INDIGENOUS KNOWLEDGE AND VEGETATION UTILISATION IN
KHAYELITSHA, CAPE TOWN

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in the Faculty of Arts, University of the Western Cape

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KEY WORDS

1. Health
2. Healers
3. Khayelitsha
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10. Community
ABSTRACT

Indigenous Knowledge and Vegetation Utilisation in Khayelitsha, Cape Town

The study investigates the application of indigenous knowledge (IK) by ‘traditional’ health care practitioners who use vegetation resources in Khayelitsha. It involved 120 informants and was conducted from 2000 to 2002. The aim of the study was to ascertain the role of IK application in the utilisation of vegetation resources in primary health care provision in the urban setting, and to determine traditional resource management approaches. The study was conducted by using questionnaires, focus group discussions, informal interviews, documentary analysis and field observations. The objectives of the study were to identify ‘traditional’ medicinal plants used for the provision of primary health care, to determine their spatial distribution, and to explore ‘traditional’ resource management strategies applied by ‘traditional’ health practitioners in the study area.

In Khayelitsha, ‘traditional’ health care practitioners use vegetation resources in the provision of primary health care and in carrying out certain cultural activities. There is no relationship between the application of indigenous knowledge in health care and formal academic training, because ‘traditional’ healing is regarded as a call. Medicinal plant collection sites are concentrated around the main wetlands in Khayelitsha. However, it should be noted that most medicinal plants are collected outside Khayelitsha, and mostly in the Eastern Cape Province from where most users originate.
‘Traditional’ resources management practices used in the study area include customary practices, for example taboos applied during the collection period, prohibition of ring barking, resource “annexation”, and collection of limited quantities of plants. However, these practices are not really effective because of the lack of earmarked land where they can be practiced. Instead, conservation by cultivation dominates ‘traditional’ resource management in Khayelitsha. It is practised in the backyards of the ‘traditional’ health care practitioners.

Conservation by cultivation is only a short-term solution to resources management in the study area. The long-term solution depends on the reaction of city officials towards users’ initiatives. The use of ‘traditional’ medicine in the urban environment is likely to increase as a result of the high costs of medicines and health care. There is a high likelihood that people who believe in ‘traditional’ medicine will often use ‘traditional’ health care systems as they cannot access medical aid schemes due to unemployment. Attempts at vegetation resource conservation call for an integrated approach, which involves the users and nature conservationists sharing knowledge and information. The provision of land where the users’ conservation skills can be explored and practised at a larger scale is worth investigating.
DECLARATION

I declare that I have not submitted “Indigenous knowledge and vegetation utilisation, in Khayelitsha, Cape Town” for any degree or examination at any other university, and that all sources used or quoted have been indicated and acknowledged by means of complete reference.

Signature

Date: 02.03.2005

UNIVERSITY of the WESTERN CAPE
DEDICATION

I dedicate this thesis to my mother, Emmah, aunt Lisbeth, colleagues and friends who have given me unstinting support and encouragement to complete the study, and to all those who cherish and support the Earth-wisdom worldview.
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CHAPTER ONE

INTRODUCTION AND CONCEPTUAL CONSIDERATION

1.1 Conceptual Framework

Indigenous Knowledge (IK) is of crucial importance in vegetation resource utilisation and management. This knowledge is not documented but transferred from one generation to the next through inculcation. Few people possess indigenous knowledge, which is manifested in ‘traditional’ music, indigenous food systems, socio-cultural systems, arts, crafts, ‘traditional’ medicine and health. This is true in South Africa. The current research project investigates IK in the utilisation and management of vegetation resources in an urban environment in Cape Town, namely Khayelitsha or ‘our new home’ in Xhosa.

Khayelitsha Township is a product of the Group Areas Act introduced in the 1950s by the apartheid Government. The main purpose was the entrenchment of “separate development” for the country’s citizenry based on racial grounds. Although Africans rendered their services in economically-active urban centres, they were not allowed to reside in the urban areas. In the 1970s and the 1980s African migrant workers living on the edge of the cities were relocated to townships such as Gugulethu, Crossroads and Langa. The core of the city was earmarked as residence for the White and Coloured people only. The removal of Black people from the edge of the city was seen as justified and conforming to the influx control of Africans. More importantly, it was presented as a process of orderly development in the Cape Peninsula (Platzky and Walker, 1984).
Khayelitsha was established in 1983. The main objective was to house the overflow of people from nearby Crossroads. However, people from Crossroads resisted their removal to Khayelitsha and eventually the apartheid Government abandoned the plans to clear the old township and relocate squatters from Crossroads to Khayelitsha. However, the availability of land in Khayelitsha was soon filled up by new arrivals in the city and people who wished to escape the overcrowded conditions of the other Cape townships (Rauch, 2002).

In the 1980s the then Minister of Environment did not anticipate that relocating people to earmarked townships would have a negative impact on the environment and natural resources. Khayelitsha is a case in point. It has a number of wetlands and the relocation of people to the area impacted negatively on the wetlands. The major impact of this resettlement policy was manifested in the land-use changes in the Khayelitsha area. Prior to 1994 there were scattered informal settlements in Khayelitsha (Platzky and Walker, 1984). The post-1994 election period saw a remarkable increase of both formal and informal settlements. Consequently, the population of the area rose steadily. The 2001 population estimation of Khayelitsha was 329 008 (South Africa, 2001).

1.2 Indigenous Knowledge

Indigenous knowledge, also known as local or ‘traditional’ knowledge, refers to the body of integrated knowledge and beliefs handed down through generations by cultural transmission about the relationship of living things with one another and their environment. It is an attribute of a society with continuity in resource utilisation practice (Berkes, 1993). According to Kolawole (2001) the term ‘traditional’ should not be misconstrued as encapsulating the 19th century
conceptions of a simple, “savage” and static society. The term is used to qualify the peculiarity of the knowledge to a people. The technical wisdom and insight gained through experience in a given locality through observation and experimentation constitutes indigenous knowledge. Indigenous knowledge was the known mode of natural resource management among people living according to customs before the advent of ‘modern’ science. These people have systematically and sustainably used and managed natural resources through common knowledge (Gonzalez, 1995). However, this knowledge is not accorded recognition by environmentalists, nature conservationists, resource managers, policy makers and health officials, the very people who need the knowledge most to make informed decisions.

Indigenous knowledge has been declining in urban areas (Cunningham, De Jager and Hansen, 1993). The decline is attributed to urbanisation and modernisation processes that detach people from their ‘traditional’ lifestyles. One repercussion is the dwindling richness of this knowledge, as there is no recognition of its custodians. In the South African context, the lack of emphasis on indigenous knowledge studies and documentation could be attributed to the lack of funds for research projects that fall within the ambit of indigenous knowledge systems (IKS).

In South Africa the status given to ‘traditional’ medicine and western medicine is unequal. There is an entrenched power accorded to western medicine whereas ‘traditional’ medicine is denigrated. This power derails attempts to study indigenous knowledge, as this form of knowledge has to be defined in relation to the western knowledge. In this light, it becomes imperative that this unique, rare and precious knowledge be recorded and documented.
Indigenous knowledge has a long history. It has been, and is still crucial for the people who value and treat it with veneration and wish to regenerate it. The wide interest shown by “outsiders” in this form of knowledge is indeed new. It is important to note that interest in harnessing indigenous knowledge for development was shown in the early 1980s. The reason was the series of failures that most development projects in Africa encountered, particularly in agriculture, a field where indigenous knowledge was amply demonstrated. Information flowing to decision - and policy-makers underestimated the value of indigenous knowledge (Howes, and Chambers 1980; Lado, 1998). This belated interest confirms the value of this non-recognised knowledge to people. In South Africa the post-apartheid era introduced a different way of treating indigenous knowledge which is now treated as an important component of social development. It is acknowledged that Black people in particular, had knowledge that informed and guided their practices.

The post-apartheid era has been characterised by initiatives aimed at acknowledging the value of indigenous knowledge. According to the minutes of an Indigenous Knowledge Systems Public Hearing held at the University of the Western Cape in 2000, the main question that the Government tried to answer was: How was it possible that Black people could have survived all the past years without any form of knowledge used? The answer was that Black people possess indigenous knowledge. For the first time, a need arose to understand IK and its role in community life from an integrated perspective, one which included spiritual and material aspects and the complex relationship between them. There was then a need to explore the potential contribution of IK to local development, particularly in the provision of primary health care services (South Africa, 2000).
In the late 1990s the Department of Arts, Culture, Language, Science and Technology made funds available for projects to investigate Indigenous Knowledge System (IKS). Interest in IK surfaced. The National Government Portfolio Committee on Arts, Culture, Language, Science and Technology initiated an IKS programme. The motive behind this was to restructure and democratise South African science and technology systems. This initiative proves that the Government is alert to the value of the cultural heritage of the nation, developed, nurtured and maintained by communities from generation to generation (South Africa, 2000).

The Portfolio Committee has a task to gather and document the indigenous knowledge of people in South Africa, the custodians of which are primarily Black South Africans. The gathering and documentation of IK is an attempt to protect, preserve, and promote the knowledge and its custodians. It is envisaged that IK will satisfy the local needs and generate a competitive national economy. The attempt to protect and promote IK demonstrates its significance, and reiterates its value to the entire country. It is estimated that two-thirds of the population in KwaZulu-Natal (KZN) Province depend on ‘traditional’ medicine for their primary health care. The plant trade in KwaZulu-Natal generates about R62 million per annum (Mander, 1998). Indigenous knowledge research projects have a national appeal and make a contribution towards further development and understanding of IK in the country (Nkuhlu, 2001). Furthermore, studying indigenous knowledge exposes the hidden knowledge that Black African people used in the utilisation and management of resources.

Indigenous knowledge has been the cornerstone in the management of natural resources in a number of countries in Africa (Warren, 1991; Marshall, 1998). Notable examples include,
agricultural and environmental knowledge in Southern Sudan (Lado, 1986), management of indigenous natural resources in Zimbabwe (Clarke, 1994), and indigenous technical knowledge associated with the use of plants in South Africa (Van Wyk, Van Oudtshoorn and Gerricke, 1997). According to Bradley, (1991), in Kenya, a movement known as the Kenya Woodfuel Development Programme used folk drama, songs, and more importantly ‘traditional’ knowledge, to create mass awareness of resources utilisation and conservation.

In the South African context, nature conservationists and environmentalists are faced with the challenge of managing the dwindling stocks of vegetation resources in the country. Militating against this challenge is the socio-economic utilisation of the very same resources by needy local people. These include ‘traditional’ health care practitioners and commercial gatherers. These local people have a working knowledge of the species they use and the ‘traditional’ ideologies for their management. Observation in Khayelitsha has shown that some of the users have private home gardens in their backyards. The main challenge for the local authorities is to tap this rare resource (knowledge) from its custodians who are ‘specialists’ in natural resource utilisation. This is in accordance with the ‘bottom-up’ approach to development (Stöhr and Taylor, 1981) and the people-first theory (Chambers, 1983). This positive attempt can enhance the use of indigenous knowledge in resources utilisation/exploitation rather than neglecting it and adopting the ‘empty vessel fallacy’ where it is assumed that there was a lack of systematic intimate and working knowledge until the advent of science filled the void. This research investigates the indigenous knowledge that urban ‘traditional’ health care practitioners have about using and managing vegetation resources.
The term indigenous knowledge resonates with the “African Renaissance” in as much as the latter acknowledges knowledge, practices, skills technologies and craft embedded in the knowledge systems of African people (Serote, 2001). According to the report of the first national workshop on the indigenous knowledge systems programme issued in 1999, the President of South Africa emphasised that in the African context, the world of knowledge possessed by people should be utilised to elevate the country’s position within the ambit of research. Through research new knowledge is generated, and the knowledge possessed by local people should form the basis upon which a new knowledge is generated. This knowledge has to be enhanced and finally disseminated (South Africa, 1999).

This research project is relevant in the context of assessing and re-emphasising the value of IK in primary health care systems, but more so, in the conservation of plant species for use by urban ‘traditional’ health care practitioners. Nature conservationists may use this research to identify areas of co-operation with the identified natural resources users, thus forming an integrated natural resources management approach. ‘Traditional’ health practitioners may use the results of the current study to justify the importance of their indigenous knowledge and their practical skills in sustainable natural resources harvesting, utilisation and management.

1.3 Vegetation Resources

In South Africa and indeed in Africa, it is well known that disadvantaged people use natural resources as firewood and ‘traditional’ medicines. What is less well-known is the role of IK in culture. The relationship between culture, resource utilisation and conservation among the disadvantaged communities has been under-researched, but this relationship surfaces during
cultural activities. Concern has been expressed about the sustainable utilisation of vegetation resources in most parts of Africa. Natural resources are declining at an alarming rate, partly because their utilisation is an activity that has been, and still is, highly regarded as panacea for alleviating socio-economic problems amongst disadvantaged communities (Balick and Cox, 1996). Studies conducted in Africa have shown the reliance of disadvantaged people on natural resources (Engel and Engel, 1990; Warren 1991; Cunningham, et al., 1993; Clarke, 1994; Balick and Cox, 1996). Natural resources provide basic needs to people for shelter and medicine, and serve as a source of income (Cunningham et al., 1993).

Among other users in Africa, and indeed in South Africa, ‘traditional’ health care practitioners are the main collectors and users of the vegetation resources. They rely on indigenous knowledge in the use of ‘traditional’ medicinal plants which is the practice predominant in rural areas. Today’s urban users of ‘traditional’ medicinal plants trace their knowledge from rural areas. They have accumulated knowledge on the use of these resources over the years. Urban environments are centres of most economic activities and draw a number of people from rural areas to the cities. Seeing that most of these people are the product of rural urban migration, their skills, beliefs and attitudes are transferred from the rural areas to the urban environment. The use of ‘traditional’ medicine in the urban setting is one example to cite.

1.4 Rural-Urban Migrations

Residents of Khayelitsha are either immigrants from the Eastern Cape Province or have relocated to Khayelitsha from other parts of Cape Town. Approximately 55% of the residents define the Eastern Cape Province as their “home”, and about 54% wish to retire there. ‘Home’ in this
context refers to the place where one was born and bred. It is a place where one’s family lives and where one’s forefathers were buried (Marsh, 1998). A significant number of people in the area remit money to the Eastern Cape Province, the place they define as ‘home’. This indicates that people in Khayelitsha retain strong relationships with rural areas. Another important practice that sheds more light on this issue is that some families usually repatriate a deceased person home instead of burying the person in Cape Town. About 71% of the population in Khayelitsha is born in rural areas, and 76% relocated to Khayelitsha from other parts of Cape Town (Marsh, 1998). The relocation and migration of people from one area to the other involves a relocation of skills and knowledge. This is true of the rural-urban migration in Africa generally.

