, tourists, tourism entrepreneurs and conservationists, as long as some groups do not see any benefit from the tourist industry. According to the native islanders, the land conflict issue will prevail if there is an encroachment of their rights while allocating the land which is theirs by inheritance, with no economic benefit accruing to them. The government, with scarce financial resources, is interested in ensuring that investment policies are implemented protecting investors and allocating the land to development.

Coastal land in the sub eco-region has been under increasing demand since 1994. Land conflict between native islanders, tourism operators and government agents can be resolved in fair negotiation, where both parties win. Native islanders have the right to the land of their ancestors; investors must be granted land in which to invest, while government agents must protect the islanders, the investors and government interests in an equitable manner.

Native islanders of Bazaruto have neither a legal organised body, nor experience in negotiating conflict involving land rights and their own properties. This situation will lead to their inability to defend their properties or their collective and individual interests, which means they may lose advantages in any decision concerning the land under dispute.

Tourism development has not helped in reducing the poverty of native islanders as tourist resorts dictate the prices at which they want to buy fish from the native islanders, especially when these prices are low compared to costs of running a native fishermen's fishing concern.

Preservation and marketing of the various existing cultural heritages of Bazaruto Island can boost tourism development locally. Although tourism development has limited beneficial economic impacts for the natives, according to the spatial diffusion model, the centre of benefits is where the resort is located and benefits lessens from the centre to the periphery. It is believed that the integration of native community traditional wealth adds value to the tourist industry. Tourism entrepreneurs and the government must bring awareness to the native communities through education and training programmes for tourism and environmental management.

Based on the analysis and conclusions above, this study recommends that:

Tourist resorts must collect the entry tax fees for every tourist visiting their complexes. At the end of every month, the revenue from tax fees collected must be checked against the number of beds sold. Any tourist who might have stayed without paying his/her entry tax would have to be paid for by the resort. The Park will collect entry tax fees from day visitors not lodged in tourist resorts, and for campers. Finally, all funds collected by both the Park and resorts would be channelled to the Park. All related receipts which produced the total amount of entry tax should be publicly shown to the islanders' committee, and then money should be distributed accurately to all beneficiaries.

The native islanders must have their own plans and projects to use the revenue tax fees, which come from within the community, and are then coordinated with either the Park or the resorts for implementation. Simultaneously, islanders must have their own bank accounts, book accounts and record file system. Using the community centre built, some native islanders should be trained for that specific task.

It is further recommended that community-based tourism should be initiated in the three zones of the island, with a limited number of huts. Tourist resorts should train native islanders to run their own tourism.

In addition, the native islanders must participate in tourism decision-making, suggesting and choosing what sort of tourism they want developed on the island, with increased awareness of several types of tourism alternatives and their advantages and disadvantages. This would be an adequate way of integrating native islanders in tourism planning and development.

The Indigo Bay Resort should start a community project of pig rearing, where the food remnants would be used to feed pigs. Pigs farmed would also feed on fresh vegetables of low quality, deemed inadequate for human consumption, which are produced in the gardening project. Pigs would be slaughtered and the meat sold to resorts and to islanders for a better diet.

This study echoes the recommendation made by Dutton and Zolho (1990) for the prioritising of a reforestation programme, to be located in places which best fit the purpose. Reforestation is vital for firewood production, supplying of building materials

and enhancing environmental quality. Alternatively, a subsidised electricity or natural gas programme use could be initiated to solve the problem of communities' access to energy resources. At the same time, there is a need to extend a power line to the community centre built by the Indigo Bay Resort, so that community craftwork can be produced using electrical tools.

Based on the fact that people from the mainland who come to stay with their relatives who already work for the resorts are the first to occupy any vacant post, native islanders recommend that tourist resorts on the island should establish an agreement with the indigenous islanders under which, if they need to employ a person, they should approach the community first, as there are workers available there for certain tasks.

In the case of the land conflict on Bazaruto Island involving native islanders and the Indigo Bay Resort, this study recommends that multiple strategies, where there is a balanced gain, be applied where the native community gets 10% of the share. Indigo Bay Resort, the native islanders, the government and the Bazaruto National Park must come together and adopt a harmonious solution for both parties. A partnership is an appropriate way of avoiding pending conflict. The Indigo Bay Resort, as an investor, must come up with a detailed environmental study and development project, according to the national and international standards, as detailed in this study.

REFERENCES

A) Books

Abrahamsson H & Nilsson A 1995. Mozambique the troubled transition from Socialism to Free Market Capitalism. London and New York: Zed Books.

Addison L 1996. An Approach to community-based tourism planning in the Baffin Region, Canada's Far North. In: Harrinson LC & Husdands W. Practicing Responsible Tourism. New York: Wiley.

Babbie E 1995. The Practice of Social Research. Seventh Edition. Belmont: Wadsworth Publishing Company.

Barbier EB 1989. Economics, natural-resource scarcity and development: conventional and alternative views. London: Earthscan Publications Limited.

Barton H 2000. Sustainable Communities: The potential for eco-neighbourhood. London: Earthscan Publication Ltd.

Blaikie P, Cannon T, Davis I & Wisner B 1994. At risk natural hazards, people's vulnerability, and disasters. London: Routledge.

Boonzaier E 1996. Negotiating the Development Tourism in Richtersveld South Africa: "In People and Tourism in fragile environments". Edited by M.F.Price, John Wiley & Sons Ltd.

Bryman A & Cramer D 1999. Quantitative data analysis with SPSS release 8 for Windows: A guide for social scientists. London & New York: Routledge.

Butler R 1998. Sustainable tourism - looking backwards in order to progress? In Hall C M & Lew A A (ed) Sustainable Tourism: A Geographical Perspective. New York: Longman.

Cole J 1987. Development and Underdevelopment: A profile of the Third World. London & New York: Methuen & Co. Ltd.

Cooper C, Fletcher J, Gilbert D & Wanhill S. (1998) Tourism Principles and Practice, Second edition, New York: Longman Publishing.

Giddens A 1984. The Constitution of Society: Outline of the Theory of Structuration. Berkeley: Cambridge Policy Press,

Graaff J & Venter D 2001. Understanding the world system Dependency, theory, world system theory, and systems thinking. In Coetzee JK, Graaff J, Hendricks F & Wood G (ed) Development Theory, Policy and Practice. Cape Town: Oxford University Press Southern Africa.

Haines R 2001. Development Theories. In De Beer F & Swenapoel H (ed). Introduction to Development Studies. Second edition. Cape Town: Oxford University Press Southern Africa.

Hall CM & Lew AA 1998. Sustainable Tourism: A Geographical Perspective. New York: Longman.

Harrison D & Price MF 1996. Fragile Environments, Fragile Communities? An Introduction in People and Tourism in Fragile Environments. London: John Wiley & Sons Ltd.

Hitchcock M 2000. Souvenirs the material culture of tourism. Aldershot, Hampshire: Ashgate.

Hunter C & Green H 1995. Tourism and the environment a sustainable relationship? London: Routledge.

Johnston RJ, Gregory D, Pratt G & Watts M 2000. The Dictionary of Human Geography. Fourth edition. Oxford: Oxford University Press.

Judd DR & Fainstein SS 1999. The tourist city. London: Yale University Press.

Kane E & De Brún O' R 2001. Doing your own research. London & New York: Mario Boyars Publishers.

Katerere Y & Hill R 2002. Colonialism and inequality in Zimbabwe. In Conserving the Peace: Resources, Livelihoods and Security. Winnipeg: International Institute for Sustainable Development.

King D. [sa]. Reef fishes & corals East Coast of Southern Africa. Cape Town: Unifoto (Pty).

Le Roux P & Graaf J 2001. Evolutionist thinking in the writing of Max, Parsons, Rostow, and Giddens. In Coetzee JK, Graaff J, Hendricks F & Wood G (ed). Development Theory, Policy and Practice. Cape Town: Oxford University Press Southern Africa.

Löfgreen O 1999. On holiday: a history of vacationing. Berkeley: University of California Press.

Maser C 1996. Resolving environmental conflict Towards Sustainable Community Development. Delray Beach: St. Lucie Press.

Mathieson A & Wall G 1982. Tourism: Economic, Physical and Social Impacts. Harlow: Longman.

Matthew R, Halle M & Switzer J (eds) 2002. Conserving the Peace: Resources, Livelihoods and Security. Winnipeg, Manitoba, Canada: International Institute for Sustainable Development.

Moisey RN & McCool S F 2001. Sustainable Tourism in the 21st Century: Lessons from the Past; Challenges to Address. In: CAB International 2001, Tourism Recreation and Sustainability (eds). McCool SF & Moisey RN. Montana: University of Montana.

Monaheng T 2001. Community Development and Empowerment. In De Beer F & Swenapoel H (ed). Introduction to Development Studies. Second edition. Cape Town: Oxford University Press Southern Africa.

Milne SS 1998. Tourism and sustainable development: exploring the global-local nexus. In Hall CM & Lew AA (ed). Sustainable Tourism: A Geographical Perspective. New York: Longman Publishing.

Mouton J 2001. How to Succeed in your Master's & Doctoral Studies: A South African guide and Research Book. Pretoria: Van Schaik Publishers.

McNeely J 2002. Overview A Biodiversity, Conflict and Tropical Forest. In Conserving the Peace: Resources, Livelihoods and Security. Winnipeg: International Institute for Sustainable Development.

Marongwe N 2002. Conflict over Land and other Natural Resources in Zimbabwe. Harare: Zero Regional Environmental Organization.

Oppermann M & Chon KS 1997. Tourism in Developing Countries. London: International Thomson Business Press.

Pigram J 1983. Outdoor Recreation and Resources Management. London: CROOM HELM.

Porto JG 2002. Contemporary Conflict Analysis in Perspective. In Lind J & Sturman K 2002. Scarcity and surfeit: The ecology of Africa's conflicts. Pretoria: African Centre for Technology Studies and Institute for Security Studies.

Pobocik M & Butalla C 1998. Development in Nepal: the Annapurna Conservation Area Project in Hall CM & Lew AA (ed). Sustainable Tourism: A Geographical Perspective. New York: Longman.

Pollard AY & Pollard GN 1981. Demographic techniques. Second edition. Sydney: Pergamon Press.

Pye K & Tsoar H 1990. Aeolian sand and sand dunes. London: Unwin Hyman.

Pye K 1990. Physical and human influences on coastal dune development between the Ribble and Mersey estuaries, northwest England. In Nordstrom KF, Psuty N & Carter B (ed). Coastal Dunes Form and Process. Chichester: John Wiley & Sons.

Richards G 1996. The scope and significance of Cultural Tourism. Cab International: Tilburg University Netherlands

Rostow WW 1960. The process of economic growth. Second Edition. Cambridge: Oxford University Press.

Roodt M 2001. Land restitution in South Africa: an overview, in Coetzee JK, Graaff J, Hendricks F & Wood G (ed). Development Theory, Policy and Practice. Cape Town: Oxford University Press Southern Africa.

_____. Participation, civil society and development. In Coetzee JK, Graaff J, Hendricks F & Wood G (ed). Development Theory, Policy and Practice. Cape Town: Oxford University Press Southern Africa.

Rostow WW 1960. The Process of Economic Growth. Second Edition. Cambridge: Oxford University Press.

SABS ISO 14001 1996. South African Standard Code of practice environmental management systems. Specification with guidance for use. (Ed. 1) Pretoria: South African Bureau of Standard.