Rural-urban migration throughout Africa and indeed in developing countries in general triggered the transfer and consequently expression of rural-based skills in the urban setting. Although there are studies on rural-urban migration, several authors have noted that there is little research on the utilisation of urban vegetation resources (Baker and Pedersen, 1992; Hanna and Hanna, 1971 and Lohnert, Oldfield and Parnell, 1998). The cycle of rural-urban migration results from a failure to secure formal wage jobs in rural areas (Mabogunje, 1980). Unemployment serves as a push factor from the rural areas in contrast to better living conditions in the city. Development initiatives appear to evolve around cities; hence rural people intercept development initiatives by migrating to urban areas. These people mostly belong to the low-income groups with low livelihood strategies which trigger conflict with the development initiatives and objectives of urban environmental planners and conservationists (Oonyu, 2001).
1.4.1 Rural-Urban Migration: The Transfer of Indigenous Knowledge

Rural-urban migration necessitates an investigation of the rural-based practices in the urban environment. Today’s urban population is yesterday’s rural dwellers, many of whom may possess ‘traditional’ knowledge, skills, expertise and beliefs acquired through experience and practical resource utilisation. The use of ‘traditional’ medicinal plants in primary health care is a case in point and it is evident in the urban environment.

Surveys of resource utilisation have been conducted in South Africa, but a review of literature reveals few attempts to document ‘traditional’ conservation measures and ideologies. The Western Cape Province (compared to KwaZulu-Natal and Eastern Cape Provinces) has less evidence of surveys conducted on the value of medicinal plants used by ‘traditional’ health care practitioners. Consequently, ‘traditional’ conservation measures employed by users to protect their resources have not been recorded, yet the province has a booming number of ‘traditional’ health care practitioners. Most of these practitioners are in the city due to rural-urban migration that has helped push the population into Cape Town to approximately 4.5 million (South Africa 2001). Soliciting and documenting information from the custodians of this knowledge could be useful for decision-makers in South Africa.

Indigenous knowledge is the reflection of people’s culture including their identity, spiritual and religious belief (Davis and Wali, 1993). Indigenous knowledge has a major role to play in achieving the goals of African Renaissance. The acknowledgement of people’s social and cultural background is one notable example. “Modern” influences and pressures impact on the survival of traditions and cultural practices; hence these two are gravely endangered. There is a
concern that cultural practices embedded in IKS could vanish. Foreign culture poses threats to the ‘traditional’ culture, as the rate of assimilation and acculturation is high. Indigenous knowledge serves as a vehicle to repatriate cultural practices and heritage that have been misappropriated in the past (South Africa, 2001).

In the South African context, research has overlooked the value of indigenous knowledge and the use of vegetation resources through cultural practices which requires the use of vegetation resources, suggesting that people treat the species they use with veneration, and manage them in a sustainable manner.

The challenge facing local authorities is how to sustain rural-based practices that find expression in the urban environment without putting more stress on the available stock of natural resources. An investigation of the indigenous knowledge possessed by vegetation resource users in relation to environmental conservation and management is desirable. The aim of the current research is to investigate indigenous knowledge of vegetation resource utilisation and management. The study focuses on ‘traditional’ medicinal plants in the provision of health care to the Khayelitsha community.

1.5 The Research

The lack of recognition accorded to ‘traditional’ health care practitioners, and the role of IK in both health care services and plant conservation, hampers the development of collaborative and environmentally-sustainable strategies to address conservation issues in Khayelitsha.
The value of IK in vegetation resources conservation in South Africa has been under researched, yet there are growing numbers of ‘traditional’ health care practitioners using medicinal plants in both rural and urban areas. The ‘traditional’ resource conservation ideology of local users is still inadequately understood in vegetation resource management strategies in the country.

The rate of ‘traditional’ medicinal plant harvesting increases proportionally to the number of users who collect these resources to keep up with the equally increasing demand for the plant species particularly in urban areas. The rate of harvesting puts more stress on the available plant species. In the quest for sustainable conservation measures, the users’ knowledge is often neglected, and little is known about how ‘traditional’ resources ideology contributes to conservation measures. Government law-enforcement strategies have achieved little success. This study attempts to fill that knowledge gap. The users’ knowledge about the utilisation and conservation of the plant species used in primary health care could make a significant contribution to resource management strategies.

1.5.1 **Research Aim**

The aim of the current research is to investigate indigenous knowledge of vegetation resource utilisation, in particular the use of ‘traditional’ medicinal plants in the provision of health care in the community of Khayelitsha. Three steps were followed in the current project. The first step is practical. It aims at identifying ‘traditional’ medicinal plants used by ‘traditional’ health care practitioners in the study area. A database of these plants is created and it includes the plant name, the family and their uses of these plants. An attempt was made to single out the species most used by ‘traditional’ health care practitioners.
The second step of the project provides information that could be used by decision-makers as opposed to conservationists. It involves analysing the spatial distribution of the vegetation resources in Khayelitsha. The vegetation resources collection sites are highlighted. The use of ‘traditional’ medicine is one aspect of indigenous knowledge which is important, but similarly the management thereof is also crucial. The resource management is an important part because it sustains the use of resources by ‘traditional’ health care practitioners. The third step examines the ‘traditional’ resource management strategies employed by health care practitioners in the urban environment. A ‘traditional’ management approach provides insight into how Black people conserved their vegetation resources many years ago.

1.5.2 Motivation for the Project

The motivation for this study is grounded in five overlapping premises. The dwindling stock of ‘traditional’ medicinal plant resources (in both urban and rural areas) in response to their demand serves as the primary motivation. The high harvesting rate of ‘traditional’ medicinal plants is a cause for concern.

Indigenous knowledge is diminishing in the urban setting, and this is attributed to modernisation, especially among the young generation. Modernisation entices the young generation to such an extent that they devalue ‘traditional’ knowledge practices and beliefs. Western knowledge is given more attention in the urban setting, which impacts negatively on the protection, dissemination and documentation of IK.

There is a lack of indigenous knowledge documentation in relation to natural resource management in the country, yet the country is rich in custodians of this knowledge. This is also
true of Khayelitsha. Though the exact number of ‘traditional’ health care practitioners is not known, respondents estimated that Khayelitsha has more than 1000.

The lack of documentation could be misconstrued as an indication of the lack of value of IK in resource conservation and management. In the study area, ‘traditional’ health care practitioners have ‘traditional’ medicinal plant gardens in their backyards. Although the cultivation of ‘traditional’ medicinal plant species has been observed, little is known about their management. Determining the ‘traditional’ medicinal plant management knowledge will provide invaluable information with regard to general resource conservation in the urban environment. It is not known why ‘traditional’ health care practitioners choose certain species above others and how these resources are managed.

Finally, the need for conservation, promotion and revival of IK is a mandate of the National Government Portfolio Committee on Arts, Culture, Science and Technology. This mandate is an indication that the value of indigenous knowledge in the country is being given serious consideration. The need to make a contribution to this process has been an important stimulus for the current study. Studying IK provides a platform for applying the ‘bottom-up’ approach in research, as the participants are custodians of this knowledge. The previous political regime in South Africa did not give any attention to IK despite its role in communities. Studying IK serves as a step in enlightening people about the value of their knowledge.
1.5.3 **Significance of the Project**

The current research project promotes collaboration between the community and the local authorities from the City of Cape Town. Through this project, a partnership between environmentalists and ‘traditional’ health care practitioners has been formed. The partnership shows that communities are willing to work with the Government on issues of common interest. In future this partnership could be central to a small-scale pilot project on ‘traditional’ medicinal plants in the community. A pilot project may expose environmentalists to the ‘traditional’ medicinal plant management strategies. Moreover, the current research project has the potential to expose ‘traditional’ resources management strategies that could be incorporated into natural resource management policy.

1.6 **Scope of the Study**

The study involves South African ‘traditional’ health care practitioners, aged twenty-one years and older, residing in the Western Cape Province. The age factor is of crucial importance. Observations shows that most ‘traditional’ health care practitioners are old people and hence, it is assumed that older generations have accumulated a wealth of experience and consequently plant resource knowledge. ‘Traditional’ health care practitioner who have been practicing for at least 5 years, were eligible to participate in the interviews. It is assumed that after this period one would have substantial knowledge of plant species used for different purposes.

Respondents for the study were chosen randomly, but attempts were made to make the study representative in terms of gender. However, male participants were not always available and willing to participate. This resulted in a situation where the number of women respondents
outnumber men. Respondents were visited in their homes. Questionnaires printed in both Xhosa and English were used, eliminating the need for a standard translation and ensuring consistent interpretation for all respondents. The translation of the questions into Xhosa meant that the respondents could answer the questionnaire without the assistance of an interpreter or translator. Respondents could complete the questionnaire at their homes. The researcher and research assistant completed the questionnaires during the interview on behalf of those respondents who could neither read nor write. The research assistant was trained by the researcher to fill in the questionnaire and how to follow research ethics when conducting the interviews.

This chapter outlined the conceptual framework of the study and explored indigenous knowledge and vegetation resources. The manifestation of these resources in the urban environment has briefly been outlined as a function of rural-urban-migration. Furthermore this chapter explored the research process, which included the motivation and significance of the study. The next chapter deals with literature review on indigenous knowledge linked to vegetation resources utilisation and management.
CHAPTER TWO

AN HISTORICAL OVERVIEW OF INDIGENOUS KNOWLEDGE ON THE USE AND MANAGEMENT OF VEGETATION RESOURCES

2.1 Historical Background

There is a long history of indigenous knowledge (IK) in health and vegetation resource management. Indigenous knowledge was used in natural resource management in rural Africa before the advent of “modern” science. Disadvantaged people have systematically and sustainably managed natural resources using their common knowledge (Warren, Brokensha and Werner, 1980; Chambers, 1983 and Gonzalez, 1995). Indigenous knowledge represents a national heritage, and natural resources have the potential to be developed, promoted and sustained for the economic benefit of any country.

The application of IK in natural resource management is very important. Indigenous knowledge was an active innovation and invention by local people in the past (Richards, 1985; Warren, 1991). Faced with the challenges of natural resources utilisation and management, many Africans resorted to indigenous strategies. Indigenous knowledge is a product of experience and the zeal to create order out of chaos (Richards, 1985). In this sense, IK should not be simply construed only as a response to practical human needs such as sustenance and health (Howes and Chambers, 1980). Though poverty in many developing countries is a menace that potentially forces a number of people to use the natural resource base unsustainably in the quest to improve their livelihoods, the application of indigenous knowledge has enabled local people to survive without driving local resources to extinction.
The role of indigenous knowledge strategies in ensuring sustainable utilisation of local resources has been neglected. Indigenous cosmology is, to some extent, intertwined with environmental knowledge because it incorporates values, skills and practices of a given people in relation to the environment. Indigenous knowledge is acquired through lived experiences, stored in people’s memories and activities, and is expressed in several ways. It is not documented, but instead it is shared and communicated orally and through culture (Cunningham et al., 1993; Alexander and van Dijk, 1996). Cultural ceremonies are ways of teaching and learning within the African communities. It should be stressed that indigenous knowledge is learned through observation and hands-on experience. Elders and ‘traditional’ health care practitioners occupy a special position in their communities by virtue of being custodians of indigenous knowledge. The channels through which this knowledge is transmitted to the youth are songs, riddles, poems, proverbs, on-the-spot field excursions, transect walks and observation.

2.2 **Indigenous Knowledge and the Utilisation of ‘Traditional’ Medicinal Plants**

2.2.1 **Indigenous Knowledge and Humanity**

Indigenous knowledge has an important role to play in the provision of health care services to people. The knowledge has existed from time immemorial but little has been written about the effect of indigenous knowledge on health systems. ‘Traditional’ knowledge makes a significant contribution to health and medicine, and ‘traditional’ health care practitioners offer crucial services in their communities. Members are respected because they reactivate and increase ‘traditional’ knowledge, yet they are not fully recognised. Despite this, it is estimated that 80% of the world population rely on ‘traditional’ medication for their primary health care (Davis and Wali, 1993). A similar estimate is applicable to sub-Saharan Africa (Hans, Snyman, and Cohen
1996; Timmermans, 2003). Statistics for South Africa show that between 70% and 80% of the population rely on the use of herbal medicine for health care (Davis and Wali, 1993; Van Wyk et al., 1997; Dyson, 1998; Lambrechts, 1998; Magubane, 2001). The number of people visiting ‘traditional’ healers for primary health care confirms that present day South African communities still ascribe great value to ‘traditional’ medicine, and that they often consult ‘traditional’ health care practitioners The statistics cited confirm that ‘traditional’ health practitioners are utilised extensively and constitute an important resource for national health care though they are not accorded due recognition The unfortunate part is the risk of commercial exploitation of ‘traditional’ health care by transnational enterprises. One observer held that:

"Pharmaceutical companies save about 60% of their research costs as they consult ‘traditional’ communities about their indigenous knowledge…" (Gallet, 1998, p. 8).

Pharmaceutical companies brush aside the question of intellectual property rights. It is argued that transnational companies may use indigenous knowledge on the medicinal quality of a given plant, but they are not obliged to give royalties or recognition, mainly because it does not have the protection of South African law (Gallet, 1998). Pharmaceutical companies have a tendency to claim intellectual property rights over biological resources after they have done minor modification to the resources. This issue raises significant concerns in developing countries that cannot protect their traditional knowledge and prevent the bio-piracy patents as these are very expensive (Timmermans, 2003). Poverty in many of these countries compels local people to sell resources such as traditional medicine thus forcing useful species to extinction.

This lack of recognition of ‘traditional’ health care practitioners has its source in the streamlined health care system in the country that perpetuated and supported western medication. During the colonial and apartheid era ‘traditional’ medication as part of indigenous knowledge was
denigrated and underrated as dirty, useless and against the law. Colonisers wanted to make African people lose their dignity - hence they attached a negative connotation to ‘traditional’ medicine which was then perceived to be associated with witchcraft or “black magic”. However the truth of the matter is that traditional medicine is:

“the sum total of all the knowledge, skills and practices based in the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in maintenance of health, as well as in the prevention, diagnosis improvement or treatment of physical and mental illness” (Timmermans, 2003, p. 746).

Colonisers threatened to sentence every ‘traditional’ health care practitioner whose patient died following treatment. By so doing, the colonisers succeeded in limiting the practice of ‘traditional’ medicine. The powerful instrument of their actions was the law. They imposed an imported legal system that denied Africa any form of social and legal economic organisation. Using the imposed law, they criticised ‘traditional’ practices (Aminata Lô, 2001). The criticism of ‘traditional’ practices justified the non-recognition of custodians of indigenous knowledge. Although attempts were made by the African Council of Traditional Healers and several universities in the country to understand the principles informing ‘traditional’ health care practitioners’ work, little has been achieved. Medical aid schemes are yet to accommodate and legitimize ‘traditional’ health care practitioners (Magubane, 2001). It is argued that if the Medical and Dental Council accord recognition to a given profession as a bona fide health discipline, the medical aid schemes are more likely to follow suite (Baleta, 1997).

Presently, there is a paradigm shift. The value of ‘traditional’ medication is now known, but the main concern is the accountability of ‘traditional’ health care practitioners. Since there is no regulatory body under which every practitioner is registered, no one can be held responsible for administering incorrect medication to patients. Within orthodox medication there is a regulatory
body to which people can complain about a medical malpractice of a western-trained doctor. The point of departure in the recognition of ‘traditional’ health care practitioner is legislation of ‘traditional’ medicine. According to the ‘Traditional’ Health Practitioners’ Bill an interim ‘traditional’ health practitioner’s council in the country should be established. The aim of the body will be to provide a regulatory framework to ensure efficacy and efficiency, safety, and quality of ‘traditional’ health care services. Furthermore, the council will manage and control registration, training and ethical and professional code of conduct of the practitioners. Finally, the regulatory authority will ensure protection of members of the public that are using ‘traditional’ medicine (South Africa, 2003). The Bill covers issues that have or are still creating major challenges and stumbling blocks in the recognition of ‘traditional’ medicine and input of ‘traditional’ health care practitioners in the health care system of the country. The Bill is an attempt to ensure that there is recognition and law governing ‘traditional’ health practitioners and ‘traditional’ medicine.

The lack of recognition is interpreted as a justification for the secrecy of most of the ‘traditional’ health care practitioners. The relationship between the Government and ‘traditional’ health practitioners is characterised through conflict. Nationwide, ‘traditional’ health practitioners need recognition of their practices and contribution to the South African health care system. The Government acknowledges the role played by ‘traditional’ health care practitioners, but its main concern is the medicinal value, efficacy and the safety of plant species used. This concern prompted the Government in 1998 and 1999 to request specimens from ‘traditional’ health practitioners for scientific analysis. The request was extended to all interested ‘traditional’ health care practitioners in the country. ‘Traditional’ health practitioners rejected the Government’s
request. They were suspicious and felt that the request was tantamount to the theft of their indigenous knowledge. ‘Traditional’ health care practitioners proposed that the Government must give them due recognition before they can provide ‘traditional’ medicinal plant specimens they use (Khandekane, 2001). The current research project was conducted just after the attempts made by the Government to obtain plant species used by the ‘traditional’ health care practitioner for primary health care. The ‘traditional’ health care practitioners were not sure whether the researcher was a Government official or not, hence the level of scepticism was high among them. The lack of recognition of ‘traditional’ health care practitioners by the Government has a serious effect on the growing number of people using ‘traditional’ medicine in the country.

There is a rapidly developing trend among people from the Western societies to use ‘traditional’ medicine mainly because of the view that it has fewer side effects (Davis and Wali, 1993; Van Wyk et al., 1997; Dyson, 1998; Wood and Low, 1998). It is not possible to provide a rough estimate of how many White people have been trained by South African ‘traditional’ health care practitioners, but the number of trainees is relatively high. In Khayelitsha there are ‘traditional’ health care practitioners who train people of non-African descent to be ‘traditional’ health care practitioners, such practice has triggered debates among ‘traditional’ health care practitioners. The training of White people is described as an “opportunistic” endeavour that betrays African religion (Mackay, 1998). Furthermore, it is argued that the practice of ‘traditional’ healing is bound up with ancestor worship. White people do not worship their ancestors, hence it is impossible for them to become ‘traditional’ health care practitioners (Ngcai, 2000). Further concerns rotate around the issue of intellectual property rights. The knowledge possessed by ‘traditional’ health care practitioners is their intellectual property. White people training as
‘traditional’ health care practitioners are in fact tapping into the knowledge of ‘traditional’ health care practitioners under the pretext of training. White people undergoing such training want to learn the complex reality of becoming ‘traditional’ health care practitioners. It is argued that they are involved in participatory research. The main aim of the exercise is to gain more in-depth knowledge on the different plant species and their uses. An argument against the opportunity to become indigenous knowledge practitioners is that it is a fundamental right of every person in this country to exercise freedom of choice and religion. Everyone is free to become a ‘traditional’ health care practitioner. African religion is not only for those who have a black skin (Mackay, 1998).

‘Traditional’ healing is a call linked to ancestors who decide to whom the power of healing is given. The call is irresistible: when the ancestors target an individual, that person cannot decline the call. In this sense it is not a profession that one may consciously choose to follow, as is the case with the western medical system (Makgopa, 2002). The argument for White people training as ‘traditional’ health care practitioners has its source in the very same line of reasoning. If the call is unavoidable and non-discriminatory, then no one can turn away from it regardless of race or creed. In this light, even White people could become ‘traditional’ health practitioners.
2.2.2 ‘Traditional’ Knowledge, Culture and Plant Utilisation

The utilisation of plant resources in South Africa, is not restricted to health care. It also fulfils a socio-cultural role. Culture hinges on indigenous knowledge in many respects, yet less is known about the role of this knowledge on culture. However, a definition of culture highlights aspects that contain important ingredients of indigenous knowledge systems. In most cases, the definition of culture tends to overlook the salient aspects of culture. One definition of culture that is all-inclusive refers to:

“the sum total of socially-inherited characteristics of a human group that comprises of everything which one generation can tell, convey, or hand down to the next, in other words on physical traits we possess” (Spector, 1996, p. 68).

Culture reflects people’s way of life, methods of doing things, patterns of behaviour, attitudes, values and knowledge learned from generation to generation. Indigenous knowledge serves as a guide to cultural activities. Supporting the link between culture and indigenous knowledge, Spector (1996) refers to culture as a “meta-communication system” in which the emphasis is not only placed on the meaning of spoken words, but to everything else as well. Embedded in this definition are the practices and activities performed in communicating culture to younger generations. Cultural practices serve as a platform in which adults teach youngsters certain past learned practices. The application of indigenous knowledge is extended to beliefs and rituals. In African countries certain plant/tree species are there to enable adults to teach youngsters about the value of the resources.

In Bwindi District, Uganda for an example, *Zanthoxylum gilletii* is planted around homesteads, because of the ‘traditional’ belief that it wards off evil spirits. *Erythrina abyssica* is planted on sites where ancestral rituals are performed (Lado, 1998; Obua and Muhunguzi, 1998). In Kenya, certain types of trees are considered very special for customary rituals such as sacrifice to
ancestors, religious ceremonies and funerals. Correspondingly, in Zimbabwe, the Muchakata tree (Parinari capensis) is planted in venues used for ceremonies to ask for rain (Bradley, 1991). The users and the community venerate trees and other plant resources used for all these purposes.

2.3 ‘Traditional’ Vegetation Resources Management Strategies

‘Traditional’ resource management is of crucial importance to vegetation resource conservation. The users of vegetation resources (both ‘traditional’ health care practitioners and consumers) are mostly disadvantaged people who rely on vegetation resources, because these resources are collected free of charge in the wild. Disadvantaged communities view the use of vegetation resource as a panacea in alleviating socio-economic problems. Vegetation resource utilisation was, from the onset, a function of socio-economic and cultural survival. Management of vegetation resources is an attempt to strike a balance between socio-economic needs and conservation.

Users of vegetation resources lack scientific knowledge about resource conservation, but possess indigenous knowledge about resource use and management. Indigenous knowledge about different resources has been the corner stone in the management of natural resources (Warren, 1991). Indigenous knowledge conservation ideologies should be considered in natural resource management. Local people have conservation ethics that were in use before colonialism. These ethics were eroded by the commercial exploitation of resources (Johannes, 1978). Harnessing these ethics could assist resource conservation strategies in the urban areas. Alteration and disruption of indigenous knowledge systems in Africa is a function of the colonial period. The disruption of IKS is perpetuated by the North-South political and economic divide and
inequality, which is in turn perpetuated by colonial state practices that undermine and undervalue indigenous knowledge (Johannes, 1978).

In the quest for natural resources to be used sustainably, local people have used common knowledge in managing their resources (Gonzalez, 1995). Though this is the case, little attention has been given to the value of this knowledge in the sustainable management of natural resources; consequently there is inadequate information on how communities have managed their resources (Sambo and Munyenyembe, 1999). In South Africa, particularly in Cape Town, conservationists know relatively little about the role of ‘traditional’ resource conservation ideologies. It is estimated that on the Cape Flats alone there are 131 plant species that are threatened with extinction, of which 76 occur nowhere else in the world (Gosling, 2002). However, there is little knowledge of ‘traditional’ ideologies and approaches applied in the management of these resources. Given the fact that the users of these plant species are ‘traditional’ health care practitioners, it becomes imperative to ensure their involvement in the process of resource conservation as they could help in resource management.

In South Africa as a whole, it is estimated that 10% of our plants are threatened by extinction. About 69% are already extinct (Gosling, 2002). The extinction rate should be seen as a wake-up call for an integrated resource management approach to include ‘traditional’ ideologies in the management of vegetation resources this point will be further developed in Chapter 5. Although the number of plant species threatened in Khayelitsha is not known, it is likely that a high proportion of species is affected.
The lack of recognition accorded to indigenous knowledge due to the lack of documentation has rendered the knowledge ineffective. The value of the knowledge declines as a result of negligence (Gonzalez, 1995). This problem is compounded by the “Westernisation” of people with ‘traditional’ lifestyles (Balick and Cox; 1996). Similarly, educational systems introduced a form of conservation that detaches African scholars from the ‘traditional’ conservation ideologies. The repercussion is that the richness of local knowledge and traditions dwindles.

The decline of IK as applied to the conservation of vegetation resources will have serious repercussions. The knowledge pertaining to the use of plant resources will be lost. The value of the plants will decrease. Indigenous knowledge serves the purpose of showing that plant resources have value to mankind. The less valuable plants are to people, the less the interest in conserving these resources. The challenge is on how to revive the value of the knowledge to communities. It therefore becomes important to use this knowledge to find out how communities manage their resources. Plant conservation measures call for community-based solutions which stand a better chance of success than solutions imposed from outside. Local people have accumulated detailed collective knowledge, skills, practices and strategies based on their interaction with the natural environment (Sambo and Munyenyebe, 1999). The involvement of local people in a synergistic natural resource management models could improve conservation measures of ‘traditional’ medicinal plant resources.
2.3.1 Prevalent ‘Traditional’ Measures

Community-based solutions are premised on the notion that development of information and conservation measures needs to focus on the needs, aspirations and knowledge of local people (Sambo and Munyenyembe, 1999). The untapped knowledge of the community could be of paramount importance in resource conservation. The impact of indigenous knowledge on conservation is strengthened by the relevance it has to the needs of the local people. In this sense it is bound to make a major contribution to natural resources conservation.

‘Traditional’ approaches to resource management do not give people the absolute right to control and egoistically exploit nature for their own interest and self-enrichment at the expense of other life forms. In traditional African religion, there are no rules that guide people to perceive themselves as masters of everything and to consequently deal as they please with nature (Bamberger, Yahie and Matovu, 1996). The above-mentioned statement is a confirmation that people have respect for the environment, and that they accord well with the Earth Wisdom Worldview which stresses that people are just part of nature, and therefore fundamentally do not have absolute control over nature and resources. Nature exists for its entire species, not just for greedy people (Miller, 1996). It could be argued that people with ‘traditional’ lifestyles have lived holding this worldview long before it was documented as a scientific principle.

2.3.2 Customary Control of ‘Traditional’ Medicinal Plants

The sustainable exploitation of ‘traditional’ medicinal plants hinges on inadvertent control systems, and to a large extent deliberate management practices agreed on and adhered to by the community. Customary management practices consist of rules, beliefs and taboos on the use of
certain medicinal plants. ‘Traditional’ leaders enforced the customary management practices. In Zimbabwe, for instance, there are a variety of the customary management practices which differ according to the dominant cultural group and the strength and respect that traditional leader commands. These undocumented practices are dynamic and are communicated by means of word of mouth. Disobedience to customary practice is interpreted as the invitation of natural calamity, namely drought, famine and disease. These ‘traditional’ practices serve to ensure that plant resources that are crucial for the livelihood of the people are protected (Clarke, 1994).

2.3.3 **Taboos in the Collection of Medicinal Plants**

Taboos in many African countries play a crucial role in the implicit and explicit conservation of resources. Taboos are unwritten rules and systems of avoidance that have been used to regulate human conduct and to ensure a physical, spiritual and moral healthy state. In rural Zimbabwe, taboos coupled with ‘traditional’ fencing were used in indigenous resources conservation (Clarke, 1994). ‘Traditional’ leaders ensure that customary practices are enforced and respected. In the same country certain rituals are followed in the collection of ‘traditional’ medicinal plants, and failure to follow them renders the medication ineffective or less potent (Mavi, 1996). Similarly, in Kenya certain tree species are considered important for specific customary rituals such as sacrifices for ancestors, religious ceremonies and funerals (Bradley, 1991).

In South Africa and Swaziland there are taboos prohibiting the collection of medicinal plants by menstruating woman as these plants deteriorate. Non-observance of these taboos is often regarded as a cause of certain natural disasters such as drought and famine. All these measures ensure that the pressure on the harvesting of medicinal plants remains relatively low. These
taboos and practices towards the conservation of vegetation resources were inculcated from generation to generation. Songs, ‘traditional’ dances, proverbs and word of mouth serve as channels through which knowledge is transmitted to the younger generation (Engel and Engel, 1990; Bradley, 1991; Hanyani-Mlambo and Hebinck; 1996). On close examination, the use of taboos could be interpreted as a reflection of an ecological mentality in tune with the idea that everything is connected.

2.3.4 Seasonality in the Collection of Plant Species

The collection of plant species like *Alepidea amatymbica* and *Agapanthus umbellatus* is restricted to winter in many African countries, including South Africa (Mavi, 1996). These species are widely used for fever, colds and flu. The collection period corresponds with the peak period of sickness. The collection of the species in winter ensures that it is reserved for the period when it is needed most (Van Wyk *et al.*, 1997). The restriction on summer collection is linked to the belief that its collection causes storm and lightning. During summer months the untouched species will grow to its fullest length.

The trans-country commonality in terms of beliefs, restrictions in collection and indigenous knowledge suggests that African people have derived environmental principles based on their circumstances. Moreover, the commonality seems to suggest a need for a comprehensive study on the role of indigenous knowledge in the continent. ‘Traditional’ management practices can be solicited, documented and used or incorporated into broader environmental resource management strategies. This intentional ‘traditional’ conservation measure is the by-product of a long history of medicinal plant exploitation in Africa.
2.3.5 **Beliefs in the Collection of Medicinal Plants**

Though not much is known and written about the role of belief systems in the conservation of plant resources, these have played a remarkable role in the management of indigenous plants in the Gokwe village, Zimbabwe (Clarke, 1994). There are deep-seated belief systems in Gokwe that, if a certain tree is cut, the consequences are inexorable, for example one’s children may die, or couples may divorce (Clarke, 1994). In this sense, customary practices prevented the over-exploitation of the resources. The modern era has witnessed urban ‘traditional’ health care practitioners, some of whom are less trained than their predecessors. Their resource management strategies still has to be investigated before the death of customary practices in the urban environment is announced.