Shepherd A 1998. Sustainable Rural Development. New York: Palgrave Publishers Ltd.

Smith MM & Heemstra PC 1991. Smiths' Sea Fish. Second edition. Grahamstown: JLB Smith Institute of Ichthyology, Southern Book Publishers.

Spence CF 1963. Moçambique (East African Province of Portugal). Cape Town: Howard Timmins.

Strydom H & Venter L 2002. Sampling and sampling methods. In De Vos AS, Strydom H, Fouché CB & Delpont CSL (2002) (ed). Research at Grass Roots. For the social

sciences and human services professions. Second Edition. Pretoria: Van Schaik Publishers.

Tembo F 2003. Participation, Negotiation and Poverty: Encountering the Power of Images: Designing Pro-Poor Development Programmes. Hampshire: Ashgate Publishing Limited.

Turner S 2001. Tourism, the environment, and rural development. In Coetzee JK, Graaff J, Hendricks F & Wood G (ed). Development Theory, Policy and Practice. Cape Town: Oxford University Press Southern Africa.

Webster A 1991. Introduction to the Sociology of Development. Second edition. London: Macmillan.

Williams, S. 1998. Tourism Geography. London: Routledge.

Zeppel S S 1998. Wildlife tourism in Maasailand, East Africa. In Hall C M & Lew Alan A (ed). Sustainable Tourism: A Geographical Perspective. New York: Longman Publishing.

B) Journals

Bergesen A J 2002. Globalisation and culture. Book reviews. In *Journal of World-Systems Research*. jwsr.ucr.edu/ vol.8(3)

Available on: <http://216.239.59.104/custom?q=cache> [Retrieved 07/06/2004, time: 21:41].

Blom A 2000. The Monetary Impact of Tourism on Protected Area Mangement and the Local Economy in Dzanga-Sanga (Central African Republic). Netherlands: In *Journal of Sustainable Tourism*, 8(3): 174-189.

Briedenhann J & Wickens E. 2003. Tourism routes as a tool for the economic development of rural areas – vibrant hope or impossible dream? In *Tourism Management*, 25: 70-79.

Chase-Dunn C 1999. Globalisation: A World-Systems Perspective. *Journal of World-Systems Research*, V(2): 185-215. Available on: <http://jwsr.ucr.edu/>. Retrieved on the 5/08/2004. Time: 21:14.

Garrod B & Fyall A 1998. Beyond the rhetoric of sustainable tourism? *Tourism Management Journal* 19(3): 199-212.

Gomes de Sousa A. de F 1936. O Arquipélago de Bazaruto. *Moçambique Documentário Trimestral* n.º 8 Outubro _ Novembro _ Dezembro 1936. Lourenço Marques: Imprensa Nacional.

Mitchell RE & Eagles PFJ 2001. An Integrative approach to Tourism: Lessons from the Andes of Peru. *Journal of Sustainable Tourism* 9(1): 4-27.

Moghadam MV 1999. Gender and Globalization: Female labour and women's mobilization. *Journal of World-Systems Research*, V(2): 367-388. Available on: <http://jwsr.ucr.edu/>. [Retrieved on the 5/08/2004. Time: 21:14].

Pickering CM, Harrington J & Worboys G 2003. Environmental Impacts of Tourism on the Australian Alps Protected Areas, Judgments of Protected Area Managers. *Mountain*

Research and Development: 23(3): 247–254. Available on: <http://www.bioone.org/bioone/> [Retrieved on 14/04/2004, time: 13:36].

Roche M 1992. Mega-events and Micro-modernisation: On the Sociology of the New Urban Tourism British. *Journal of Sociology* 43(4): 563-600.

Sharpley R. 2000. Tourism and Sustainable Development: Exploring the Theoretical Division. *Journal of Sustainable Tourism* 8(1): 1-19.

Sklair L 1999. Competing Conceptions of Globalisation. In: *Journal of World-Systems Research*, V(2): 143-162. Available on: <http://jwsr.ucr.edu/>. [Retrieved on the 5/08/2004, time: 21:36].

Williams DR 2001. Sustainability and Public Access to Nature: Contesting the Right to Roam. In *Journal of Sustainable Tourism*, 9(5).

Wolfs JB 1991. A Grand Tour: South Africa and America Tourists Between the Wars. In: *Journal of Popular Culture*, 25: 99-116.

C) Other document sources:

C1) Decrees and Laws:

Lei no. 19/97 _ de Terras, Boletim da República (BR) (1997), I Série _ Número 40, 3º Suplemento. Maputo: Imprensa Nacional de Moçambique.

Lei no. 20/97 _ do Ambiente, Boletim da República (BR) (1997), I Série _ Número 40, 3º Suplemento. Maputo: Imprensa Nacional de Moçambique.

C2) Magazines:

ILRIG _ International Labour Resource and Information Group 2002. Energy for all or Energy for the few? A Case of the South Africa-Mozambique gas Pipeline. Cape Town.

Mendonça S 2003. In Pestana Newsletter, Grupo Pestana, Verão 2003, Edição nº 11, Ano 3. Lisboa: Pestana Hotels and Resorts.

Van Aarde R & Wassenaar T 2000. From sand to a dune Forest, RBM's Coastal Dunes Rehabilitation Programme. Ecology Unity, University of Pretoria. In Earthyear the Essential Environmental guide 10th Anniversary Special Edition, December 1999- June 2000, Edition 20.

C3) Newspapers articles

ELIAS A 2003. Recursos naturais de Moçambique, _ Parque Nacional de Bazaruto, Ilhéus sob risco de acantonamento. In: *Zambeze weekly newspaper* of Thursday, the 15 May: 21-22. Maputo.

C4) Conference Papers

Mello JF de 1949. As Pérolas de Bazaruto, vantagens económicas da sua exploração para a Colónia de Moçambique. Conferência realizada na Sociedade de Geografia de Lisboa em 7 de Fevereiro de 1949. Lisboa.

Pan-African Programme on Land & Resource Rights (PAPLRR) 2002. Lagos Declaration on Land and Resource Rights in Africa: Second workshop, July 15-16, 2002: Lagos.

Taljaard J 2000. Managing the Richtersveld National Park. In South African National Parks (SANP): Towards Best Practices Conference. Pretoria.

C5) Studies Reports

Boekstein M S 2000. Issues in the Planning and Management of Community-Based Tourism. Unpublished paper.

Correia A, Enosse C, Fiebig S, Magane S, Santana Afonso P, Fiebig G & Siteo P 1998. Plano de Maneio Parque Nacional do Arquipélago do Bazaruto. Maputo: Ministerio do Turismo, Direcção Nacional das Areas de Conservação.

Dutton T P & Zolho R 1990. Conservation Master Plan for Sustainable Development of the Bazaruto Archipelago, People's Republic of Mozambique. Maputo: Southern Africa Nature Foundation (SANF).

Egeimi O, Mohmood MA & Abdella AM 2003. Towards a local peace. SOS Sahe'l experience of conflict transformation between Pastoralists and farmers at El ain, North Kordofan State, Sudan. Securing the common No. 2. London: International Institute for Environment and Development (IIED).

PNUD 2000. Moçambique, Relatório Nacional do Desenvolvimento Humano. Maputo.

Pretorious L 2002. Southern African Foreign Direct Investment in Mozambique: A case study of the development impact of the cross-border natural gas pipeline between Mozambique and South Africa. Bellville: University of the Western Cape, Centre for Southern African Studies (CSAS).

Ramsay SA 1995. Sustainable Development and resources use within the Bazaruto Archipelago. Part 2 Bazaruto Archipelago Community Conservation Programme ZA 243, 1. SANF/ (WWF) World Wide Fund for Nature – South Africa.

Steinbruch F 2003. Hazard risk assessment for Districts of the Buzi River Basin/Central Mozambique Project: Disaster Risk Management (Gestão de Risco de Calamidades). Draft Version: GTZ/PRODER.

Van Ballegooyen R. 2001. SASOL Natural Gas Project Mozambique to South Africa, Environmental Impact Study: Specialist Study 12 Impact of an Offshore buoy for Transport of condensate; CSIR Division of Water, Environment and Forestry Technology, Mark Wood Consultants South Africa: Impacto Mozambique.

C6) Thesis

Ricardo G 1999. Estratificação da Autoridade Tradicional sua relação com a Utilização Comunitária dos Recursos Naturais na Ilha do Bazaruto. Tese de Licenciatura. Maputo: Univeridade Eduardo Mondlane, Faculdade de Letras, Departamento de Geografia.

Saruchera M 2000. Conflict analysis and resolution in natural resources management: The case of illegal land sales and settlement in Domboshava, Mashonaland East Province of Zimbabwe. (MA Thesis). Universities of Fort Hare and Zimbabwe.

D) Internet:

Alden C 2001. Mozambique: a success story in crisis. Available on: <http://www.igd.org.za/pub/g-insight/globalinsight10.doc>. [Retrieved 13/11/2004, time: 09:43].

Ashley C, Goodwin H & Roe, D. 2001. Pro-Poor Tourism Strategies: Expanding Opportunities for the Poor. Available on: http://www.dfid.gov.uk/Pubs/files/tourism_ODI%20briefing.pdf, [Retrieved 03/04/2004, time: 01:17].

Australian Museum online: 2003. Available on: <http://www.amonline.net.au/fishes/fishfacts/fish/mindica.htm> [Retrieved 28/04/2004, time: 14:43].

Baland JM & Platteau JP 1996. Halting degradation of natural resources. Rome : Food and Agriculture Organization of the United Nations (FAO). Available on: from <http://www.fao.org/docrep/x5316e/x5316e04.htm> [Retrieved 03/06/2004, time: 19:40].

Carr DB, Olsen, AR, Pierson S & Courbois JYP 1998. Topics in Information visualisation Boxplot Variations in a Spatial Context: An Omernik Ecoregion and Weather Example. *Statistical Computing & Statistical Graphics Newsletter* 9(2). Available on: <http://www.galaxy.gmu.edu/> [Retrieved April 12/04/2003, time: 15:31].

Central Intelligence Agency _CIA Factbook 2001. Available on <http://www.bartleby.com/151/sf.html>. [Retrieved 12/08/2004; time 11:00].

DFO Science, Eastern Canada, Stocks Status Report, DO-03 1998. Historical research into the effects of hook-and-release angling on the Atlantic salmon. Available on: <http://www.dfo-mpo.gc.ca/csas/Csas/status/1998/d0-03e.pdf>. [Retrieved 25/04/2004, time: 22:17].

Engdahl S, Bjerner M & Enosse C. 2002. Review of local community participation and economic contribution of the tourism industry. The case of Bazaruto archipelago, Mozambique. Available on: <http://www.org.mz/pt/publicações/en/bazaruto.pdf>. [Retrieved on the 17/12/2003, time: 23:01].

Eurovision May 2004. Living with coastal erosion in Europe: Sand and Space for Sustainability. PART V – Guidelines for incorporating coastal erosion issues into Environmental Assessment (EA) procedures. Final version; Directorate General Environment European Commission. Available on: http://www.euroSION.org/reports-online/part5_4.pdf. [Retrieved on the 06/04/2004, time: 14:26].

Fairhead, J. Conflicting perspectives on the natural resource base, University of Sussex. Available on: <http://www.geog.sussex.ac.uk/research/development/marena/pdf/mozambique/Moz10.pdf>. [Retrieved on the 6/05/2004, time: 12:17].