A closer look at different ‘traditional’ conservation measures reveals that local people do not plan to practise all these activities in a way similar to how the “modern” person would conserve plant resources. However, the positive outcome of the interaction between people and the environment is the development of ecological and environmental knowledge, thus promoting natural resource sustainability.

2.4 **The Role of Local Knowledge on Resources Utilisation**

Local knowledge makes a remarkable input in local resource management. Throughout the Southern African Development Community, people have developed their own principles of environmental management based on their experiences and circumstances (Munslow, Katerere, Fest, and O’Keefe, 1988). Local people have been involved in knowledge-generation experiments, which enable them to continue to use their knowledge with less intervention from
the Western knowledge. According to Hanyani-Mlambo and Hebinck (1996), farmers in Chinyika, Zimbabwe, experimented with various ‘traditional’ strategies to combat termites. Through informal experiments and intuitive knowledge, farmers discovered that the ashes of *Munyambanje* (a small smelly plant) ground together with onion and paraffin can be used as an effective termite repellent. They brushed aside the unfamiliar and expensive *Marshalssuscon* termite remedy recommended by Department of Agriculture Technical and Extension Services (Agritex), which is not readily available. This Department helps farmers with innovation and technology which can be used in dealing with resource management. Through their experiences farmers have learned that by burning the edges of a pole, the pole’s lifespan could be elongated. This is in contrast to the use of oil recommended by Agritex. The initiative proved to be useful, as termites cannot eat the blackened surface which in effect lasts longer (Hanyani-Mlambo and Hebinck, 1996). The main challenges facing resource managers to date is to unlock and solicit local people’s knowledge. Resource managers should learn from and work with the custodians of the knowledge and make attempts to integrate it with “modern” scientific knowledge.

2.5 **Government’s Role in Vegetation Resources Management**

Legislation has achieved very little in controlling the use of medicinal plants in Africa. During the colonial period in South Africa several attempts were made to ban the sale of ‘traditional’ medicinal plants in the urban areas. In Durban, the Natal Pharmaceutical Society made an unsuccessful effort to prohibit the sale of ‘traditional’ medicinal plants (Sibanda, 2000).
In all the major cities of the country, there are a number of established sale stalls of medicinal plants on the pavements. ‘Traditional’ health care practitioners were selling herbs in urban environments in the 1960s and the 1970s amidst police harassment and detention. In Johannesburg, the Faraday Muthi market is one of the biggest in the country. Cape Town’s Grand Parade has thousands of medicinal plant sellers, drawn from the Cape Coloured, Cape Malays, and African-Xhosa-speaking people (Sibanda, 2000).

Law enforcement has little success in hampering the use of ‘traditional’ medicinal plants. ‘Traditional’ African medical systems survived in many countries because they satisfy the pressing needs and requirements of people. ‘Traditional’ medical systems are accessible, available, acceptable, dependable and affordable (Davis and Wali, 1993). The appearance of these markets in the urban areas is in response to the number of people who value and hang on to their traditions. These markets demonstrate that ‘traditional’ African medicine and indigenous knowledge have a place in our society and will have to be acknowledged.

The decrease in the employment level within the formal sector in the country suggests that people will no longer qualify for medical schemes. The country’s high unemployment rate of 45% limits the choice of medical systems for users (Daniels, 2002). The implication is that a small proportion of people will have access to modern medical services and those depending on ‘traditional’ medicinal plants will increase. A high dependency on ‘traditional’ medicinal plants and the service of the ‘traditional’ health care practitioners is almost inevitable. The increase in the number of customers parallels increase in demand, which in turn necessitates that more species be harvested.
2.6 **Poaching of Medicinal Plants in Surrounding Nature Reserves**

The Western Cape National Park experiences poaching of medicinal plants by ‘traditional’ health care practitioners and commercial users. Poaching demonstrates the usefulness of medicinal plants and the desperation with which they are sought. The demand for medicinal plants is so huge that users are prepared to take the risk of being apprehended by Nature Conservationists and Patrol Officers. Reports from Abe Bailey Nature Reserve in Carletonville, Gauteng indicated that *Eucomis autumnalis* has disappeared in the wake of the belief that it cures life-threatening diseases (Ndlovu, 2001).

In Newlands Forest, Cape Town, there is evidence of bark removal from indigenous trees. Though the exact number of indigenous trees affected is not known, it is estimated that about 23 old indigenous trees’ bark were once stripped for medicinal plant use. ‘Traditional’ health care practitioners are implicated in this activity. The National Parks Act protects the indigenous trees in Newlands Forest, but bark stripping continues (Gainsborough-Waring, 1998). This further indicates that law enforcement measures play an ineffective and inefficient role in the control of medicinal plants collection. These activities call for the involvement of local people in the structure that deals with conservation of indigenous trees. Sustainable land and natural resource development can be successful if there are strategies put in place to benefit the local people (Collingridge, 1996).
2.6.1 **Tygervalley and Durbanville Nature Reserves**

In Durbanville and Tygervalley Nature reserves, medicinal plant poaching is rife. Nature Conservationists in these two reserves had evidence of tools like spades used in digging the roots of these species. The poachers are not apprehended, and that limits the possibility of determining the real culprits, and it is presumed that it could be ‘traditional’ health care practitioners or commercial gatherers. In 2001 about 1000 bulbs were confiscated in these reserves. Bulbs seem to be the main part of the plants poached and these bulbs have medicinal value. Lack of formal scientific research studies on this subject deprives a lot of people of useful information (Marais, 2001).

2.6.2 **Cape Nature Conservation**

The Cape Nature Conservation Board confirms a high level of ‘traditional’ medicinal poaching. There has been evidence that certain plant species have been stolen. Bulbs and bark have been removed. However, there is no scientific study conducted to substantiate this claim, and therefore there is no quantifiable information about plant species being removed, neither is there any indication of the culprits (Hignett, 2001).

2.6.3 **Wolfgat and Rondevlei Nature Reserves**

Wolfgat Nature Reserve is the closest to the study area. There are concerns that medicinal plants are harvested from the site. No formal studies have been conducted, but resource users were once observed leaving the area carrying bags of medicinal plants. The names and families of the plant species poached are not known because the poachers are yet to be apprehended. There is no
specific study that has been conducted about this issue before. Similarly, Rondevlei Nature Reserve is experiencing ‘traditional’ medicinal plant poaching in various forms (Gibbs, 2001).

Studies dealing with indigenous knowledge about the use of natural resources have not been done extensively in the Western Cape. One reason is the lack of information with regard to the value of plant species to people. A second reason is that vegetation resource conservation is considered to be the responsibility of nature conservationists in the urban environment. Conservationists are reluctant to solicit the knowledge of local users in the management of these resources. Attempts were made by the Government to prevent local people from using ‘traditional’ medicinal plants. Local people were perceived as heartless users of natural resources. The idea that these people have a conservation ideology is usually brushed aside. In the light of the escalating vegetation resources depletion, it becomes imperative that users be fully involved in resource conservation and their knowledge be taken into consideration.

This chapter has outlined the application of indigenous knowledge on vegetation resources utilisation with the aim of achieving sustainable resource utilisation and sound management using ‘traditional’ strategies. Furthermore, it highlighted the consistent use of ‘traditional’ medicine in healthcare system and shows its value to humankind. The use of vegetation resources for health care continues despite due recognition accorded to ‘traditional’ health care practitioners. The link between indigenous knowledge and culture of a people has been highlighted. Acknowledgement of the value of IK to humankind could help develop resource management strategies based on ‘traditional’ ideologies. The following chapter presents a brief background about the study area and methods used to collect data used in this study.
CHAPTER THREE
THE STUDY AREA, RESEARCH METHODOLOGY AND DATA ANALYTIC FRAMEWORK

3.1 Study Area

3.1.1 Geographic Location
Khayelitsha lies within the Tygerberg Administration in the City of Cape Town. It is situated 35 kilometres from Cape Town Central Business District on the white dunes on the Cape Flats. It is sandwiched by the N2 Highway to the North, False Bay Coast to the South and Mitchell’s Plain to the West (Figure 3.1). The township is situated zero to ten meters above sea level.

3.1.2 Climate
Annual rainfall in Cape Town ranges between 400mm and 700mm. About 80% of the rain occurs during the winter months, namely April to September. The mean temperature varies between 15° and 25° C. Winters are frost-free and do not pose any threat to winter crops (Lambrechts, 1998). In the past, ‘traditional’ medicine collected from other provinces and cultivated in the study area thrived under these climatic conditions which suggests that the climatic condition of the area is conducive for the cultivation of medicinal plants.

3.1.3 Soil
The soil of the study area is characterised by poor organic matter (less than 1% of organic carbon). This soil has poor capacity to store water and plant nutrients. The clay content is between 5% and 10%, which is not a limitation for the cultivation of medicinal plants, as only a clay content of less than 5% is regarded as a severe limitation (Lambrechts, 1998).
Despite these limitations, sufficient irrigation coupled with proper application of fertilizers could enable the soil to be utilised successfully for the cultivation of medicinal plants.

3.1.4 **Vegetation**

Several indigenous plants identified in the Cape Flats are edible and also possess medicinal value (Cape Metropolitan Council, 1999). The use of medicinal plants is spiralling in reaction to the growing population. No formal scientific studies have been conducted on the quantity of medicinal plants used. However, personal observation shows that ‘traditional’ health care practitioners visit Wolfgat Nature Reserve for medicinal plant collection.

Durbanville and Tygerberg nature reserves are both situated at a distance from the study area. However, they do experience medicinal plant poaching. No one has been apprehended, but visible signs of the removal of medicinal plant roots from the ground have been observed. On close examination, medicinal plant poaching shows that the demand for these resources prompts users to approach protected areas (Marais, 2001).

3.1.5 **Human Population**

Khayelitsha has a culturally and linguistically homogenous population of approximately 329 008 predominantly Xhosa-speaking people. Women constitute 52% of the population and men 48% (South Africa, 2001). People who have just moved to the urban environment characterize a greater proportion of Khayelitsha’s population. These people are in a state of transition and acculturation. Generally, ‘traditional’ elements of community life are evident. This serves as an indication that, though people are now living in the urban areas, their ‘traditional’ practices are
still an important feature. Many of these people live in the informal settlement areas (Cape Metropolitan Council, 1996; Rauch, 2002). Khayelitsha experiences a high population growth as a result of constant migration into the city. This influx contributes to enormous pressure on the infrastructure leading to conflicts over access to resources. The majority of the residents are illiterate; hence employment opportunities are very limited due to a lack of marketable skills. They live in informal housing settlements, characterized by overcrowding. Health and personal safety are limited and the quality of urban life is poor (Rauch, 2002).

Some of the Khayelitsha inhabitants practise informal urban agriculture involving food crop production in small backyards. It is difficult to estimate the proportion of the population living from the land, as some are involved in other activities as well. Inhabitants regard informal urban agriculture as “self help”. The small-scale agricultural projects indicate willingness among Khayelitsha inhabitants to embark on cultivation projects. The self-help initiative is a response to joblessness. Some residents have “spaza” shops and some keep livestock. Cultivating crops is not a new activity for many inhabitants, as most of them are from the rural areas of the Eastern Cape Province where there is more space for cultivation purposes.

Fifty-five per cent of the residents define the Eastern Cape Province as their ‘home’, and about 54% wish to retire there. ‘Home’ in this context refers to a bona fide place where one was born and bred, a place where one’s family lives. This is witnessed by the fact that most people in the Western Cape are living in shacks, whereas at ‘home’ they have reasonably big houses where their families live (Cape Metropolitan Council, 1996). These people remit money to their families at ‘home’.
3.2  Research Methods

The study of ‘traditional’ medicinal plants used by community health care practitioners was conducted between March 2000 and November 2001. Methods used include questionnaire administration, documentary analysis, focus group discussions, field observation, transect walks and Geographic Information System (GIS) analysis. According to van Schalkwyk and van As (2000), qualitative research can involve more than one method of data collection. The use of many research methods for data collection assists the researcher in gaining information that might have been missed by a limited range of data collection methods. According to Whyte, Greenwood and Lazes (1991), the complexity of the world around us demands the application of a variety of techniques which increases the validity and reliability of the results.

3.2.1  Utilisation of ‘Traditional’ Medicinal Plants

a)  A Questionnaire Survey

A questionnaire was designed to elicit information on the use of vegetation resources by ‘traditional’ health care practitioners. The questionnaire was divided into four sections (Appendix I). The first section provides the socio-economic background of the respondents. The second section elicits information on the names of ‘traditional’ medicinal plants used in the community, however the technical details and application for using these ‘traditional’ medicinal plants were not disclosed. In addition, this section contains information on plants used for cultural purposes and ‘traditional’ ceremonies. The third section deals with the spatial location of these resources in the study area. The ‘traditional’ resources management strategies and indigenous ideologies applied in resources management are dealt with in the fourth section of the questionnaire.
The questionnaire was tested in pilot survey between September 1999 and March 2000 using local vegetation resource users. The results of the exercise singled out ‘traditional’ health care practitioners as the most knowledgeable section of the community. In the preparation of the final questionnaire some questions and items in the pilot questionnaire were revised.

b) **Sampling and Questionnaire Administration**

One hundred and twenty respondents were randomly selected. Local people identified three ‘traditional’ health care practitioners who were visited by the researcher and through Bird’s (2003) technique called “snowballing” additional ‘traditional’ healthcare practitioners were identified. The technique is a community-based technique where people being interviewed recommend other respondents to participate in the survey.

On the basis of the identified population of 240 ‘traditional’ health care practitioners, a decision was taken to interview 120 of them, which is 50% of the identified population. Every second person of the 240 people identified was included in the interview session. The remaining 120 names of potential interviewees not included in the interview session were not discarded. In fact in the event where the person identified was not available, the fifth person on the list defined as non-participant in the interview session was instead chosen.
c) Stratified Random Sampling

Stratified random sampling was a preferable sampling mode for the study, mainly because of the previous exploitative experience of ‘traditional’ health care practitioners, which culminated into mistrust and scepticism towards researchers. By holding an informal discussion with ‘traditional’ health care practitioners in Khayelitsha, the researcher deduced that they were concerned about the lack of acknowledgement they would receive for participating in the study; hence certain potential respondents were not willing to participate.