Faroda AS 1998. Desertification Control: Recent Technologies in the Indian Context, (pp.35-48). In: New Technologies to Combat Desertification Proceedings of the International Symposium held in Tehran, Iran 12–15 October 1998. Tokyo: United Nations University, Environment and Sustainable Development. Available on: <http://www.unu.edu/env/workshops/iran-1/05-Faroda%20Paper.doc>. [Retrieved on the 31/07/2004, time: 15:37].

Gardieff S. [sa]. Biological profiles. Describing blue marlin, *Makaira nigricans*. Available on: <http://www.flmnh.ufl.edu/fish/Gallery/Descript/BlueMarlin/BlueMarlin.html>. [Retrieved on the 28/04/2004, time: 14:20].

Giddens A (1984) The Constitution of Society: Outline of the Theory of Structuration. Available: http://www.tcw.utwente.nl/theorieenoverzicht/Levels%20of%20Theories/meso/AST_theory.doc/. [Retrieved: 21/09/2004, time: 15:27].

Hilary J 2003. Unlimited Companies, the development impacts on an investment agreement at the WTO. Actionaid. Available on: http://websrv.actionaid.org/wps/content/documents/embargoed_1862004_155952.pdf. [Retrieved on the 13/11/2003, time: 09:10].

HMS/ FMP 2002. Ch. 5, pp. 48. Available on:
<http://www.pcouncil.org/hms/draftfmp/chp5.pdf>. [Retrieved on the 25/04/2004, time: 22:17].

Hopkins WG 2000. Sports science perspective research resources, Quantitative research design. Available on: <http://www.sportsci.org/jour/0001/wghdesign.html>. [Retrieved on the 10/10/2004, time: 16:38].

Jacobs J. (1993). Structurational theory. Available:
http://www.tcw.utwente.nl/theorieenoverzicht/Theory%20Clusters/Organizational%20Communication/Structurational_Theory.doc/. [Retrieved: 21/09/2004, time: 15:49].

Landsea C 1997. FAQ: Hurricanes, Typhoons and tropical cyclones (Part 1). Available on: <http://www.faqs.org/faqs/meteorology/storms-faq/part1/>. [Retrieved on the 12/11/2003, time 18:27].

Lukacovic R 2001. MD DNR Fisheries Feature Story, Recreational Catch-and-Release Mortality Research in Maryland.
Available on:
<http://www.dnr.state.md.us/fisheries/recreational/articles/crmortalityresearch.html>.
[Retrieved on the 25/04/2004, time 22:53].

Media Backgrounder 2000. Conservation organizations' assessment of Windmill Bight golf course proposal based on screening criteria for Environmental Impact Statement: Available on: http://www.nfld.net/paa/nr_wb0502a.doc; [Retrieved on the 13/04/2004, time 11:12].

Neto F 2003. A new approach to sustainable tourism development: Moving beyond environmental protection. ST/ESA/2003/DP/29. DESA Discussion Paper No. 29. United Nations. New York. Available on: <http://www.un.org/esa/esa03dp29.pdf>. [Retrieved: 24/06/2004, time: 14:16].

Ohlsson L 2000. Concepts and Issues: Livelihoods conflicts. Göteborg University Commissioned by the Environment Policy Division at the Swedish International Development Cooperation Agency (SIDA). Available on:
<http://www.edcnews.se/Research/LivelihoodConflicts.html>. [Retrieved on the 06/05/2004, time: 08:19].

Pacific Fisheries Conservation Resources Council (PFCRC) 2002. Coast-Wide Coho Background Paper No. 1999/1d. Selective Fishing Initiatives. Available on: <http://www.fish.bc.ca/html/fish21B4.htm>. [Retrieved on the 25/04/2004, time: 12:47].

Saddul P 1998. The proliferation of golf courses in Mauritius. A Major Environmental Threat, Source: Le Week End, 11 October 1998. Available on: http://www.intnet.mu/iels/11thoct98_golf.htm. [Retrieved 13/04/2004, time: 19:56].

Sandole DJD 1993. A comprehensive mapping of conflict and conflict resolution: a three-pillar approach. Available on: <http://www.gmu.edu/academic/pcs/sandole.htm>. [Retrieved 06/04/2004, time: 18:19].

UNEP 2002. Coral Reefs, an ecosystem under threat. Available on: <http://www.unep.org/pc/tourism/sensitive/coral-threats.htm>. [Retrieved on 14/04/2004, time: 13:36].

UNIDO 2003. Summary Report in ECOSOC Ministerial Roundtable discussion in "Rural development and rural energy development". Available on: <http://www.un.org/esa/coordination/ecosoc/hl2003/RT6%20summary.pdf>. [Retrieved on the 23/11/2003, time: 16:53].

United Nations Agenda 21, 1999. Promoting sustainable Agriculture and Rural Development; Chapter 14. Available on: <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter14.htm> [Retrieved 14/04/2002, time: 12:40].

United Nations (UN) 1995. Emergencies unit for Ethiopia field trip report: Tigray Region (Southern Zone) and Amhara Region (Welo and North Shewa Zones). Available on: http://www.sas.upem.edu/African_Studies/eue_web/North95jul.doc. [Retrieved on the 23/11/2003, time: 17:25].

WELTMUSIK 1994. Timbila ta Venancio Mbande, Mozambique: Xylophone Music from the Chopi People, a joint label of 'Haus der Kulturen der Welt' and Wergo, SM 1513. Available on: http://www.fotofilm.nl/timbila/venancio_inhoud.htm [Retrieved on the 31/7/2004, time: 15:00].

APPENDIXES

PLATE A1 PICTURES RELATED TO TOURISM IN BAZARUTO



Picture 1a - A young trainer woodcraftsman in 1997. Behind the woodcraftsman timbila keyboards appear on the sand beach.



Picture 1b - The young woodcraftsman trainer with his trainee



Picture 2a - New young trainees woodcraftsmen demonstrating their carving skills.



Picture 2b - A shanty settlement of tourism workers at the Indigo Bay Resort by 2003.



Picture 3a - Piles of garbage (cans and bottles) prior to transferring them to Vilankulo for landfill/burial.

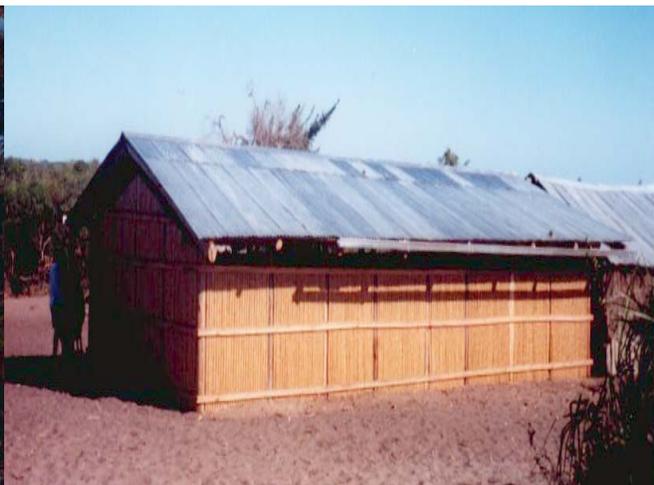


Picture 3b - Site for burying (left)/incinerating (right) garbage. Hungry islanders look for food remainders risking their lives.

PLATE A2 _ PICTURES RELATED TO TOURISM IN BAZARUTO



Picture 4a - The Bazaruto Lighthouse. A cultural tourist attraction built in 1913 by the Portuguese.



Picture 4b - A First Grade Pangaia Primary School built by the Indigo Bay Resort for the local community.



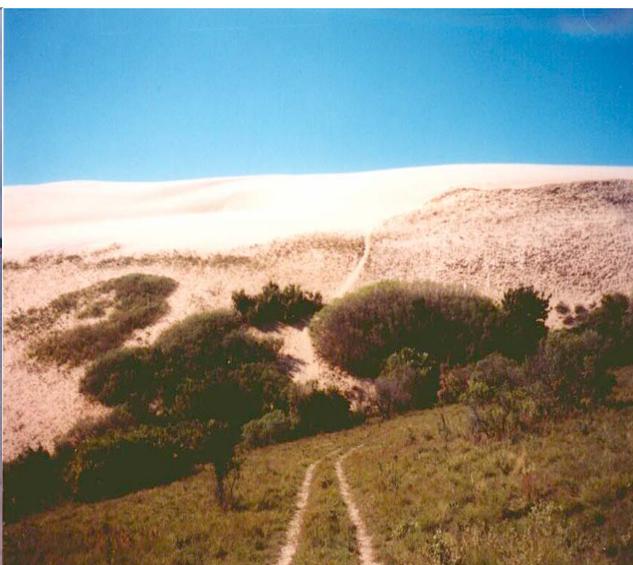
Picture 5a - A round shaped hut; the typical building for the tourism worker in the Island.



Picture 5b - The tourism workers' kitchen: a risky and less elegant hut.



Picture 6a - A fine sand beach in front of the Bazaruto Lodge is what tourists look for.



Picture 6b - A car trail heading towards the sand dunes. A detrimental practice for environmental impact

PLATE A3 _ PICTURES RELATED TO TOURISM IN BAZARUTO



Picture 7a - Partial view of the Indigo Bay Tourist Resort showing a wooden walkway to preserve vegetation.



Picture 7b - A typical 'A' shaped chalet of the Bazaruto Lodge; north of the Island.



Picture 8a - A new profile of the coast line refigured by the cyclone Japhet that took place from 28 February to 3 March 2003 and left the beach disfigured.



Picture 8b - A typical luxurious chalet of the Indigo Bay Tourist Resort threatened by the Cyclone Japhet is left hanging up looking for support.



Picture 9a - A shore profile similar to figure 3 of the coast line refigured by the cyclone Japhet from 28 February to 3 March 2003 and some dead trees.

Picture 9b - Tourists enjoying the sandy beach on the Bazaruto Island. Native islanders blame tourists of changing traditional dressing codes.

ISLAND IN 2003

1) Demographic pressure on land and its consequences

Measure and demarcate possible places where there are a lot of people who are not supposed to be there, and indicate major consequences of huge human presence.

2) Sandy tracks and grass path ways

Are the roads at the Bazaruto Island oriented and built to withstand pluvial erosion? _____

Do they have any side trenches for carrying away run-off rain water? _____

Is the grass well treated in order to protect the roads and pathways? _____

3) Land use forms:

What are the major land use forms? _____

Are they sustainable? _____

How sustainable are they? _____

4) Housing

What sort of housing is there for the majority of the local communities on the Island? _____

What kind of materials is used to build rural houses? _____

How often do they use to renovate their house made of local material? _____

Where these materials come from? _____

How long does it take to grow a wood pole to be cut for housing construction? _____

Have they ever planted a single jungle tree for building houses? _____

If yes, show where is it planted? _____

Is the current local material usage sustainable at the rate of growth of housing and demographic demand on the island? _____

What is the main policy guiding the promotion of private and public housing at local level? _____

4) Main energy resource used

What is the main energy resource used by both native communities and tourism workers and tourist resorts? _____

Where and who collects firewood? _____

What is the impact of firewood collection and use on the landscape and environment? _____

5) Economic

Subsistence strategies of the native communities in tourism economy

6) Socio-cultural

Participation and integration of local culture of the native communities in the tourism industry.

Decision-making of the native communities, involvement of several stakeholders.

Social benefits accruing to the native communities islanders from the tourism sector.

APPENDIX IIA _ QUESTIONNAIRE TO TOURISM WORKERS

This questionnaire forms part of research being done towards a M.A. Degree in (Development Studies) Mini-thesis at the University of the Western Cape. Strict anonymity will be observed in use of the data.

Place of enquire _____ Date of enquire ___/___/03 Inquire No. _____

I PERSONAL PROFILE

1. Name _____
2. Profession or occupation _____
3. Age _____ 4. Sex _____
5. Academic level _____

II ENVIRONMENTAL ISSUES

6. **Where were you born?** _____

7. **If you were not born here, what made you to come and life here?**

- 7.1 I moved here due to the war situation.
- 7.2 I came to live here because I wanted live on the Island.
- 7.3 I came here to look for employment.
- 7.4 Other, specify _____

8. **How long have you been living here?**

- 8.1 Before 1976.
- 8.2 Between 1980-1992.
- 8.3 After 1992.
- 8.4 Other, specify. _____

9. **Is the place adequate for your living?**

- 9.1 Yes it is
- 9.2 No it is not
- 9.3 No it is not, but I have nowhere to go.
- 9.4 Others specify. _____

10. **What are the major natural problems you face here?**

- 10.1 Soil erosion
- 10.2 Hurricanes,
- 10.3 Wind erosion,
- 10.4 Land slides
- 10.5 Other, specify. _____

III_ Housing

11. **Who built you house?**

- 11.1 I built it at my own.
- 11.2 The company built it.
- 11.3 I bought it.

11.4 It is not mine I am just renting it.

12. Does the company build houses for national low standard (general) workers?

- 12.1. Yes it does.
- 12.2. No, it does not.
- 12.3. I do not know.

13. How do you get the material to build your house?

- 13.1. I got materials just here in the local forest.
- 13.2. I bought materials from the mainland.
- 13.3. I bought materials from the people here in the Island.
- 13.4. None of this options, specify _____.

14. Do many workers harvest building material locally here?

- 14.1. Yes, they do.
- 14.2. No, they do not.
- 14.3. I do not know.

15. How many new huts were built last year here using local materials?

- 15.1. Less than 10 huts.
- 15.2. Between 10-20 huts.
- 15.3. Between 20-30 huts.
- 15.4. Over 30 huts.
- 15.5. I do not know
- 15.6. Other, specify. _____

16. How many new huts were built here in this year (2003) from January to June using local materials?

- 16.1. Less than 10 huts.
- 16.2. Between 10-20 huts.
- 16.3. Between 20-30 huts.
- 16.4. Over 30 huts.
- 16.5. I do not know.
- 16.6. Other, specify. _____

17. Have you ever planted any indigenous tree where you usually cut local building material?

- 17.1. Yes, I have planted some.
- 17.2. No, I have not planted any.
- 17.3. Other, specify. _____

18. If you have planted any, how many have you planted?

- 18.1. Planted 1-5.
- 18.2. Planted 5-10.
- 18.3. More than 10.

19. Can we go together so that you can show me the place where you planted a tree?

- 19.1. Yes of course.
- 19.2. No, it is far.
- 19.3. No, I do not have time today, come at another day.
- 19.4. No, it was a joke.

20. Is there any prohibition to harvest building materials here?

- 20.1. Yes there is but we have no alternative, we have to build our own huts.
- 20.2. Yes there is but we steal and cut some poles.
- 20.3. No there is no prohibition at all.
- 20.4. There is prohibition but we do not have money to buy building materials.
- 20.5. Some other reason, specify. _____

21. If there is a regulation on this issue, do you cut the material in violation to such regulation?

- 21.1. Yes, what can I do.
- 21.2. No, I do not cut at all.
- 21.3. Any other reason, specify. _____

22. Who controls the implementation of such rule?

- 22.1 The local guards from the WWF.
- 22.2 The community members.
- 22.3 Nobody controls.
- 22.4 I do not know.
- 22.5 Any other, specify. _____

23. What happens to the law breakers of such regulations?

- 23.1. They are punished through community work.
- 23.2. They are fined.
- 23.3. They are verbally reprimanded and given civic education about the importance of trees.
- 23.4. They are taken to a community court.
- 23.5. Others specify. _____

24. Are public and individual houses protected against pluvial erosion?

- 24.1. Yes, they are protected.
- 24.2. No, they are not protected.
- 24.3. No, I am not quite sure.
- 24.4. I do not know.

25. What sorts of protection is there?

- 25.1 Grass and vegetation.
- 25.2 Sacks with sand.
- 25.3 Concrete channels.
- 25.4 Other systems.
- 25.5 None.

26. Is there any system of retention or of erosion protection built?

- 26.1. Yes, there is.
- 26.2. No, there is not.
- 26.3. Any other, specify. _____

27. Are the houses and other infrastructure built at a fragile or consistent place?

- 27.1. Yes, they are built at a consistent place;
- 27.2. They are not built at a consistent place;
- 27.3. They are built at a fragile and vulnerable place;

27.4. Any other, specify.

28. Are the techniques used for building adequate for the environment and resistant to erosion?

28.1. Yes there are some adequate techniques.

28.2. There are no adequate techniques being implemented.

IV _ Energy resources

29. What sort of energy resource do you use everyday?

29.1. Natural gas.

29.2. Paraffin.

29.3. Electricity.

29.4. Firewood.

29.5. Charcoal.

30. Where do you get the firewood you use everyday?

30.1. In the local forest at _____

30.2. People bring and sell it here.

30.3. I go to buy in the mainland and bring it here.

31. How long do you have to walk to collect firewood?

31.1. About 500 metres.

31.2. Between 500m - 1000m.

31.3. Between 1000m-1500m.

31.4. Over 2000m.

32. Is it the same place you used to collect firewood last year?

32.1. Yes, it is.

32.2. No, it is not.

33. Are there many people collecting firewood in the same place?

33.1. Yes, there are.

33.2. No, there are not.

33.3. There are just a few.

34. For how long have you been collecting firewood in the same area?

34.1. Less than a year.

34.2. For two years.

34.3. For more than two years.

35. Do you think firewood get exhausted?

35.1. Yes, I do.

35.2 No, there are plenty.

35.3 Other, specify. _____

We end up here and thank you very much.

Have a good day.

APÊNDICE IIB _ QUESTIONÁRIO AOS TRABALHADORES DO SECTOR DO TURISMO NA ILHA DO BAZARUTO

Este questionário é parte da pesquisa feita para a Mini-Tese de Mestrado em Letras (MA) em Estudos do Desenvolvimento na Universidade do Cabo Ocidental. Será observado o anonimato estrito no uso dos dados nele contido.

O local da realização do inquérito _____ Data do inquérito ___/___/03
Inquérito no. ___

I PERFIL PESSOAL

1. Nome _____ 2. Idade _____
2. Profissão ou ocupação. _____
4. Nível académico _____ 5, Sexo M/F

II QUESTÕES AMBIENTAIS

6. Onde você nasceu? _____

7. Se você não nasceu aqui, porque veio viver aqui?

- 7.1 Eu desloquei-me para aqui devido à situação da guerra.
- 7.2 Eu vim viver aqui porque quis viver na Ilha.
- 7.3 Eu vim procurar emprego.
- 7.4 Outros, especifica-os. _____

8. A quanto tempo vive aqui?

- 8.1 Antes de 1976.
- 8.2 Entre 1980-1992.
- 8.3 Após 1992.
- 8.4 Outras, especifica-as. _____

9. O lugar onde está vivendo é adequado para si?

- 9.1 Sim é.
- 9.2 Não, não é.
- 9.3 Não, mas nós não temos nenhuma outra parte para ir viver.
- 9.4 Outros, especifica-os. _____

10. Quais são os principais problemas naturais que você enfrenta aqui?

- 10.1 Erosão do solo;
- 10.2 Tempestades ou ciclones;
- 10.3 Erosão eólica;
- 10.4 Deslisamentos de terra;
- 10.5 Outras, especifica-as. _____

III _ Habitação

11. Quem construiu a sua casa?

- 11.1 Eu construí-a com os meus próprios braços.
- 11.2 Foi a companhia que a construiu;
- 11.3 Eu a comprei;
- 11.4 Não é minha, eu estou alugando-a.

12. A companhia constrói casas para trabalhadores nacionais (comuns) de baixo escalão?

- 12.1. Sim, constrói.
- 12.2. Não, não constrói.
- 12.3. Eu não sei.

13. Como você arranja material para construir sua casa?

- 13.1. Eu arranho o material aqui na floresta local.
- 13.2 Eu comprei o material na parte continental.
- 13.3 Eu comprei o material, de pessoas que o vendem aqui na Ilha.
- 13.4. Nenhuma destas opções, especifique a sua. _____

14. Muitos trabalhadores arranjam o material de construção localmente aqui?

- 14.1. Sim; arranjam.
- 14.2. Não, não arranjam.
- 14.3. Eu não sei.

15. Quantas palhotas novas foram construídas o ano passado usando materiais locais aqui?

- 15.1. Menos de 10 palhotas.
- 15.2. Entre 10-20.
- 15.3. Entre 20-30.
- 15.4. Acima de 30.
- 15.5. Eu não sei nada sobre o assunto.
- 15.6. Outra resposta, especifica-a. _____

16. Quantas palhotas novas foram construídas deste Janeiro a Junho deste ano aqui na Ilha usando materiais locais?

- 16.1. Menos que 10 palhotas;
- 16.2. Entre 10-20;
- 16.3. Entre 20-30;
- 16.4. Acima de 30;
- 16.5. Eu não sei nada sobre o assunto;
- 16.6. Outra resposta, especifica-a. _____

17. Você alguma vez já plantou uma árvore indígena onde costuma cortar o material de construção local?

17.1. Sim, eu plantei algumas;

17.2. Não, eu não plantei nenhuma;

17.3. Outro, especifica o. _____

18. Se você plantou algumas árvores, quantas de facto você plantou?

18.1. 1-5 árvores.

18.2. 5-10 árvores.

18.3. Mais de 10.

19. Podemos ir juntos para mostrar-me o lugar onde você plantou as árvores?

19.1 Sim naturalmente.

19.2 Não, é longe.

19.3, Eu não tenho tempo hoje, vem noutro dia.