The exploitative nature of research, educational, health institutions and NGOs, introduced a high level of scepticism in the community, especially on issues of indigenous knowledge. In the past, knowledge produced by respondents contributing to research work has not been acknowledged in the final reports. This lack of acknowledgement of respondents creates high levels of mistrust towards researchers. ‘Traditional’ health care practitioners in the study area have been visited by researchers from different sectors like the Departments of Health and Agriculture, universities, private institutions and pharmaceutical companies most of which did not acknowledge the respondents. Such interactions caused some ‘traditional’ health care practitioners to be unenthusiastic about participating in the study. Such bad previous experiences of the ‘traditional’ health care practitioners impacted on the progress of the study. Despite that other ‘traditional’ health care practitioners participated with enthusiasm, and that posed a challenge to the sampling strategy used. Excluding respondents on the basis of sampling strategy could embitter the researcher’s relationship and rapport with the respondents. Random sampling accommodates this challenge. It provides an opportunity for every respondent to be selected for an interview (Neuman, 1997).
d) **Focus-Group Discussion**

The focus group had a discussion guide (Appendix II), which is based on information obtained from the questionnaire. The discussion guide sought to provide an elaborate explanation on information obtained earlier from the questionnaire that relates to the utilisation of ‘traditional’ medicinal plants by the community. Given the fact that some of the issues highlighted in the questionnaire needed clarity, a focus group of seven participants was formed to strengthen the relationship and rapport between the researcher and respondents. Furthermore, it provided more details and an in-depth interpretation of issues observed and addressed in the questionnaire. Attempts were made to ensure that the focus group had equal number of men and women respondents. Discussions with the focus group were held at an agreed-upon place such as preschool premises, at the respondents’ homes, and community halls. The discussion in the focus group was an ongoing process, but meetings did not last for more than one-and-a-half hours.

e) **Field Observation**

In order to validate information on how respondents’ activities relate to the use of ‘traditional’ medicinal plants, an observation chart was designed. Though there was continuity in observation, the greater part of it was conducted from July till November 2001. The rapport and good working relationship established between the researcher and the respondents enabled the field observation to continue smoothly. Presence of the observer was not viewed with much scepticism. Attempts were made to reduce consciousness of the observer’s presence. Species cultivated were observed and recorded, and reasons for cultivation were also solicited and documented. Information observed was compared with information obtained from the questionnaire and the focus group.
f) **Transect Walks**

Transect walks supplemented the observation technique. Transect walks are difficult to undertake, as ‘traditional’ health care practitioners are skeptical about showing their collection areas as the Government might enforce laws that prevent and regulate the use of that site and the species therein, and that could have serious repercussions for their profession. Nevertheless, attempts were made to carry out transect walks in the study area. Plant species and their uses were observed. The main aim of the transect walks was to determine the harvesting techniques in the wild and to assess attempts made to protect the plant species.

g) **Coding and Data Analysis**

Emerging themes from the questionnaire, focus group discussions, and observations were recorded on a Standard Interview Record Form (SIRF), and coded for qualitative analysis (Appendix III). Verification and clarification was sought. The focus group formed by the leaders played a central role in the clarification and elaboration on resource management practices.

h) **Documentary Analysis**

There are few documents on vegetation resource utilisation in Khayelitsha. The reason could be that ‘traditional’ health care practitioners are secretive about their knowledge. There is also a lack of studies undertaken in the area that deal specifically with ‘traditional’ medicine. However, through constant interaction with the respondents, and participating in their meetings, it was possible to build a good rapport with them and to eventually obtain access to previous ‘minutes’ compiled by the healthcare practitioners. Newspaper articles containing information on ‘traditional’ health care practices also revealed information relevant to the study.
i) Meeting and Events

The researcher attended two events in 2000. The first event was a seminar organized by the National Government Portfolio Committee on Arts, Culture, Language, Science and Technology. It was held at the University of the Western Cape in July, 2000. The main aim of this event was to ensure public participation on the issue of indigenous knowledge in the Western Cape Province. ‘Traditional’ health care practitioners, academics, community members with an interest on indigenous knowledge and students fully participated in the event.

The second event held in September 2000 was a graduation ceremony of a ‘traditional’ health care practitioner marking the completion of the training session that the health practitioner had undergone. The focus was on the role of ‘traditional’ health care practitioners in the area. There were also discussions about the recognition of ‘traditional’ health practitioners, availability of land, vegetation resource utilisation and management.

Between January and September 2001, the researcher attended five events. The researcher organised the first meeting and invited the local authority. It was held at the Tygerberg Administrative offices in Bellville. The aim was to determine the stance local authorities (Environmentalists and Nature Conservationists) have with regard to the utilisation of vegetation resources.
In February 2001, the researcher attended a meeting in the Khayelitsha Resources Centre organised by ‘traditional’ health care practitioners. The focus of the meeting was the establishment of a provincial ‘traditional’ health care practitioners’ representative structure. It was envisaged that this structure should be in the forefront in dealing with issues that affect ‘traditional’ health care practitioners in the province.

The third meeting was organized jointly between ‘traditional’ health care practitioners and the local authority. It was held at the Tygerberg Administrative offices in Khayelitsha. The purpose of this meeting was to identify and earmark a site that could be used by ‘traditional’ health care practitioners for the cultivation of medicinal plants. The criterion for the site was determined and subsequently a suitable site was identified. It was envisaged that an earmarked piece of land would promote research into ‘traditional’ medicinal plants.

The following meeting, organized by the Cape Town branch of the World Wide Fund for Nature -South Africa (WWF-SA) was held in Salt River in March. The WWF-SA is a Non Governmental Organisation that serves as a funding conduit to facilitate environmental and biodiversity conservation. It focuses on the conservation of nature and ecological processes by promoting sustainable use of resources. This meeting was not on ‘traditional’ medicinal plants’ utilisation per se, but rather on the conservation of renewable resources in the Western Cape Province. ‘Traditional’ health care practitioners were not involved in this meeting.
In April 2001, the researcher attended a seminar organised by the Camagu Institute held at the University of Cape Town. The theme of the seminar was: Multiculturalism in divination-Initiation of White ‘traditional’ health care practitioners. At the seminar there were debates about the possibility of a white person responding to the call of becoming a ‘traditional’ health care practitioner. Speakers made contributions based on their experiences and knowledge on the profession.

Finally, in September 2001, ‘traditional’ health care practitioners, in conjunction with the Medical Research Council (MRC), organised an event where there was an official launch of the partnership between a group of ‘traditional’ health care practitioners and the MRC. The launch was called MRC Delft Partnership Project. The focus was on forming partnerships with the community and learning from them. It was envisaged that the project would accommodate indigenous practices relating to the use of vegetation resources.

In all these meetings and events, the researcher learned a lot about indigenous knowledge, but more importantly, about how people who possess indigenous knowledge exhibit and practice it. Information collected during the meeting and events is not attributed to any individual speaker in the following text.
3.2.2 **Spatial Distribution of ‘Traditional’ Medicinal Plants**

a) **Geographic Information System**

An understanding of the vegetation resource distribution is not only important because it gives an orientation of the distance travelled in the collection of these plants species used, but also provides information on knowledge that users have about the plants and their topography. The spatial distribution of medicinal plants in Khayelitsha is investigated mainly so as to have an understanding of the physical location where certain plant species grow. The area where plants grow naturally, means that the soil type of that area supports the growth of medicinal plants. Such areas could then be earmarked for medicinal plants use. A Geographic Information System (GIS) tool was used to analyse the spatial distribution of medicinal plants in the study area, mainly because the concept of spatial analysis could be shown. Spatial analysis is a common feature in geographical studies. It is a positivist approach of identifying the spatial order in human affairs (Johnston, Gregory, and Smith, 1986). By definition, spatial analysis refers to a set of geographic methods used for the location of an object in space. Any change on the location of the objects analysed induces change in the results (Longley, Goodchild, Maguire and Rhind, 2001).

3.2.3 **‘Traditional’ Resource Management Strategies**

a) **Questionnaire Survey**

A specific section of the questionnaire was designed to solicit information on ‘traditional’ resources management strategies employed in the utilisation and management of vegetation resources and their sustainability in the urban environment.
b) **Field Observation**

The field observation technique was used to record occurrences and behavioural patterns of the ‘traditional’ health care practitioners without questioning them - particularly with regard to management practices. Field observation was used to verify and gather more information on how ‘traditional’ resource users apply ‘traditional’ management strategies to the resources they use. Field observation plays an important role in unpacking hidden management strategies. Harvesting and management practices were observed, especially in the collection areas and the participants’ households. Small-scale private gardens and management practices were observed in the practitioners’ backyards in the study area.

c) **Focus-Group Discussion**

An attempt to unpack and probe observed information which respondents alluded to in the questionnaire was done through focus-group discussions. More in-depth information and insight were gathered by means of an interactive focus-group discussion which appears to be a platform where not only information relevant to the focus research was solicited, but also serves as a platform where the users enlightened one another on uses and resources management strategies.
3.2.4 Validation and Reliability

a) Triangulation

The results obtained from the questionnaire were cross-checked with the information gathered through focus-group discussion, field observations and document analysis to determine the accuracy of the findings. Attempts were then made to thoroughly scrutinise whether the contents of the questionnaire served the objectives of the study. Respondents were consulted to verify the accuracy and the correctness of the final results from the questionnaire which served as a backdrop upon which further questions could be asked in the quest to clarify pending questions. In so doing, the validity and the reliability of data provided by the questionnaire was verified.

b) Data Analysis

The analysis of the questionnaire data was based primarily on the different questions posed to obtain information from the respondents. Those questions warranting a quantitative approach were tabulated in accordance with emerging themes. The results were analysed in terms of frequency and percentages. Given the fact that the questionnaire was organised according to the research objectives, the responses were also analysed and categorised following these objectives.

Qualitative data from the focus group discussion was analysed through content analysis and condensed into themes that provided an explanation of certain aspects of vegetation resources utilisation and management. Likewise the focus group questionnaire was organised according to the objectives of the study. The results of the focus group discussion were compared with the questionnaire findings.
Observed activities were recorded and cross-checked with information obtained through the other techniques. Attempts were made to organise the observation chart to follow the objectives of the study. Similarly the results of the focus group discussion fed into the findings of the questionnaire. This was an attempt to double check whether there was consistency in the responses given by the respondents.

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The exploratory nature of the current study called for a qualitative framework, hence the main research design adopted in this study was qualitative and was supplemented by numerical data. The aim of this study is to determine the application of indigenous knowledge to vegetation resource utilisation and management. Such an investigation demands a design that focuses on in-depth knowledge of respondents about indigenous knowledge and resource utilisation. Techniques applied in the study include questionnaires, interviews, focus group discussions and documentary analysis. These techniques were all relevant provided more information on the phenomenon under investigation. Information about the socio-economic details of the respondents who participated in the study is presented in the following chapter.
CHAPTER FOUR

SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

This chapter describes, analyses and interprets the socio-economic background of the 120 respondents who were selected through stratified random sampling in Khayelitsha to participate in the current study. All 120 respondents were selected because of their long and continuous involvement in the application of indigenous knowledge in traditional healing practices. Indigenous knowledge underpins the use of vegetation resources in primary health care. In order to gain a better understanding of indigenous knowledge, this chapter examines selected characteristics of the respondents such as gender, age, education, and employment status. The purpose is to find the pattern and profile of people involved in IK in the urban environment.

4.1 Socio-Demographic Patterns

4.1.1 Gender

Sixty-nine (58%) of the total sample of 120 were women and 51 (42%) were men. The distribution of the sample suggests that women possess more knowledge of indigenous knowledge practice in Khayelitsha. Women as caregivers tend to identify and address issues of health at a household level hence McClain (1989) referred to them as domestic healers mainly because they provide curing strategy of first resort in the household. They sustain the family livelihood (Zweifel, 1997). Comparatively, women spend more time with children than men do. They have more time to impart their knowledge to children. Sharing information about useful medicinal plants is viewed as a contribution in saving a child’s life. The high number of women respondents could be attributed to the low level of scepticism shown by them in the study.
4.1.2 Age

The ages of the respondents ranged between 27 and 71 years. Both respondents on the extremes were women. The 27-year-old woman is the youngest trainee in the sample in the IK field with secondary education and was born in the Nyanga Township, Cape Town. The 71-year-old self-employed pensioner is originally from Cofimvaba, Eastern Cape Province. She does not possess any schooling. It could therefore be inferred that she cannot read and write. Informal discussions with respondents revealed that the older generations have in-depth indigenous knowledge due to their experience and exposure. It was observed during the focus group discussions that the 71-year-old woman is respected by her colleagues as a result of her vast experience.

The age range analysis shows that 58 respondents are in the age group: 41 to 60. Most of these respondents are from the Eastern Cape Province and have moved to Khayelitsha over the past decades. The respondents with less than 30 years are trainees on IK. The young respondents and those that are more than 71 years of age constitute the lowest number of participants (Table 4.1).

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>&lt;30</td>
<td>5</td>
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<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Data

The majority of the women and men respondents (48%) fall in the age-range between 41 to 60. In this age range there were 12 more women than men who participated in the study. The high
number of women participants seems to suggest that there are more women who practice indigenous knowledge than men. Such findings are not surprising, because in many African countries disadvantage accumulates at the level of women and girls. From childhood there is an expectation that women should take responsibility for the family’s health care (IK Notes, 2002). Respondents in the age group 41-60 came from various provinces in the country, but most are from the Eastern Cape Province.

Eighteen per cent of the respondents were between 61 and 70 years old. None of the respondents in their sixties were from the Western Cape. This age group does not have any form of schooling. Only two men in this age group could speak English. Though there is lack of schooling in this age group, the number of plant species and associated uses mentioned by this age group surpasses the other groups. Such findings confirm the claim that older people possess more indigenous knowledge. It should be noted that some of the respondents in this group (61-70) are trainers and therefore they have the responsibility to impart knowledge to others. Such attempts sustain indigenous knowledge practices.

During informal discussions respondents mentioned their child-rearing responsibility either as parents or as grandparents. Such discussions indicate that this is the bottom line responsibility. Many women respondents indicated that they are divorced; hence they have to fend for themselves and their children. Though the exact number of children could not be established, most of the respondents referred to children in their discussions, hence it could be deduced that they have more than one child. It is an accepted phenomenon among African people that when a family member resides in close proximity to schools, that member will be asked to accommodate
children of relatives. Accommodating a relative’s child is justified on the grounds that most schools in rural areas where most of the participants’ relatives reside are very far. Children have to travel long distances to reach their respective schools.

Of the 120 respondents a mere 10 (8%) are under the age of 30 (Table 4.1). As mentioned above, these happened to be trainees in indigenous knowledge. The age of the trainees ranges between 27 and 30. This is not surprising given that in general, ‘traditional’ health care practitioners are elderly people. During informal discussions, it was pointed out that there is no fixed age when one can start practising to become a ‘traditional’ health care practitioner. They stated that becoming a traditional health care practitioner is not a choice, but a pre-ordained call. Respondents hold the view that most practitioners start training during the mid-20s and early 30s. One indication of this delay is that respondents extend their schooling.