19.4 Não., era uma brincadeira, não plantei nenhuma.

20. Há alguma proibição de corte de materiais de construção aqui?

20.1. Sim há, mas nós não temos nenhuma alternativa, temos que construir nossas casas.

20.2. Sim há, mas nós roubamos e cortamos algumas estacas.

20.4 Não, não há nenhuma proibição em tudo.

20.5 Há uma proibição mas nós não temos dinheiro para comprar o material de construção.

20.6 Alguma outra razão, especifica-a. _____

21. Se houver um regulamento nesta questão, você corta o material em violação do tal regulamento?

21.1. Sim, o que é que eu posso fazer.

21.2. Não, eu não corto de forma alguma.

21.3. Qualquer outra razão, especifica-a. _____

22. Quem controla a execução do tal regulamento?

22.1 Os guardas locais de fauna da WWF.

22.2 Os membros de comunidade.

22.3 Ninguém controla.

22.4 Eu não sei.

22.5 Qualquer outra razão, especifica-a. _____

23. O que acontece aos violadores da lei e de tais regulamentos?

23.1. São punidos através do trabalho comunitário.

23.2. São multados.

23.3. Reprimidos verbalmente e lhes ministrada educação cívica sobre a importância das árvores.

23.4. São julgados em tribunal comunitário.

23.5. Outras soluções, especifica-as. _____

24. As casas públicas e individuais são protegidas contra à erosão pluvial?

24.1. Sim, são protegidos.

24.2. Não, não são protegidas.

24.3. Não, eu não estou completamente certo.

24.4. Eu não sei responder ao assunto.

25. Que tipo de protecção há?

25.1 Grama e vegetação.

25.2 Sacos com areia.

25.3 Canaletes de betão.

25.4 Outros sistemas.

25.5 Nenhuma das respostas acima está correcta, especifique a correcta. _____

26 Há algum sistema de retenção ou da protecção da erosão construído?

26.1. Sim, há.

26.2. Não, não existe.

26.3. Qualquer outro, especifica-o. _____

27. As casas e outras infra-estruturas são construídos em lugar frágil ou consistente?

27.1. Sim, estão construídas em um lugar consistente.

27.2. Não estão construídos em um lugar consistente.

27.3. São construídos em um lugar frágil e vulnerável.

27.4. Qualquer outra variável, especifica-a. _____

28. As técnicas usadas para a construção são adequadas para a protecção do meio ambiente e resistentes à erosão?

28.1. Sim, algumas técnicas são.

28.2. Não há nenhuma técnica que está sendo executada.

IV _ Recursos energéticos

29. Que tipo de recursos energéticos você usa diariamente?

29.1. Gás natural.

29.2. Parafina.

29.3. Electricidade.

29.4. Lenha.

29.5. Carvão vegetal.

30. Onde você obtêm a lenha que usa diariamente?

30.1. Na floresta local.

30.2. As pessoas trazem e vendem aqui.

30.3. Eu vou comprar no continente e trago aqui.

30.4. Outros. _____

31. Quanto tempo você tem que andar para a recolha da lenha?

31.1. Aproximadamente 500 metros.

31.2. Entre 500m - 1000m.

31.3. Entre 1000m-1500m.

31.4. Sobre 2000m.

32. É o mesmo lugar que você costumava procurar lenha o ano passado?

32.1. Sim, é.

32.2. No., não é.

33. Há muitas pessoas que recolhem lenha no mesmo lugar?

33.1. Sim, há.

33.2. Não, não há.

33.3. Há apenas algumas.

34. Há quanto tempo você tem procurado lenha na mesma área?

34.1. Menos de um ano.

34.2. Há dois anos.

34.3. Há mais de dois anos

35. Você pensa que a lenha que apanha se esgota?

35.1. Sim, eu penso que sim.

35.2. Não, não se esgota, há bastante.

35.3. Outro tipo de resposta, especifica. _____

Obrigado, terminado

Bom dia

APPENDIX IIIA _ INTERVIEW GUIDE FOR THE NATIVE COMMUNITIES FOR ANALYSING SUSTAINABLE TOURISM DEVELOPMENT IN OF THE BAZARUTO ISLAND

Place of interview _____ Date of interview ___/___/03 Interview No. _____

Personal profile

1. Name _____
2. Profession or occupation _____
- 3 Age _____ 4. Sex _____
5. Academic level _____

I _ In economic aspects

- 6) Do you have any tourist resort run entirely by a community members? _____
- 7) Do you have any word to say to the private entrepreneur running any tourist business? _____
- 8) Do you, as a community member, participate in tourism as tourist guides? _____
- 9) Do you have any chance to talk to tourists? _____
- 10) What sort of relationship exists between you as a native community member and a private tourist entrepreneur? _____
- 11) Are you allowed or do you sell any of your goods to tourists in any tourist resorts? _____
- 12) What sort of goods do you sell to tourists? _____
- 13) How regular do you sell such goods? _____
- 14) How do you get such goods? _____
- 15) Are you a partner in any tourist enterprise? _____
- 16) What is your role within the tourism business? _____
- 17) What do you benefit from a private exploitation of tourism at Bazaruto Lodge or the Indigo Bay? _____
- 18) How much do you gain for your household from a tourist resort that exists in your area? _____
- 19) Do these practices contribute to sustainable growth of the tourism sector and benefit the national economy and sustainable development? _____

II _ In Culture

- 20) Do you perform any sort of native dances in tourist resorts? _____
- 21) Do you sell your carvings to tourists? _____
- 22) What are tourists allowed and not allowed to do within your culture? _____
- 23) Do you dress the same way you used to do before 1985 _____
- 24) What has changed in terms of dress codes from 1985-2003 _____
- 25) How did you use to dress before tourist resorts were established here? _____
- 26) What did you use to drink before 1975? _____
- 27) And from 1975-1992? _____
- 28) And from 1994-2003? _____
- 29) What has changed in social and moral behaviour of the local people here? _____
- 30) What caused these changes to happen? _____
- 31) What are your favoured drinks now? _____
- 32) When did you start preferring that drink and why? _____
- 33) Where do these drinks come from? _____

- 34) Are there any sacred place where tourists are not allowed to enter? _____
- 35) If you do not have it now, did you have them before? _____
- 36) Do you produce any crafts made especially for sale to tourists? _____
- 37) How many native community members are involved in such activities? _____
- 38) Do you learn any foreign language by interacting with tourists? _____
- 39) What language is that? _____
- 40) Are there many native community members speaking such foreign languages? _____

III _ Participation

- 41) Do you have any opinion to share with the government departments on planning and executing any programme for sustainable development of tourism which focus on Bazaruto Island? _____
- 42) Do you have any committee dealing with tourism issues? _____
- 43) If yes, how many times do you meet per year? _____
- 44) Do other native community members attend these meetings? _____
- 45) Do you accommodate any tourist in your home? _____
- 46) Do you sell any foodstuff to tourists? _____
- 47) If yes, do they buy? _____

IV _ Community leaders

- 48) Who do Community Leaders take charge of? _____
- 49) Towards what do they lead the community? _____
- 50) What has the community have done to uplifting their standards of living? _____
- 51) What has the community done to protect or better their environment? _____
- 52) What has the community done that damages and worsen the environment? _____
- 53) What plans does the community have to manage the local environment? _____
- 54) How are the local forests preserved and what sort of management is done to keep the integrity of the Island? _____

V _ Forest

- 55) Are there any sort of management initiatives at local level and involving local communities? _____
- 56) Is there any law enforcement and control of forest management at local level? _____
- 57) Who exercises the control of the forest at local level? _____
- 58) Is control efficient? _____
- 59) Does it guarantee tourism sustainability? _____ How? _____

VI _ Fauna

- 60) Is the wildlife associated with tourism protected within the Island? _____
- 61) What role the local communities play in this protection? _____
- 62) Aren't there any poachers? _____
- 63) If so, what sort of animals do they use to kill? _____
- 64) Are the ecosystems of these animals preserved? _____

VII _ Coast line ground slops and sand dunes:

- 65) How is the movement of people, vehicles and animals made in these ecosystems? _____

- 66) What sort of negative effects are caused by such movement of vehicles, animals and people along the coastline and sand dunes? _____
- 67) Are the ground slopes seen as a fragile ecosystem that needs special care in order to avoiding erosion? _____

VIII _ Fishing methods and fishermen:

- 68) Who fishes in the Island? _____
- 69) For what purpose is the fishing done? _____
- 70) What sorts of fishing methods are practised on the Island and sub-ecoregion? _____
- 71) Are these methods sustainable? _____
- 72) Is there any control on the quantity of fishing? Are there still plenty of fish? _____
- 73) Is there a period in which fishing is prohibited for the purpose of reproduction? _____
- 74) Do local fishermen and tourists obey to that imposition? _____
- 75) How has the relationship between the fishing community and tourism grown between 1975-1992 and between 1992-2003? _____
- 76) How do fisheries affect the development of sustainable tourism on Bazaruto Island?

IX _ Means of transport:

- 77) Do the mean of transport currently in use contribute to create erosion? _____

Apêndice IIIB _ Guia da entrevista para as comunidades locais para analisar o desenvolvimento sustentável do turismo na Ilha do Bazaruto

Local da entrevista _____ Data da entrevista __/__/2003

Entrevistador: Gilberto Ricardo

Perfil pessoal

Nomes dos entrevistados:

2. Idade _____

3. Profissão ou ocupação: _____ 4 Nível acadêmico: _____ 5. Sexo M/F

I _ Aspectos econômicos

6) Vocês têm algum estância turística explorada inteiramente pelos membros de comunidade?

7) Você tem alguma palavra a dizer num empreendimento turístico privado aqui da Ilha? 8) Vocês como membros da comunidade participam como guias aos turistas? _____

9) Você têm tido alguma possibilidade de falar com os turistas? _____

10) Que tipo de relacionamento existe entre você como um membro de comunidade local e um operador turístico privado aqui na Ilha? _____

11) Você está autorizado a vender alguns dos seus bens aos hotéis aqui da Ilha? _____

12) Que tipo de bens você vende aos turistas em visita na Ilha? _____

13) Com que regularidade você vende tais bens? _____

14) Como você obtêm tais bens que vende? _____

15) Você é sócio de alguma empresa de turismo ou hotel aqui da Ilha? _____

16) Que papel você tem dentro do negócio do turismo aqui na Ilha? _____

17) Que benefício você obtêm de uma exploração turística privada aqui na Ilha e nesse lugar específico? _____

18) Quanto você obtêm ou rende no seu agregado familiar pela existência de um lodge na sua área? _____

19) Estas práticas contribuem para o desenvolvimento sustentável do setor do turismo e da economia nacional? _____

II _ Na Cultura

20) Você apresenta algum tipo de dança local a turistas nos hotéis aqui da ilha? _____

21) Você costuma vender as suas esculturas aos turistas? _____

22) O é que os turistas são permitidos e não são permitidos fazer dentro de sua cultura?

23) Você costuma vestir-se da mesma maneira que se vestia antes de 1985? _____

24) O que mudou em termos do modo de vestir-se de 1985-2003? _____

25) O que fez com que a mudança acontecesse? _____

26) Como você costumava vestir-se antes de se reabrirem os hotéis aqui em 1985-86? _____

27) O que é que você costumava beber antes de 1975? _____

28) E de 1975-1992? _____

29) O que mudou no comportamento social e moral dos habitantes nativos ou locais aqui?