Eight per cent of the trainees have primary and secondary education and defined themselves as unemployed. Originally, half of these trainees are from the Eastern Cape Province (three women and two men). The other four are from Cape Town (two women and two men) but none were originally from Khayelitsha. Only one man is from KwaZulu-Natal while the other three were from Nyanga and Gugulethu. The number of women under the age of 30 constituted a mere 7% of the total number of women (69). Of the total male respondents only 10% was under the age of 30.
Thirteen respondents who participated in the study were more than 70 years old. There were 8 women and 5 men coming from the Eastern Cape Province. They had spent between 34 and 40 years practicing indigenous knowledge. The accumulated experience distinguishes this group. Seven of the women respondents in this group defined themselves as self-employed, and only one woman indicated that she is unemployed. All the men indicated that they are unemployed. All respondents were state pensioners. Of the 13 respondents, only 2 women and 3 men indicated that they once worked for wages in the prime of their lives. The others earned a living through indigenous knowledge.

4.1.3 Education

Of the total sample of 120, 44 (36%) of the respondents had no schooling, but are the most experienced in practicing ‘traditional’ medicine. It can be inferred that they cannot read or write. Ninety-three per cent of the 44 respondents who cannot read or write are between 51 and 70 plus years old (Table 4.2). The application of indigenous knowledge does not require that one should be able to read and write, as it resides in people’s activities, cultural practices and behaviour. The knowledge is passed on from one generation to the other by word of mouth. Equipped with this knowledge, respondents help their community to understand the contribution of indigenous knowledge in the society. The 36% of respondents who lack education suggest that the profession does not require of practitioners to be literate. The education and age range of the respondents is reflected in the Table 4.2.
### Table 4.2 Education and Age Categories of the Respondents

<table>
<thead>
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<th>Age-range</th>
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<th>Primary</th>
<th>Secondary</th>
<th>Tertiary</th>
<th>Total</th>
</tr>
</thead>
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<td>6</td>
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<td>1</td>
<td>0</td>
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<td>61-70</td>
<td>15</td>
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<td>0</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>&gt;70</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>44</td>
<td>57</td>
<td>17</td>
<td>2</td>
<td>120</td>
</tr>
</tbody>
</table>

Source: Field Data

An overwhelming majority 62% (74) of the respondents have education. The majority (48%) has primary schooling (grade 3 or 4), and 14% has secondary schooling (grade 9). The age range for the respondents with primary and secondary schooling begins below 30 and goes up to the age of 60. Interestingly, in the age-group 51 to 60 there are 13 respondents who have no formal education, and 18 have primary education. The findings that 62% of the respondents have education refutes the above-mentioned statement that indigenous knowledge is an industry for the uneducated.

Surprisingly, only 2% of the respondents have a tertiary level qualification, and these happened to be women. Again, the 2% shows that the practice is not restricted to uneducated people. These respondents (women) have professional nursing qualifications. Having a primary or secondary education is something that is common; however, a tertiary qualification is a huge achievement. Very few ‘traditional’ health care practitioners have tertiary education. ‘Traditional’ healing is not a profession that requires rigorous academic training. The professional nursing degrees of these respondents have no direct bearing on the ‘traditional’ healing as a discipline. There were no male respondents with an equivalent qualification (tertiary education). In informal
conversation the women respondents with tertiary education indicated that they went to tertiary institutions under the impression that a tertiary qualification would eventually overcome the call to be a ‘traditional’ health care practitioner. However, they could not stop the calling.

4.1.4 Employment Status

The majority, namely 87 of the 120 respondents, were employed. Startlingly, 26 respondents had no jobs. Almost everybody (81 of those with employment) was self-employed. A mere 6 (7%) had formal employment. Of the 81 self-employed participants 48 (59%) were women and 33 (41%) were men (Table 4.3). These respondents are the source of health for the poor people in their community, and that they take pride in helping their communities. Furthermore, it is demonstrated that through the application of indigenous knowledge other people in the community can see the value and the relevance of indigenous knowledge.

Table 4.3 Age and Employment Status of the Respondents

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Unemployed</th>
<th>Employed</th>
<th>Self employed</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>&lt;30</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>31-40</td>
<td>4</td>
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<td>41-50</td>
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<td>2</td>
<td>0</td>
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<tr>
<td>61-70</td>
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<td>1</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>&gt;70</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>15</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Field Data

The issue of self-employment is linked to informal enterprises, commonly known as self-help a strategy based on self-reliance. Three in ten of the self-employed respondents indicated that they have never been in formal employment. They earn a living through the use of their ‘traditional’ health care practices.
Only 7% had formal employment. These respondents took employment anywhere where there was work and that is not surprising because they do not have marketable skills, hence they will take what is offered. The majority of respondents who work are the trainees who have not yet started practicing as fully-fledged ‘traditional’ health care practitioners.

Twenty-two per cent (26) of the participants were unemployed of which 15 were women and 11 were men. The majority of these respondents have primary and secondary education levels. These respondents are looking for employment to supplement their current cash flow. These respondents answered positively when asked whether they wanted to take alternative employment in another sector. It could be deduced that people with any form of schooling believe that their education should enable them to obtain better employment.

A mere 6% of the respondents did not disclose their employment status, and all these happened to be women aged between 40 and 60. There is no clear reason that could be attributed to the respondents declining to respond. It could be that they are working, but they do not like to be known that they have alternative employment elsewhere. Arguably, the call of being a traditional healer is seen to be enough to enable one to earn a living through the use of indigenous knowledge. From such assertions it could be inferred that ‘traditional’ health care practitioners who are formally employed may not be given due recognition by their fellow colleagues in the profession of traditional healthcare. Observation shows that the older generation (ages 61-70) interviewed have no other visible means of support than the state pension fund.
4.1.5 Previous Location

Regarding the place of origin there is a difference between the Eastern Cape and the Western Cape Province. Of the total sample (120 respondents), 48% (57) are from the Eastern Cape, compared to the 38% from the Western Cape Province (Figure 4.1). A mere 14% was from other South African provinces, with KwaZulu-Natal Province alone contributing 6%. The fact that most respondents in the current study are from the Eastern Cape Province is not surprising, because 71% of the population in Khayelitsha was born in rural areas (Marsh, 1998). As mentioned, approximately 55% of Khayelitsha residents defined the Eastern Cape Province as their ‘home’, and 54% wish to retire in that province (Cape Metropolitan Council, 1996).

![Figure 4.1 Province of Origin of the Respondents](image-url)

Source: Field Data

KwaZulu-Natal Province is well-known for having a huge number of people using indigenous knowledge for primary health care. It is estimated that two-thirds of the population in KwaZulu-Natal rely on ‘traditional’ medicine for their primary health care needs (Mander, 1998). It is
therefore not surprising that 6% of the respondents are from KwaZulu-Natal Province. The bulk of the respondents in the current study are people who have no education or only have primary education (Table 4.4).

Table 4.4  
Education, Gender and Province of Origin

<table>
<thead>
<tr>
<th>Education and Gender</th>
<th>Eastern Cape</th>
<th>Gauteng</th>
<th>KwaZulu-Natal</th>
<th>Western Cape</th>
<th>Other provinces</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Women</td>
<td>13</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>10</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Primary</td>
<td>Women</td>
<td>13</td>
<td>1</td>
<td>0</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>15</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Secondary</td>
<td>Women</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Tertiary</td>
<td>Women</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>57</td>
<td>2</td>
<td>7</td>
<td>46</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Field Data

Fifty-one respondents (43%) with no education or primary education are from the Eastern Cape, Province compared to the 28% (33) from the Western Cape Province. However, there are nine women and four men from the Western Cape Province with secondary schooling, whilst there is only one woman and three men from the Eastern Cape Province with secondary schooling (Table 4.5). Schools in the Western Cape are widely available and accessible as compared to the Eastern Cape Province.

Table 4.5  
Education, Gender and Cape Origin

<table>
<thead>
<tr>
<th>Education level</th>
<th>Eastern Cape</th>
<th>Western Cape</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>None</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Primary</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Secondary</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Tertiary</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>28</td>
</tr>
</tbody>
</table>

Source: Field Data
Regarding retirement, everybody over the age of 51 noted that they would like to be buried next to members of their families at the place they call ‘home’ in their respective provinces. They define the place of residence in the Western Cape Province as temporary, while practising in the province. Twenty-seven per cent of the total sample indicated they have built houses at ‘home’ (Eastern Cape) as opposed to the shack they use as a dwelling place in the Western Cape. Thirty per cent of the participants noted they intend staying in the Western Cape Province, while 15% had mixed feelings. They preferred to keep their options open as they are uncertain whether to stay in the city for the rest of their lives or go back to the place called ‘home’.

The 56% of participants who intend going back home, confirm the phenomenon about circular migration patterns among African people. This phenomenon is of African urban dwellers defining rural areas as their origins and exerting a strong pull back from the bright lights of the city. Respondents demonstrated ties with the rural areas because their families and livestock are still in the rural areas. However, it is worth mentioning that the younger generation is not keen to return to the rural areas, and that could have a negative impact on the migration circulation pattern in the future. This locational stability has an implication for vegetation resource utilisation in the urban environment, posing a challenge to conservationists and environmentalists.

4.1.6 **Years Spent Using ‘Traditional’ Medicinal Plants**

The shortest period that respondents worked with ‘traditional’ medicinal plants was 4 years and the longest 40 years. These two extremes exclude trainees. Women occupy both extremes. The respondent who worked with ‘traditional’ medicinal plants for 4 years is a woman from the
Eastern Cape. Aged between 31 and 40, she has primary school education and she categorised herself as self-employed. She lives in Khayelitsha and has not worked for a wage in her lifetime. The 71-year old self-employed pensioner is originally from the Eastern Cape. The respondent does not have any schooling. However, she commands respect by virtue of her experience in the use of indigenous knowledge. She is among the group of respondents who define the Eastern Cape as ‘home’. Interestingly, she has not worked for wages in her lifetime. She worked with indigenous knowledge ever since she responded to the call between the age of 25 and 30.

A significant number of participants became involved in ‘traditional’ healing at an early age. It became clear during focus group discussions that there is no specific age when one can become a ‘traditional’ health care practitioner. In the current study, the number of years which women spent working with ‘traditional’ medicinal plants is more than that of men. Such findings suggest that more women started working with medicinal plants at an earlier age than men. The reason for this finding could be women’s social roles. Traditionally women look after children. When children are sick it becomes women’s responsibility to restore the child’s health. Grandmothers and mothers teach their children and young women at an early age about useful ‘traditional’ medicinal plants, specifically those that could be used for their children’s health.

4.1.7 Years Spent in the Study Area

In the late 1970s and early 1980s a large group of “African” people (migrant labourers and squatters) were relocated into earmarked and designated townships. These townships included Khayelitsha, Gugulethu, Langa and Crossroads. These attempts were aimed at controlling the influx of the non-white population into the central area of the city, which was traditionally
perceived as the residence and employment area for the White and the Coloured communities (Rauch, 2002). The relocation of African people to designated townships was defined by the then Minister of Co-operation and Development as the process that governed orderly development around the Peninsula (Oonyu, 2001).

Khayelitsha is relatively new having been established in 1983. It was built to house the overflow of people from nearby Crossroads. Crossroads residents resisted removal to Khayelitsha. The available land in Khayelitsha was then filled by new arrivals from other areas in Cape Town and outside (Rauch, 2002). The number of years that respondents spent in Khayelitsha ranges between 5 and 19 years. This corresponds to the establishment of the township. A significant number of the respondents arrived in their current location during the mid-1980s. The movement of people from their respective locations to Khayelitsha provided an environment conducive for ‘traditional’ health care practitioners to find themselves a new niche where they can practice. There is an insignificant difference in the average number of years that men and women had spent in the study area. On average women spent eighteen years, while men spent seventeen. Throughout discussions the subject of being responsible for children was repeatedly mentioned. From these discussions it could be inferred that most of the female participants are breadwinners in their households.

4.1.8 Practice Category

Of the total sample, 85% of the respondents in the randomly selected Khayelitsha respondents were ‘traditional’ health care practitioners. The categories of ‘traditional’ birth attendant, ‘traditional’ surgeon and trainees combined accounted for only 15% of the sample (Table 4.6).
Table 4.6  Practice Category, Employment Status and Education Level

<table>
<thead>
<tr>
<th>Practice category</th>
<th>Employment Status</th>
<th>None</th>
<th>Primary</th>
<th>Secondary</th>
<th>Tertiary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Birth attendant</td>
<td>Self-employed</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>‘Traditional’ healer</td>
<td>Self-employed</td>
<td>21</td>
<td>11</td>
<td>15</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>0</td>
<td>2</td>
<td>13</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>‘Traditional’ surgeon</td>
<td>Self-employed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Trainee</td>
<td>Self-employed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>24</td>
<td>20</td>
<td>32</td>
<td>25</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: Field Data

The study revealed that ‘traditional’ birth attendants are old, matured, knowledgeable, trusted, respected women. According to Gumede (1990) almost 90% of birth attendants in certain countries – particularly in the poorly-serviced areas – are attended to by ‘traditional’ practitioners. In Uganda, for instance, trained health workers attend to 38% of births, while ‘traditional’ practitioners attend to 62% of births (IKS Notes, 2002). Though the number of births attended to by ‘traditional’ birth attendants in Khayelitsha is unknown, it is likely that it is relatively high, and that ‘traditional’ birth attendants have an important role to play in the community. ‘Traditional’ birth attendants are always available, affordable and accessible, and the ones from Khayelitsha are no exception.
A ‘traditional’ surgeon (‘Ingeibi’ in Xhosa) is normally an older male person who is tasked to oversee the transition from childhood to manhood. The ‘traditional’ surgeon performs circumcision and oversees the initiation process that follows thereafter. There are lessons that are given during the transition to manhood. The main aim of the lessons is to teach respect, responsibility, loyalty, faithfulness and accountability to other people and the community. It is expected that a person who is defined as a man should uphold family values. It is expected of the initiate to emerge from the period of seclusion as a person, with a different outlook on life, ready to take on family responsibility. He is expected to be a role model for other youngsters. It is the responsibility of the ‘traditional’ surgeon to ensure that the boys obtain lifeskills and advice about what is expected of them.