30) O que causou essa mudança? _____

31) Qual é a sua bebida favorita agora? _____

- 32) Quando é que você começou a preferir essa bebida e porque? _____
- 33) De onde vem essa bebida favorita? _____
- 34) Vocês têm algum lugar sacrado onde não são permitidos os turistas entrar? _____
- 35) Se vocês não o têm agora, já o tiveram antes? _____
- 36) Você produz algumas estatuetas ou artesanato feito especialmente para a venda aos turistas? _____
- 37) Quantos membros de comunidade estão envolvidos na tal actividade? _____
- 38) Você aprende alguma língua estrangeira interagindo com os turistas? _____
- 39) Se sim, que língua é essa? _____
- 40) Existem muitos membros de comunidade que falam a tal língua estrangeira? _____

III _ Participação

- 41) Você tem alguma opinião no governo no processo de planificação e execução de algum programa do desenvolvimento sustentável do turismo focalizada na Ilha do Bazaruto? _____
- 42) Vocês têm algum Comitê que trata de questões do turismo aqui na Ilha? _____
- 43) Se sim, quantas vezes vocês se reúnem por ano? _____
- 44) Existem outros membros de comunidade que assistem estas reuniões? _____
- 45) Vocês alojam algum turista em vossas residências? _____
- 46) Você vende algum gênero alimento confeccionado aos turistas? _____
- 47) Se sim, os turistas compram? _____

IV _ Os líderes da comunidade

- 48) A quem é que os Líderes Comunitários lideram? _____
- 49) Para que objectivos os líderes comunitários dirigem as suas comunidades no concernente ao turismo? _____
- 50) O que tem feito a comunidade para promover os seus padrões de vida? _____
- 51) O que tem feito a comunidade para melhorar e proteger o seu meio ambiente? _____
- 52) Que planos tem a comunidade para melhor controlar o meio ambiente local? _____
- 53) O que é que as comunidades locais têm feito que danifica e deteriora o seu meio ambiente? _____
- 54) Como é que as florestas locais estão preservadas, e que tipo de gestão é feita para manter a integridade da Ilha? _____

V _ Floresta

- 55) Existem algum tipo de iniciativas de gestão florestal a nível local envolvendo a as comunidades? _____
- 56) Existe algum reforço da lei para o control e gestão florestal a nível local? _____
- 57) Quem exerce esse control florestal a nível local? _____
- 58) O controlo exercido é eficiente? _____
- 59) Esse controlo florestal garante a sustentabilidade do turismo? De que maneira? _____

VI _ Fauna:

- 60) Os animais selvagens associados ao turismo são protegidos dentro da Ilha? _____
- 61) Existem caçadores furtivos na Ilha que matam os animais? _____
- 62) Que papel desempenha a comunidade local nessa protecção? _____

63) Se sim, que tipo de animais se matam muito? _____

64) Os ecossistemas destes animais estão preservados? _____

VII _ Linha da costa e ladeiras das dunas de areia:

65) Como é feito o movimento de veículos, de animais e de pessoas nestes ecossistema? _____

66) Que efeitos negativos são causados por tal movimento de veículos, dos animais e de pessoas ao longo da linha de costa e de dunas de areia? _____

67) As ladeiras das dunas são tidas como um ecossistema frágil que necessita de cuidado especial evitar a erosão? _____

VIII _ Métodos de pesca e pescadores:

68) Quem pesca na Ilha ou na sub-ecoregião? _____

69) Para que finalidade é feita a pesca? _____

70) Que métodos de pesca estão sendo praticados na Ilha? _____

71) Estes métodos são sustentáveis? _____

72) Observa-se um período de defeso na pesca na Ilha, para a reprodução do pescado? _____

73) Os turistas e os pescadores locais obedecem a essa imposição? _____

74) Existe algum controlo na quantidade de pescado? Há abundância do pescado capturado ainda? _____

75) Que tipo de crescimento se observa na comunidade local e de turistas quanto à pesca, desde 1975 -1992 e de 1992-2003, na Ilha? _____

76) Como a pesca afecta o desenvolvimento do turismo sustentável na sub-ecoregião, com foco na Ilha do Bazaruto? _____

IX _ Meios do transporte:

77) Os meios do transporte atualmente em uso contribuem para criar a erosão costeira na Ilha?

APPENDIX IV _ GUIDED INTERVIEWS TO TOURISM ENTREPRENEURS IN THE BAZARUTO ISLAND

Place of interview _____ Date of interview ___/___/03 Interview No. _____

I PERSONAL PROFILE

- a) Name _____
- b) Profession or occupation _____
- c) Age _____ d) Sex _____
- e) Academic level _____

II MEASURING SUSTAINABILITY OF TOURISM DEVELOPMENT

1. What do you do to use and conserve local natural resources in tourism activities for long term? _____
2. What is that local culture about? _____
3. Do you preserve local culture? _____
4. What sort of activities a tourist is permitted to engage in or not? _____
5. What level of cultural knowledge should a tourist possess as minimum required for admission as a visitor here? _____
6. What do you do to use and preserve local social resources for long term? _____
7. What type of resources are those? _____
8. What does over-consumption of natural resources mean to you? _____
9. How do you do to reduce over-consumption of natural resources in order to avoid damage? _____
10. Is there any limitation in the number of tourist access? _____
11. Do you have any code of conduct for tourists visiting your tourist resort? _____
12. If yes, what does it state? _____
13. Can you give me a sample please? _____
14. If not, why not? _____
15. Is there any restriction in use of natural resources to a tourist visiting your resort?
16. Do you know of any environmental principles set by the International Hotels Environmental Initiatives (IHEI) about green consumers? _____
17. If yes what do they say? _____
18. Do you apply them? _____
19. Is there any form of promoting and maintaining diversity in the tourism sector in the sub-ecoregion? _____
20. How do you as a tourist entrepreneur promoted natural diversity? _____
21. How do you as a tourist entrepreneur promoted natural, social and cultural diversity in tourism here on the island? _____
22. Is there any regional, and local planning strategy for sustainable tourism at the Inhambane Ecoregion? _____
23. If there is development planning for the sub-ecoregion, how is tourism integrated into planning process? _____
24. Has any environmental impact assessment taken place at the tourism sector in the sub-ecoregion? _____
25. If so, how was it done? _____
26. Did it incorporate consultation with the local community members? _____

III COMMUNITY PARTICIPATION AND DEVELOPMENT

- 27 Are the local communities full or partially involved in the tourism sector? _____
- 28 In which way are these local communities involved? _____
- 29 How do they benefit from that involvement? _____
- 30 Does any sort of consult take place between the tourism industry and local communities on the Bazaruto Island? _____
- 31 Are there any regular meetings? Have any occurred? _____
- 32 What has been discussed and agreed so far? _____
- 33 What sort of potential conflicts of interest have been identified among the stake-holders? _____
- 34 How many workers are native on the Island? _____
- 35 How many workers are native in the Vilankulo/Inhassoro Districts? _____
- 36 Why are so many workers not from the Bazaruto Islands? _____
- 37 Why do so many children give up studying at the tourist complex school? _____
- 38 What sort of strategy do you have in order to attract, and keep children attending school in the tourist complex school? _____
- 39 Does the community participate in decision-making regarding tourism here? _____
- 40 Have you got many local staff members who were recruited here? _____
- 41 Were any training skills administered at them? _____
- 42 In which position were they placed? _____
- 43 Have any responsibility been relegated to you as tourist entrepreneur? _____
- 44 What is your responsibility as tourist entrepreneur? _____
- 45 Who assigned you such responsibility? _____
- 46 Has any research or monitoring taken place in the tourism industry development? _____
- 47 If so, when was that carried out? _____
- 48 Who did the study? _____
- 49 How was it done? _____

IV HEALTH FACILITIES

- 50 What sort of constraints do you have during the floods that occur now and then? _____
- 51 What sort of measures have you got to prevent tourists from getting malaria? _____
- 52 What sort of measures have got to prevent local community members from getting malaria? _____
- 53 Do you have medical staff who provides appointments in regards to malaria (Doctor, Health Technician, Nurse, Health Auxiliary or any other)? _____
- 54 Does the Health Technician live and work there? If not, who and how long does he/she visit the Health facility? _____
- 55 Is there any diagnostic device or equipment for malaria here? If so, name them _____
- 56 Is there any medicine to cure or prevent malaria here? _____
- 57 Mention what sort of medicine do you have for malaria? _____
- 58 Is there any chemist in the Island from where you can buy medicine against malaria? _____
- 59 What are the major areas that you plan to invest in, in the near future in the local tourism sector? _____
- 60 What have you done so far within this perspective? _____
- 61 What sort of co-ordination exists between you and the local and national government towards achieving sustainable development of tourism? _____
- 62 Is it easy or accessible to start a business Project at the Inhambane Ecoregion with focus on Bazaruto Island? _____

63 What sort of constraint do you face in implementing your projects? _____

V DEVELOPING LOCAL ECONOMY

64. Where do you buy food and beverage stuff from? _____

65. How much do you spend per month or per year importing food and drink stuff? _____

66. What local stuff do you buy here for the tourists _____

67. How much do you spend in buying at local markets? _____

68 Is your operation balance positive or negative on expenditures and gains in the last 3 years? _____

69 Is any expense related to accommodation of your tourists paid abroad in any of your office representatives or agencies before a tourist coming here? _____

70 If so, is the VAT or Added Value Tax (AVT) transferred into Mozambique from the country it was charged? _____

71 How is the process operated? _____

72 If it is not transferred, why not? _____

73 How do you minimise the leakage affects in you enterprise? _____

74 How is local economy supported by the tourism sector specially the institutionalised tourism run by foreign investment in Bazaruto Island? _____

75 How does the tourism strengthen the local community members income individually so that less pressure is exercised in natural resources and the contribution towards environmental sustainability? _____

76 Do tourist visitors pay any entrance fee tax? _____

We end up here and thank you very much.

Have a good day.

APPENDIX V _ QUESTIONNAIRE TO TOURISTS VISITING THE BAZARUTO ISLAND

Place of inquiry _____ Date of inquiry ___/___/03 Inquiry No. _____

I Personal profile

1. Name _____
2. Profession or occupation _____
3. Age _____ 4. Sex _____
4. Academic level _____

II Attractiveness

5. How did you come across the existence of Bazaruto Island?

- 5.1 Through friends.
- 5.2 Through magazines and pamphlets advertisement.
- 5.3 Through Internet.
- 5.4 Through travelling agencies and hotel chains.
- 5.5 Other sources specify. _____

6. What attracts you to come to Bazaruto Island as a tourist?

- 6.1 The beauty of the beach, integrity, loneliness, cleanliness, the preserved biodiversity.
- 6.2 The white sands.
- 6.3 The peacefulness of its people.
- 6.4 The water sports.
- 6.5 The culture of the people.
- 6.6 Other, specify. _____

7 Since you have been here, have you ever watched any cultural dances of the native communities?

- 7.1 Yes I have.
- 7.2 No, I have not.

8 Have you ever since you have been here, met and talked with native community members?

- 8.1 Yes I have.
- 8.2 No, I never had such a chance.
- 8.3 I never went to a native community village.

9 If you have met and talked to native community members, which language did you use to talk in?

- 9.1 In English.
- 9.2 In Portuguese.
- 9.3 In Fanakalo.
- 9.4 In the local language using translator.
- 9.5 Any other, specify. _____

10 Have you ever visited local families here and slept in community homes?

10.1 Yes I have at least once.

10.2 No, I never.

10.3 It is not in our plan.

10.4 Others specify. _____

III Malaria control and prevention

11 Are you aware that Bzaruto Island is affected by malaria?

11.1 Yes, I am aware.

11.2 No, I am not aware.

11.3 Any other, specify. _____

12. Being aware of the existence of malaria, what prevention have you taken?

12.1 I took some repellents.

12.2 I took some tablets.

12.3 I have constant assistance from a doctor.

12.4 I use a mosquito net.

12.5 As soon as I return, I will see a doctor.

12.6 Any other, specify. _____

13 Are you aware of events like floods that occur in the sub-ecoregion. What sort of monitoring of the weather conditions and possible rescue in case of floods, do you need to have?

13.1 I am not aware of any deterioration of weather conditions.

13.2 I/We listen to the news and watch television and also the Internet in order to be aware of such an event.

13.3 There is a guarantee from the tourism operator to rescue me (us) if necessary.

13.4 I did not think about that.

13.5 Any other, specify. _____

We end up here and thank you very much.