Thirty-four (33%) of the ‘traditional’ health care practitioners possess no education while an overwhelming majority (65%) of the ‘traditional’ health care practitioners have education. Fifty-two per cent have primary and 13% secondary education. The findings indicate that the majority of ‘traditional’ health care practitioners are educated, which contradicts the claim that indigenous knowledge is practised by people who do not have any form of schooling. Almost half (48.3%) of the total sample are women and 36.6% are men. Seven in ten of these ‘traditional’ health care practitioners are self-employed, 25.5% is unemployed and a mere 5.8% are employed. These findings confirm that women are caregivers who take care of their children’s health – and also to a certain extent – their husband’s. As indicated previously, women were more willing to participate and to discuss ‘traditional’ healing as their profession in the current study.
The current study shows that the majority of the respondents were ‘traditional’ health practitioners and most of them come from the Eastern Cape Province. The high number of ‘traditional’ health care practitioners from the Eastern Cape Province confirms a rural-urban migration pattern. This migration of people from rural areas reflects a migration of rural-based practices and activities to the urban areas. The application of indigenous knowledge in resource utilisation is primarily a rural-based activity. However due to the need of ‘traditional’ medicine in urban areas the application of this knowledge is manifested in the urban settings. Many people ascribe the need of ‘traditional’ medicine to the increasing unemployment and the non-affordability of medical aid. ‘Traditional’ medicine becomes a viable option in this regard. The trend is likely to continue, causing the cities of the future to be characterised largely by most activities initially regarded as ‘rural’ in nature. The challenge facing nature conservationists and environmentalists is how to allow people to express the freedom of practise their customs and traditions without impacting negatively on the sustainability of vegetation resources.

As the study reveals, there are more women ‘traditional’ health care practitioners than men. Women’s social responsibility cannot be ruled out as a contributing factor as they play a nurturing role in their families. Women in the ambit of medical systems are domestic healers, particularly for those illnesses that are not life-threatening. Women are the first to employ curing strategies within a household. They recognise serious illness and injuries and family members seek the care of specialists - indigenous or biomedical (McClain, 1989).
Most respondents defined themselves as self-employed. The bulk of these were between the age of 40 and 60. Indeed, this confirms the fact that the profession is for older people with responsibility to care for their children or grand children. ‘Traditional’ healing does not require of the practitioners to be literate. In fact, educational attainment does not matter at all, as ‘traditional’ healing is regarded as a call. A significant number of ‘traditional’ health care practitioners in the current study have primary and secondary education. Respondents in the study have been practising for a maximum period of 40 years. The age range corresponds with the establishment of the settlement in the mid-1980s. The following chapter presents more information on interpretation and analysis of findings of the study.
CHAPTER FIVE

‘TRADITIONAL’ MEDICINAL PLANT UTILISATION IN THE STUDY AREA

5.1 Vegetation Resource Utilisation

This chapter presents, analyses and discusses the findings of the current research project conducted in Khayelitsha among the 120 respondents chosen through stratified random sampling. Through a free-listing technique respondents mentioned the uses of vegetation resources in the area. Respondents were asked open-ended questions, which allowed them to express their views freely.

Sixty-two respondents (52%) acknowledged that vegetation resources are used for firewood. Inhabitants collect the firewood, pack them and offer them for sale at different prices depending on the mass of the load. According to Gilfellan, Dysell, Simelane, Blocks and Kara (2000) the price of a 10 kg bundle was R10.00 in 1999. However the prices have increased over the years. The latest price structure indicates that 10 kg costs R15.00 and 40 kg costs R50.00. This price increase is due to the scarcity of the firewood. Selling firewood is a common practice among the poor people. A study conducted in Namibia confirmed that jobless youth and older people sell firewood to create self-employment (Naude and Forsythe, 1992). The use of vegetation resources for firewood has serious repercussion on the environment. Unsustainable use of vegetation resources could lead the land to become bare and susceptible to rain and wind erosion. The use of firewood remains the most viable option that people turn to for their energy demand (Leach, and Mearns, 1988; Munslow et al., 1998; Naude and Forsythe, 1992). The use of vegetation resources in the study area is likely to continue until attempts are made to find ways of providing alternative and affordable sources of energy to the poor people.
Forty-nine per cent of respondents held that vegetation resources are used in the provision of ‘traditional’ health care, and only 25% noted use of vegetation resources in cultural practices. The study indicated that respondents use vegetation resources for socio-economic needs, and more importantly, for survival. The use of vegetation resources for survival is not always a conscious choice. The existing conditions necessitate that people use resources for their survival. Poverty is pushing people to use and often over-utilise the resources to the very same people’s detriment.

The use of vegetation resources for firewood includes invasive alien vegetation in the study area. The alien Port Jackson tree is used mainly for firewood. A small proportion of the population use this tree species to make wooden chairs, which they eventually sell to community members. Use of alien species by respondents occurs regardless of the fact that alien species in the Western Cape Province account for about one third of the water use. Alien species use more water than indigenous species. Invasive alien species are brought to South Africa from other countries and have a tendency of displacing local plants. The Western Cape Province has among others, the Port Jackson. Noting the effects of alien species, the Government ‘working for water project’ removes these species to improve water supply and to protect the environment’s local vegetation resources (Working for Water, 1999).

‘Traditional’ health care practitioners are the main users of vegetation resources for medicinal purposes. The use of vegetation resources for health care recorded 49% of the respondents. ‘Traditional’ health care practitioners are in the community and have specialised training, thus specialised knowledge in their field. These practitioners are the users and the collectors of
medicinal plants. Knowledge of the users of the environment, terrain and the medicinal plants enables them to locate plants in the wild. Use of ‘traditional’ medicine is enshrined in the minds of many local people in the community. Administrators of ‘traditional’ medicine are respected as they are often taken as opinion leaders in the communities. Different criteria are used to identify these plants. The plant smell is one criterion. The smell of *Alepidea amatymbica* “Iqwil,” for example, is distinct and sharp. Furthermore, respondents indicated that according to their experience certain plant species grow in proximity with others. If one species has been identified, there is a high likelihood that another will be located in the same environment. Local people have a framework generated from experience and it includes the firmness of the soil and colour categories linked to the properties of the soil. The framework is central in their knowledge of the environment and shows an understanding of localized ecosystems. It is argued that using the framework local people are:

‘able to quickly locate individual plants of particular species through their intimate understanding of the principle governing the co-location of different plants according to the soil conditions’ (Howes, 1980, p. 337).

5.1.1 **Vegetation Resources Used as ‘Traditional’ Medicinal Plants by Respondents**

The number of plant species used for ‘traditional’ health care purposes in the study area is not known. However, there are plant species that are frequently used. By making use of free-listing techniques, respondents were asked to name plants they use most. The technique is based on the notion that the user will mention first the plants used most before mentioning any other species. The top mentioned plant species mark the frequently used species. The frequently used medicinal plants are shown in figure 5.1.
From the frequently-used medicinal plants in the study area four groups emerge (Figure 5.1). These groups are based on how often a given plant is used by respondents. The groups range from the most frequently used plants to the least. *Strychnos henningssii* (44) is the most used species. *Strychnos henningssii* was mentioned 44 times by respondents. The species is mainly collected from the Eastern Cape and KwaZulu-Natal provinces. It is mostly used for colic remedy and stomach ache. From the group discussions the researcher could deduce that the plant species is the favourite because respondents claim it is effective.
Group (B) is made up of six plant species, the most used species in this group is *Eucomis autumnalis* (33). The plants in this group have three dominant uses. Firstly, *Eucomis autumnalis* and *Zantedeschia aethiopica* are used for the treatment of wounds, burns and cuts. The second use is for coughs, stomach complaints and fever, where *Alepidea amatymbica* and *Artemisia afra* are used. The third emerging use is for stomach complaints, constipation and bladder complaints where *Pittosporum viridiflorum* and *Bowiea vollubilis* are used.

Group (C) does not have species that could be grouped according to their function. The uses vary: among others there is *Clivia miniata* used for menstrual disorder and in childbirth, *Rapanea malanophloeos* used mainly for stomach disorders and constipation, and *Knowltonia vesicaria* used for toothache and colds. Group (D) is mainly used for antenatal and postnatal disorders. *Xysmalobium undulatum* and *Pentanisia prunelloides* are the two species mainly used for this purpose.

‘Traditional’ medicinal plants are not effective in isolation; hence they are combined with others in a mixture or concoction. Most of these species are used to treat more than one ailment. Uses identified are in no way the only ones that the species could be subjected to. They have been singled out on the basis of how often respondents claim to use them (Table 5.1).
<table>
<thead>
<tr>
<th>Species</th>
<th>Treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strychnos henningsii*</td>
<td>Colic, stomach ache</td>
</tr>
<tr>
<td>Eucomis autumnalis</td>
<td>Fractures, childbirth, wounds, boils, venereal diseases</td>
</tr>
<tr>
<td>Zanthedischia aethiopica</td>
<td>Wounds, sore throat, boils, heartburn</td>
</tr>
<tr>
<td>Alepidea amatymbica</td>
<td>Pneumonia, chest pain, stomach complaints</td>
</tr>
<tr>
<td>Artemisia afrfa</td>
<td>Coughs, loss of appetite, blocked nose, stomach complaints</td>
</tr>
<tr>
<td>Pittosporum viridiflorum</td>
<td>Fever, stomach complaints</td>
</tr>
<tr>
<td>Bowiea vollublis*</td>
<td>Bladder complaints, infertility, serves as purgative</td>
</tr>
<tr>
<td>Rapanee malanophloeos</td>
<td>Stomach disorder</td>
</tr>
<tr>
<td>Oleo europaea</td>
<td>Urinary illness, sore throat, blood pressure, worms</td>
</tr>
<tr>
<td>Helichrysum odoratissimum</td>
<td>Wards off evil spirits</td>
</tr>
<tr>
<td>Knowltonia vesicatoria</td>
<td>Colds, headache, alleviate toothache</td>
</tr>
<tr>
<td>Clivia miniata*</td>
<td>Childbirth, hastens parturition, relieves pain</td>
</tr>
<tr>
<td>Acokanthera oppositifolia</td>
<td>Body fatigue, snakebite</td>
</tr>
<tr>
<td>Xysmalobium undulatum</td>
<td>Stomach cramps, headache, indigestion, wounds, after-birth treatments</td>
</tr>
<tr>
<td>Wild verbena</td>
<td>Heartburn, labour and burns</td>
</tr>
<tr>
<td>Scilla natalensis</td>
<td>Wounds, laxative, virility, boils, sores</td>
</tr>
</tbody>
</table>

Source: Field Data. [The asterisk (*) indicates a dangerous plant that should be used with caution - preferably by trained ‘traditional’ health care practitioners]
<table>
<thead>
<tr>
<th>Species</th>
<th>Character Species</th>
<th>Common Species</th>
<th>Companion Species</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Strychnos henningsii</em></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Eucomis autumnalis</em></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zanthedischia aethiopica</em></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><em>Alepidia amatymbica</em></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Artemisia afra</em></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Pittosporum viridiflorum</em></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><em>Bowlesia volubilis</em></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><em>Rapanea malanophlokos</em></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><em>Oleo europaea</em></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><em>Helichrysum odoratissimum</em></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><em>Knowltonia vesicatoria</em></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><em>Clivia miniata</em></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><em>Acokanthera oppositifolia</em></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><em>Xysmalobium undulatum</em></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><em>Wild verbena</em></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Source: Field data [The asterisk (*) indicates a dangerous plant that should be used with caution - preferably by trained ‘traditional’ health care practitioners]
The ‘traditional’ medicinal plants frequently used were further broken down according to the percentage of users. Species that are used by more than 75% of the respondents were classified into character species. Common species are those used by at least 33% of the respondents, and those that are used by less than a third of the respondents are known as companion species (Table 5.2). Some of the species used for ‘traditional’ medicine are collected outside the Western Cape Province, including companion and common species.

Observation shows that character species are frequently used for common ailments such as stomach complaints, chest pain, colds, wounds and burns. Elderly ‘traditional’ health care practitioners use both common and companion species, and were able to mentioned between one and two companion species. These companion species were reported to be toxic. The toxicity of some plants varies with the plant’s growth. At a particular growth stage the plant may either be toxic, or less toxic at another growth stage. These plants need to be used by trained ‘traditional’ practitioners as incorrect use of these plants may result in serious repercussions, including death.

Table 5.3  Toxic Plants

<table>
<thead>
<tr>
<th>Local Name</th>
<th>Botanical Name</th>
<th>Family name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhlungunyembe</td>
<td><em>Acokanthera oppositifolia</em></td>
<td>Apocynaceae</td>
</tr>
<tr>
<td>Umthuma</td>
<td><em>Solanum sodomum</em></td>
<td>Solanaceae</td>
</tr>
<tr>
<td>Umayime</td>
<td><em>Clivia miniata</em></td>
<td>Amaryllidaceae</td>
</tr>
<tr>
<td>Umagaqane</td>
<td><em>Bowiae vollubilis</em></td>
<td>Hyacintheaceae</td>
</tr>
<tr>
<td>Ishwadi</td>
<td><em>Boophane disticha</em></td>
<td>Amaryllidaceae</td>
</tr>
</tbody>
</table>

Source: Field Data
The toxicity of the plants mentioned in Table 5.3 is high. Though ‘traditional’ health care practitioners could not spell out what is toxic about these plants, they singled them as dangerous plants. The Boophane disticha and Clivia miniata are both from the Amaryllidaceae plant family and contain toxic alkaloids. Acokanthera oppositifolia is from the Apocynaceae plant family, and this family also has toxic compounds that make the plants dangerous to use. Despite that, the plants in this family contain substances that relieve pain (Van Wyk et al., 2000).

5.1.2 Plant Utilisation and Plant Families

The exact number of plant families affected in the study area could not be determined by the current project. The study singled out plant families consistently used, and the number of species used informs us on the possible species that will be affected by the harvest rate - if not already affected. These plant families are drawn from the list of frequently used plants (Table 5.1). There are three groups of plant families that could be determined from the data on the basis of their use. (Table 5.4). The Loganiaceae family is most commonly used as ‘traditional’ medicine in the study area. It is used for stomach ache and cleansing gall from the stomach. The same species is used for black gall in cattle. Though the plant is not found in the Western Cape Province, the frequency of use affects the plant in its collection area, namely the Eastern Cape Province. The collection of these plants outside the Western Cape Province has cost implications that compel users to collect more of the species at once, and that in turn has serious repercussions for the sustainability of the species. The other plant families that are affected are depicted in Table 5.4.

The plant families mentioned in Table 5.4 are likely to continue to be affected by the collection rate, mainly because the bulk (80%) of community members who believe in the use of
‘traditional’ medicine and its value, consult ‘traditional’ health care practitioners before consulting medical practitioners. These are the people who uphold the services of the ‘traditional’ health care practitioners. The main reason for visiting ‘traditional’ health care practitioners is attributed to their affordability, availability and the common belief that patients and ‘traditional’ health care practitioners uphold (Gumede, 1990; Davis and Wali, 1993).