Have a good day

APPENDIX VI A_ PUBLIC DEBATE GUIDE WITH NATIVE COMMUNITIES AT THE BAZARUTO ISLAND

Poverty measurement

- 1) Who is poor? _____
- 2) Why is he/she considered or consider himself/herself poor? _____
- 3) What are the criteria to consider someone poor? (Minimum value of assets). _____
- 4) Do you meet tourists and talk to them? _____
- 5) Do you thing that you can own tourist superstructures, and accommodate tourist in your homes? _____
- 6) Do you individually benefit in any way from sustainable tourism based on the Island? _____
- 7) What is the role of poor people participating in the sustainable tourism development programme? _____
- 8) Are the poor people excluded from the tourism development programme process? _
- 9) Do you as community members participate in decision making regarding to tourism here? _____
- 10) How do you create good harmony between the native community islanders and tourism operators on the Island? _____
- 11) In June a 2002 conflict emerged here due to Indigo Bay intentions to expand the land concession they have now, withdraw the natives, and put a fence on the new concession so that natives cannot have access. How was the problem resolved? _____
- 12) What must the community do to get a better benefit from tourism development? _____

Apêndice VI B_ Guia do debate público com comunidades locais na Ilha do Bazaruto

Medição da pobreza

- 1) Quem é pobre? _____
- 2) Porque é que ela/ele é considerado ou considera pobre? _____
- 3) Quais são os critérios para considerar alguém pobre? (valor mínimo dos recursos). _____
- 4) Vocês encontra-se com turistas e fala com eles/as aqui na Ilha? _____
- 5) Vocês pensam que podem possuir algum património turístico, e, acomodar turistas em em vossas casas? _____
- 6) Vocês individualmente têm algum benefício, no turismo sustentável aqui na Ilha? _
- 7) Qual é o papel da participação das pessoas pobres nos programas de desenvolvimento do turismo sustentável na Ilha? _____
- 8) Os pobres são excluídos do processo do programa de desenvolvimento do turismo na Ilha? _____
- 9) Você como membro da comunidade participa na tomada de decisões concernentes ao turismo aqui aqui na Ilha? _____
- 10) Como ficou resolvido o problema do conflito que se gerou em 2002 por causa da intenção do Hotel Indigo Bay querer estender a área do terreno que actualmente ocupa e vedar o acesso da mesma área aos nativos? _____
- 11) Como criar boa harmonia entre a comunidade dos ilhéus e os operadores turísticos? _____
- 12) O que é que a comunidade deve fazer para tirar melhor benefício do turismo? _____

**APPENDIX VII TABLE 14 _ CYCLONES AFFECTING MOZAMBIQUE DURING 1959_2003
(INAM, IMPRENSA NACIONAL)**

Date	Name of the cyclone	Affected Area	Province
Dec 1959		Mocímboa da Praia	Cabo Delgado
Jan. 1961	Tropical A	Buzi coast	Sofala
Jan. 1962	Daisy	Buzi coast	Sofala
Mar. 1962	Kate	Zambeze River	Zambezia
Dec 1965	Claude	Maputo coast	Maputo
Jan. 1968	Flossie	Inhambane Province	Inhambane
Jan. 1968	Georgette	Massinga and Vilanculos coasts	Inhambane
Nov. 1969	Corrine	Mecufi coast	Cabo Delgado
Mar. 1971	Nelly	Inhambane coast	Inhambane
Feb. 1972	Carolina	Sofala, Inhambane and Xai-Xai	Sofala, Inhambane
Feb. 1972	Eugenie	Inharrime and Inhambane coast	Inhambane
Jan. 1973	Faustine	Musuril coast	Nampula
Oct. 1973	Bernardette	Mecufi coast	Cabo Delgado
Jan. 1975	Elsa	Chinde coast	Zambezia
Jan. 1976	Danae	Massinga coast	Inhambane
Mar. 1976	Ella	Memba coast	Nampula
Apr. 1976	Galdys	Angoche, Moma, Quelimane coasts	Zambezia, Nampula
Feb. 1977	Emille	Buzi coast	Sofala
Dec. 1978	Angelle	Angoche, and Quelimane coasts	Zambezia, Nampula
Nov. 1980	Bettina	Macomia coast	Cabo Delgado
Dec. 1981	Benedecte	Quelimane	Zambezia
Feb. 1982	Electre	Angoche coast	Nampula
Jan. 1984	Domoina	Inhambane, Xai-Xai and Maputo	Inhambane, Gaza, Maputo
Feb. 1988	Filão	Zambézia, Sofala, Manica, Southern Tete province	Central Mozambique
Mar. 1994	Nadia	Nampula coast	Nampula
Feb. 2000	Eline	Sofala, Inhambane, Xai-Xai and Maputo	Central and Southern Mozambique
Mar. 2000	Hudah	Sofala, Inhambane, Xai-Xai and Maputo	Central and Southern Mozambique
Feb. 2003	Delfina	Nampula	Nampula
Feb. 2003	Japhet	Sofala, Inhambane	Central and Southern Mozambique

Source: Steinbruch (2003:25), based in (INAM, Imprensa Nacional _ Mozambique).

Appendix VIII, Table 15 _ Marine Fish Exploited in the Bazaruto Archipelago

Frequency of species caught in tourism fisheries, on scale of 3-1.

3 = Frequently caught; 2 = Less frequently caught; 1 = Rarely caught

Class chondrichthyes order carcharhiniformes	Tourists	
	Ski boat	Shore
<i>Carcharhinus brevipinna</i> Spinner shark	2	1
<i>Carcharhinus leucas</i> Blue shark (Zambezi shark)	1	1
<i>Carcharhinus limbatus</i> Blacktip Shark		2
<i>Carcharhinus sealei</i> Blackspot shark	1	1
<i>Carcharhinus wheeleri</i> Shortnose blacktail shark		2
<i>Rhina ancylostoma</i> Bowmouth guitarfish		1
<i>Rhynchobatus djiddensis</i> Giant guitarfish		2
<i>Himantura uarnak</i> Honeycomb stingray		2
<i>Elops machnata</i> Ladyfish		2
<i>Albula vulpes</i> Bonefish		2
<i>Epineuphelus chlorostigma</i> Brownspotted rockcod		2
<i>Epineuphelus faveatus</i> Bigspot rockcod		2
<i>Epineuphelus spilotoceps</i> Foursaddle rockcod		1
<i>Epineuphelus tukula</i> Potato bass	1	
<i>Plectorhinchus flavomaculatus</i> Lemonfish		1
<i>Plectorhinchus playfairi</i> Whitebarred rubberlip		1
<i>Lutjanus russell</i> Russell's snapper	3	
<i>Lutjanus rivulatus</i> Blubberlip snapper	2	
<i>Lutjanus sanguineus</i> Blood or Pacific snapper	1	
<i>Lutjanus sebae</i> red emperor snapper	1	
<i>Rhabdosargus sarba</i> Natal stumpnose		3
<i>Lethrinus nebulosus</i> Blue emperor		3
<i>Lethrinus sanguineus</i> Sky emperor	1	1
<i>Tripteron orbis</i> Spadefish		1
<i>Carangoides ferdau</i> Blue kingfish		2
<i>Carangoides fulvoguttatus</i> Yellowspotted kingfish	1	
<i>Caranx ignobilis</i> Giant kingfish	3	3
<i>Caranx melampygus</i> Bluefin kingfish	3	
<i>Caranx paquensis</i> Brassy kingfish	1	3
<i>Caranx sexfasciatus</i> Bugeye kingfish	1	2
<i>Elagatis bipinnulata</i> Rainbow runner	2	
<i>Scomberoides commersonnianus</i> Doublespotted queenfish	3	2
<i>Scomberoides tol</i> Needlescaled queenfish		1
<i>Rachycentron canadum</i> Prodigal son	2	1
<i>Echeneis naucrates</i> Shark remora	2	
<i>Thalassoma hebraicum</i> Goldbar wrasse		3
<i>Thalassoma lunare</i> Crescent-tail wrasse		2
<i>Thalassoma purpureum</i> Surge wrasse		3
<i>Thalassoma trilobatum</i> Ladder wrasse		2

Appendix VIII continued

Class chondrichthyes order carcharhiniformes	Tourists	
	Ski boat	Shore
<i>Sphyraena barracuda</i> Great barracuda	3	1
<i>Acanthocybium solandri</i> Wahoo	2	
<i>Euthynnus affinis</i> Tuna	3	
<i>Katsuwonus pelamis</i> Skipjack Tuna	2	
<i>Scomberomorus commerson</i> King fish	3	1
<i>Scomberomorus plurilineatus</i> Queen mackerel	2	1
<i>Thunnus albacares</i> Yellow Fin Tuna	2	
<i>Istiophorus platypterus</i> Sailfish	3	
<i>Makaira indica</i> , Black marlin	2	
<i>Tetrapturus audax</i> Striped marlin	2	
<i>Balistoides viridescens</i> Dotty triggerfish		1

Source: Dutton & Zolho, 1990:87 Updated from Smiths' Sea Fish 1988.

Reference: Smith M.M. and Heemstra P.C. (1991). Smiths' Sea Fish, Second edition. JLB Smith Institute of Ichthyology, Grahamstown, Southern Book Publishers.

King, D. Reef fishies & corals East Coast of Southern Africa, Cape Town, Unifoto (Pty).

APPENDIX IX, TABLE 16 _ LIST OF SOME INDIGENOUS ORNAMENTAL PLANTS THAT SURROUNDS THE INDIGO BAY ISLAND TOURIST RESORT.

- 1 _ **CELASTRACEAE** “Xitlhangua” *Meytenas Senegalensis* _ Red spike thorn _ South Africa & Moz.
- 2 _ **ARECACEAE**, “Ngokho”, *Cocus nucifera*, Coconut palm, wet tropics, Coqueiro
- 3 _ **BOMBACACEAE**, “Ximhuu” *Andasonia digitata*, Embondeiro
- 4 _ **MELIACEAE** “Nkulhu” *Trichilia emetica*, natal mahogany, Mafurreira
- 5 _ **ANACARDIACEAE**, “Nkanju” *Anacardium Occidentale*, Cashew-nut tree, Cajueiro
- 6 _ **LOGANIACEAE** “Nihala” *Strichnos Spinosa*, Spiney Monkey orange, Massaleira
- 7 _ **POLYPODIACEAE** *Microsorium Scalopendria*, Dune fern
- 8 _ **MIMOSACEAE** “Ntingari” *Albizia versicololar*, Large leaved falsethorn
- 9 _ **ANNONACEA** “Nrova” *Annona senegalensis*, Wild custard apple, Ateira brava
- 10 _ **ARCACEAE**, “Ntchindzu” *Phoenix Reclinata*, Wild data palm
- 11 _ **ANACARDIACEAE** “Xinungumafi” *Azoroa abovana*, Broad leaved tree

Source: Giberto Ricardo, data survey on sustainable tourism development, Bazaruto Island August 2003.

APPENDIX X, Table 17 _ List of demographic figures and calculations to determine the Bazaruto Island Population in 2004.

Bazaruto Lodge		
Total workers in 1997		101
Total workers in 2003		69
Difference	emigrated	32
Ex Sabal-Indigo Bay		
Total workers in 1997		53
Total workers in 2003		173
Difference	immigrated	120
Balance Indigo Bay/Bazaruto Lodge		88
Natives islanders died	97/2004	24
Emigrants	97/2004	15
Born	97/2004	189
No. of babies born per year		27
Time elapse (t)		7

Source: Gilberto Ricardo Ricardo, Sustainable Tourism Development 2004.

B=189

I=88

D=24

E=15

Po=2279

Pt=Po+B-D+I-E

Pt=2279+189+88-24-15

Pt=2517

Current population of the Bazaruto Island 2517 habitantes =2500

Where (B) = born; (I) = Immigrated; (D) = Died; (Po) = Population at reference year 0, in the case 1997; (Pt) Total population at the present.

Pt the population in year t is calculated from Po, the population in year, the date of previous survey where (B) is births, (D) deaths, (I) immigrants and (E) emigrants.

Formula to estimate the current population, of the Island was obtained from Pollard, Yusuf and Pollard 1981:115.

Pollard Ah, Yusuf and Pollard G.N. 1981 Demographic techniques, Second edition. Sydney: Pergamon Press.

Appendix XI, Table 18 _ Indigo Bay Tourist Resort calculated entry fees 2003.

Description	Jan-Jul 2003	USD\$
Total no. of rooms available	10,142	
Rooms sold	3,105	
Total unoccupied rooms	7,037	
Total bed nights available	20,021	
Total beds sold to adults	5,190	
Beds occupied by married couples 25%	1,298	
Total adult tourists	6,488	
Total beds sold to children	693	
Total estimated number of tourists (period)	7,181	
Total unoccupied beds	14,831	
Entry tax fee to the Island		
Entry fee paid by adult in \$ USD	55,148	55,148
Foreign children paying USD \$5	173	865
National children paying USD \$1,5	173	260
Children free entry tax fee	347	000
Total entry fee children		1,125
Number of foreign tourists paying fees	4866*\$10	48,660
Number of national adult tourists paying fees	1622*\$4	6,488
Total paid entry fee tourist (period)		56,273
Total amount given to the native community		4,200

Source: Estimated calculations of data obtained from the Indigo Bay Resort 2003.

Explanatory table of calculations on Indigo Bay

Assumption 1, the Indigo Bay Resort sold from January to July 2003 a total of 5,190 bed to adults and 693 to children. One in four beds sold to adult tourists was occupied by a couple thus, the total of adult bed sold was multiplied by 0.25 and the obtained result added to the number of beds sold to adults to estimate the number of tourists. Then after, the number of adult tourists was added to the number of children tourists make up the total number of tourists, who visited Indigo Bay Resort from January to July 2003. The total number of beds sold to adults was 5190. A quarter of this number corresponding to 1,294 was obtained representing beds occupied by adults. Adding the initial 5190 and 1,294 makes up 6488, then the number of 693 was added resulting in total of 7181 tourists.

Assumption 2: Children pay or may not pay entry fee according to their age and nationality, to estimate number of children from which entry fee was supposed to have been collected, number of children was divided by half. Then, the result was again divided by half. The first half we considered free entry assuming that they qualified so, given their age. The result of the further division corresponding to a quarter was considered to be of foreigner child tourists paying USD\$4, while the other quarter was considered to be of national child tourists paying USD\$1.5. Obtained result was added to the total amount of adult foreign tourists, paying USD\$10.

Assumption 3, not all tourists visiting the Indigo Bay is of foreigners. It was assumed that only 75% of these tourists are foreigners. From the total visitors 6,488, was applied 75% and the result obtained was 4,866 adult foreign tourists. The remaining 25% (1,622) visitors were national adult tourist.



UNIVERSITY of the WESTERN CAPE

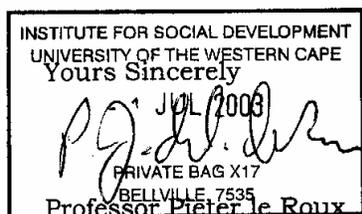
Private Bag X17 Bellville 7535 South Africa
Telephone: (021) 959 2205 Fax: (021) 959 3242
E-Mail: lscheepers@uwc.ac.za

Institute for Social Development

Bellville, 1st July 2003

To whom it may concern

This is to certify that Mr. Gilberto Ricardo is registered Master student at the Institute for Social Development (ISD) of the University of the Western Cape (UWC), Bellville, South Africa, during the years 2003 and 2004. He is going to do a field survey collecting data for his thesis on the Bazaruto Island and in Inhassoro Town. We would greatly appreciate it if you could support him with this important work.



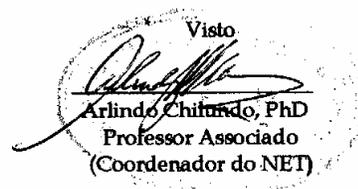
Director of the Institute for Social Development (ISD)



Universidade Eduardo Mondlane

Nucleo de Estudos de Terra e Desenvolvimento (NET)

Faculdade de Letras, 2º Andar, porta nº 322 tel, Email : neuem@uem.mz/ Fax / 494743



Ao: Ministério do Turismo

De: Gilberto Ricardo

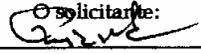
Assunto: Pedido de apoio logístico para realização de trabalho de campo.

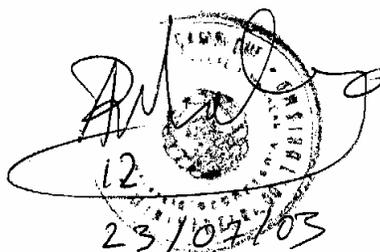
Gilberto Ricardo, Licenciado em Geografia, pela Universidade Eduardo Mondlane (UEM) e Mestrando em Estudos de Desenvolvimento, pela Universidade de Western Cape (UWC) na África do Sul, bolsheiro do Nucleo de Estudos de Terra (NET) da UEM, pretendendo recolher dados para a sua Tese de Mestrado, sobre o tema Sustentabilidade do Turismo com Participação Comunitária, a ocorrer na Ilha do Bazaruto, entre os meses de Julho a Agosto do corrente ano, vem por este meio solicitar ao Vosso Ministério o seguinte:

- 1 Um apoio logístico para acampar na Sede do Parque Nacional do Bazaruto (PNB), Zenguelema e noutros locais da mesma Ilha conforme conveniência do trabalho.
- 2 Apoio em transporte por barco para e da Ilha do Bazaruto, a partir de Inhassoro ou Vilankulo, conforme a coordenação, com a Direcção do PNB. Este aspecto inclui também o uso de barco ou viatura para sua deslocação dentro da Ilha durante a realização do trabalho, comparticipando com fundos próprios, na aquisição de combustíveis gastos para o efeito.
- 3 Que o trabalho de recolha de dados incluirá encontros com líderes e vários Comités de Gestão Comunitária, operadores de hotéis na Ilha, e residentes na mesma, estruturas administrativas do Posto, do Distrito e Provincia, se facilite a coordenação necessária.
- 4 Qualquer forma de apoio que for julgado necessário e não mencionado aqui.

Ciente de que esta solicitação irá produzir o eco necessário e consequente apoio desejado, antecipadamente vos fica grato.

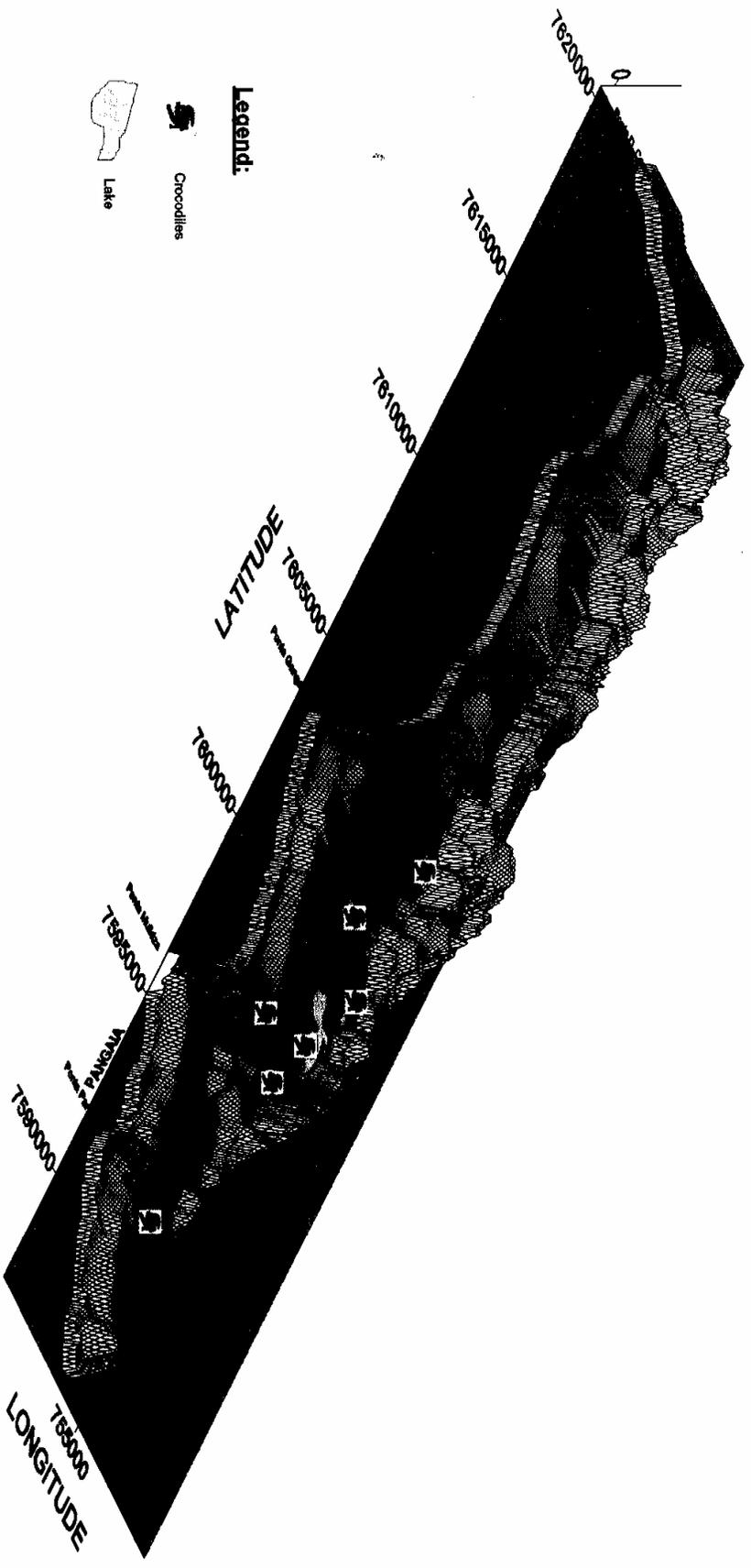
Maputo, aos 22 de Julho de 2003.

Solicitante:

 dr. Gilberto Ricardo



BAZARUTO ISLAND LAKES AND CROCODILES

Map 6
Appendix XIII A



Legend:

-  Crocodiles
-  Lake

Source: Topographic map 1:50,000, sheets 869 and 974 of the Provincial Directorate of Geography and Cadastre Services, 1971.



Master's Thesis in Development Studies:
Sustainable Tourism Development
A case study of Bazaruto Island in
Inhambane Province, Mozambique
Produced by Gilberto Ricardo, 2004.

BAZARUTO ISLAND

DISTRIBUTION OF DUGONGS,
MARINE TURTLES, DOPHINS
AND MARINE TURTLES NESTS

Map 7 Appendix XIII B

b