Table 5.4  **Affected Plant Families**

<table>
<thead>
<tr>
<th>Name</th>
<th>Frequency of Mentioning</th>
<th>Group</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Strychnos hengsii</em>&lt;sup&gt;*&lt;/sup&gt;</td>
<td>44</td>
<td></td>
<td>Colic remedy, stomach ache</td>
</tr>
<tr>
<td>(Loganiaceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Eucomis autumnalis</em></td>
<td>33</td>
<td></td>
<td>Fractures, facilitates childbirth, wounds, boils, venereal diseases</td>
</tr>
<tr>
<td>(Hycenthaceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Zanthedischia aethiopica</em></td>
<td>31</td>
<td></td>
<td>Wounds, sore throat, boils, heartburn</td>
</tr>
<tr>
<td>(Araceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Alepidea amatymbica</em></td>
<td>30</td>
<td>Group B</td>
<td>Childhood, hastens parturition, relieves pain</td>
</tr>
<tr>
<td>(Apiaceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Artemisia afra</em></td>
<td>29</td>
<td></td>
<td>Coughs, loss of appetite, clears blocked nose, stomach ache</td>
</tr>
<tr>
<td>(Asteraceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Pittosporum viridiflorum</em></td>
<td>28</td>
<td></td>
<td>Pain, fever, colds and stomach complaints</td>
</tr>
<tr>
<td>(Pittosporaceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Rapanea melanophloeo</em></td>
<td>24</td>
<td></td>
<td>Stomach pain</td>
</tr>
<tr>
<td>(Myrsinaceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Oleo europaea</em></td>
<td>20</td>
<td>Group C</td>
<td>Urinary illness, sore throat, lowers blood pressure, kills worms</td>
</tr>
<tr>
<td>(Oleacea)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Knollonia vesiculosa</em></td>
<td>18</td>
<td></td>
<td>Toothache, colds, flue, headache</td>
</tr>
<tr>
<td>(Ranunculaceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Clivia miniata</em></td>
<td>17</td>
<td></td>
<td>Childhood, hastens parturition, relieves pain</td>
</tr>
<tr>
<td>(Amaryllidaceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acokanthera oppositifolia</em></td>
<td>15</td>
<td></td>
<td>Body fatigue, snakebite</td>
</tr>
<tr>
<td>(Apocynaceae)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data [The asterisk (*) indicates a dangerous plant that should be used with caution - preferably by trained ‘traditional’ health care practitioners]
5.1.3 **Cultural Use of ‘Traditional’ Medicinal Plants**

The link between the use of vegetation resource and culture is not well known. In the process of carrying out certain rituals and cultural values, certain species are used. Respondents acknowledged the role of vegetation resources in their cultural activities.

Sixty per cent of the respondents indicated that vegetation resources play a significant role in their culture. Though these resources are used in cultural activities, major ‘traditional’ ceremonies are held in their place of origin (rural areas) mainly because that is the place they defined as ‘home’. About 27% answered negatively as they could not ascertain the role of vegetation resources in their culture, they felt that vegetation resources are mainly for firewood, building material and ‘traditional’ medicine. Thirteen per cent of the respondents (predominantly women) declined to answer cultural questions.

Further attempts were made to determine the specific role played by vegetation resources in the respondents’ culture. The specific role played by vegetation resources in culture is important in the sense that it gives an indication of the value people attach to the resources they use for their cultural activities (Table 5.5).

The above-mentioned findings support Dewes’ (1993) argument that there is a link between indigenous knowledge and culture. Local people perceive indigenous knowledge as part of their overall culture which is a way of life passed down from generation to generation. According to Kale (1995), Western medication does not always yield positive results when curing illness stemming from ‘traditional’ cultures and beliefs. People with a ‘traditional’ lifestyles resolved
their problems and satisfied their needs by embarking on experiments, problem-solving and adaptation experiments. Results of these experiments are validated through word of mouth and socialisation. Wisdom gained is transmitted from one generation to the next (Rhoades and Bebbington, 1995).

Table 5.5  The Role of Vegetation Resources in the Culture of the Respondents

<table>
<thead>
<tr>
<th></th>
<th>Strengthen Culture</th>
<th>Distinguishes Culture</th>
<th>Dignify Culture</th>
<th>Fulfilling Role</th>
<th>No. of Respondents</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>32</td>
<td>25</td>
<td>27</td>
<td>16</td>
<td>20</td>
<td>120</td>
</tr>
<tr>
<td>Percentage</td>
<td>26%</td>
<td>21%</td>
<td>23%</td>
<td>13%</td>
<td>16%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field data

Seventy per cent of the respondents noted a culture-related role of resources, while only 30% indicated non-cultural responses. There is no specific role played by resources in the culture that has been mentioned by everybody (Table 5.5). There are three culture-related roles that vegetation resources play, namely that it strengthens, distinguishes and dignifies culture.

Twenty-six per cent (32) of the respondents noted that vegetation resources strengthen their culture. Cultural practices and events carry indigenous knowledge that serves to disseminate socially-inherited practices that are not documented. Through cultural activities, knowledge on the culture is imparted to the next generation. The main concern is that the young generation in the urban environment is not keen to attend these activities as they do not recognise the value of indigenous knowledge. Non-participation in cultural activities is a possible reason why indigenous knowledge is declining in the urban environment.
5.1.4 **Plant Species Used for Cultural Activities**

Particular plant species are used for cultural activities. The current study single out a few species used for cultural purposes. An analysis of the respondents' responses singled out *Boophane disticha* as the most frequently-mentioned (55 times) species (Table 5.6).

<table>
<thead>
<tr>
<th>Plants Species</th>
<th>Family Name</th>
<th>No. of Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Boophane disticha</em></td>
<td>Amaryllidaceae</td>
<td>55</td>
<td>46%</td>
</tr>
<tr>
<td><em>Olea europaea</em></td>
<td>Oleaceae</td>
<td>36</td>
<td>30%</td>
</tr>
<tr>
<td><em>Ptaeroxylon obliquum</em></td>
<td>Ptaeroxylaceae</td>
<td>30</td>
<td>25%</td>
</tr>
<tr>
<td><em>Plumbago auriculata</em></td>
<td>Plumbaginaceae</td>
<td>26</td>
<td>22%</td>
</tr>
<tr>
<td><em>Bulbine natalensis</em></td>
<td>Asphodelaceae</td>
<td>16</td>
<td>13%</td>
</tr>
<tr>
<td><em>Balanites malighamii</em></td>
<td>Balanitaceae</td>
<td>13</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: Field Data. Note: The number of responses exceeds the sample because of multiple response

*Boophane disticha* and *Olea europaea* are used during passage to manhood. The remaining species are used in different rituals including the process followed by women to maturity and introducing a bride to the bridegroom’s family. Understanding the value of vegetation resources to humankind enable them to treat species used for cultural purposes with veneration. According to Sambo and Munyenymbe (1999) the respect showed by vegetation resources users towards resource utilisation could be used as a good base for building conservation solutions.
Table 5.7  Uses of Vegetation Resources in Cultural Activities

<table>
<thead>
<tr>
<th>Local Name</th>
<th>Botanical/Family Name</th>
<th>Uses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ishwadi</td>
<td><em>Boophane disticha</em> (Amaryllidaceae)</td>
<td>Initiation school and passage to manhood</td>
<td>42%</td>
</tr>
<tr>
<td>Umatshinithini</td>
<td><em>Plumbago auriculata</em> (Plumbaginaceae)</td>
<td>Focus for ‘traditional’ healers, provides security</td>
<td>30%</td>
</tr>
<tr>
<td>Umquma</td>
<td><em>Olea europaea</em> (Oleaceae)</td>
<td>Cultural ceremonies, building initiate’s hut</td>
<td>27%</td>
</tr>
<tr>
<td>Umthithibala</td>
<td><em>Bulbine natalensis</em> (Asphodelaceae)</td>
<td>Ward off evil spirits and evildoers, ‘traditional’ security</td>
<td>20%</td>
</tr>
<tr>
<td>Umnulu</td>
<td><em>Balanites malighamii</em> (Balanitaceae)</td>
<td>Sprinkle around homestead to provide security</td>
<td>13%</td>
</tr>
<tr>
<td>Umthathi</td>
<td><em>Ptaeroxylon obliquum</em> (Ptaeroxylaceae)</td>
<td>Cultural ceremonies</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Field Data.

Sixty-nine per cent of the respondents maintained that *Boophane disticha* and *Olea europaea subs africana* are used during the process of passage to manhood (Table 5.7). Forty-two per cent of the respondents held that *Boophane disticha* fulfills an important role in cultural activities. Dry scales of the bulbous plant are applied to boils, wounds and burns. During circumcision these dry leaves are applied directly to the wound and always changed with the dressing. The interval or frequency of dressing changes is variable. *Boophane disticha* has been, and is still the trusted wound disinfectant used during the process of initiation mainly because of its antiseptic properties. These results confirm Meintjies’ (1998) and van Wyk’s *et al.*, (2000) findings on its value and role during the process of passage to manhood.
The transition to manhood is a process that exposes initiates to a number of life skills. According to Magubane (2001) initiates are taught sexual matters and different codes of respect like lowering their eyes when speaking to adults. The passage to manhood indelibly instills values and mores of the society to the young people. Constructing the makeshift hut for accommodation during the period of seclusion is often the responsibility of the initiate. Traditionally *Olea europaea* is the preferred species for constructing the huts commonly known as “ibhuma”. Twenty-seven of the respondents maintained that *Olea europaea* is used in building the hut which is symbolic of one’s home. The hut should last the initiates for the duration of seclusion. *Olea europaea* is used because it is strong and durable. The same species is again used to create a stick (‘umnqayi’) that is presented to initiates on the final day of the seclusion period before they return to society. The stick symbolises peace and the ability of the person presented with it to resolve conflict without a physical fight. It is the very same stick (‘umnqayi’) that is carried by adult men when consulting a ‘traditional’ health practitioner (Magubane, 2001). In the urban environment *Olea europaea* is not widely available. In its absence, the Port Jackson tree (alien species) is used. Responses show that 30% noted that *Plumbago auriculata* (*Plumbaginaceae*) enables the practitioners to focus on the problem of the patient and to determine ways of healing that specific illness.

The above-mentioned species have the cultural value and are therefore used during traditional ceremonies. Cultural activities impart knowledge on certain aspects of culture, and also expose people to plants species used during their cultural activities. This has implications for vegetation resource conservation and management. It is likely that species used in cultural activities will be treated with respect, and attempts will be made to protect them. The challenge is to increase the
number of people who are aware of the value of these resources in their culture. An awareness programme could positively impact on the attempts to protect natural resources. In Malawi, many local farmers show respect for cultural beliefs and traditional values related to resources utilisation and that provided basis for building conservation solutions (Sambo and Munyenyebe, 1999).

5.1.5 Documentary Analysis

The use of ‘traditional’ medicinal plants in the study area has not been documented before, partly because ‘traditional’ health care practitioners are very secretive about their knowledge of plants used, and partly because of their previous negative experiences with research workers. The secretive nature of ‘traditional’ health care practitioners is linked to their attempt to protect their indigenous knowledge, which is not protected by any legislation in the country. The protection of indigenous knowledge and issues of property rights is a serious matter.

The negative experience ‘traditional’ health care practitioners had with researchers is another reason for their secrecy. The exploitative nature of research undertaken by educational, health institutions and NGOs introduced a high level of scepticism by the community, especially on the issues of indigenous knowledge. In the past, knowledge produced by people contributing to research work has neither been acknowledged, nor have respondents been given feedback of the study in which they participated. The lack of acknowledgement of participants’ contribution to research work creates high levels of mistrust towards researchers. In the current study, attempts were made to build a good rapport with the respondents. Community members tend to categorise researchers as either “insiders” or “outsiders” with the former as someone who belongs to the
community being researched. Usually “insiders” are given access to information they need because of the identified commonalities, among other things, language. “Outsiders” have the challenge to build an amicable working relationship with the leaders of different associations, which then makes it easier for them to access to the necessary information needed from the respondents (Ntlebi, 1998).

Observations have shown that community members are concerned about their knowledge. The interviewer (researcher) was subjected to an intensive interview session by the community about his intentions. The respondents had to be satisfied with the answers the researcher provides to their questions. The rapport-building process helps in alleviating the difficulty associated with the provision of information. This serves as a confirmation of Viljoen’s (1990) study that rapport and confidence stimulate effective participants in the research.

Despite the fact that traditional healthcare practitioners are secretive about their knowledge and had bad experience with researchers in the past, the researcher managed to access documents from them. These included ‘minutes’ of their previous meetings and other correspondence. These documents revealed the plant species that are available and used in the study area. The contents of these documents were compared with data gathered through other research techniques in this study. The results of the analysis revealed that ‘traditional’ health care practitioners have considerable knowledge that could be publicised upon recognition of their practice and profession by the Government.
5.1.6 **Focus-group Discussion**

The findings of the focus group discussions support those from the questionnaire survey. In fact, the focus group provided a reason for the use of ‘traditional’ medicine in primary health care. The use of vegetation resources is a long-standing tradition which has its roots in the ancient past. It reflects ‘traditional’ wisdom embedded in the healing profession. One participant pointed out that:

“The use of ‘traditional’ medicine is our wisdom traceable from our ancestors. In fact, to some of us it is a source of living. I have never worked for an employer ever since I was born. I used this knowledge from my early age. The ‘traditional’ medicinal plants used today manifest African knowledge. It shows that we are clinging tenaciously to our values and knowledge which has governed the existence of the very same resources for years.”

There is pride in the use of vegetation resources by ‘traditional’ health care practitioners. The use of ‘traditional’ medicinal plants in the provision of health care is accepted as a way of expressing the value of indigenous knowledge, and also as a way of maintaining and preserving it. Indigenous knowledge carries what participants defined as the core of being an African, namely knowing where you come from. One participant stated the following:

“The use of ‘traditional’ medicine shows that we accept our own knowledge as Africans, we would like to preserve it for the future generations. The application of indigenous knowledge on health is just a portion of this knowledge. It does not end there. It covers innumerable aspects of social living. The knowledge carries indispensable information, and that is the unique characteristic of our culture.”

The focus-group discussions revealed that age and experience have significant influence on the number of species that the ‘traditional’ health care practitioner knows and uses as medicine. About 47% of the participants above 51 years of age could list a minimum of five species and uses per person. Observation shows that there is an element of reticence among ‘traditional’ healers. It was observed in the group discussions and in the presence of fellow colleagues, that participants do not freely and openly share information. On the contrary, when interviewed individually, they were more expressive. The scepticism could be attributed to the fear that the
respondents could reveal the use of plant species that others are not aware of, and that will trigger competition for the collection and use of those species. By and large, the findings of focus-group discussions concur with those emanating from the transect walks. Moreover, during the transect walks, respondents emphasised that medicinal plant species are rarely used in isolation, and that they are effective and strong when used in conjunction with others.

5.1.7 **Observation of Vegetation Resources Utilisation by Local Community**

Observations conducted through the Standard Interview Research Form (SIRF) confirmed findings revealed by the questionnaire. The use of different species seems to overlap. One plant species has many applications, which then causes that plant to be used in combination with many others to address an identified illness. Throughout the process of observation, the mixing of different plant species to form a concoction for an illness emerged as a domain that exclusively belonged to ‘traditional’ health care practitioners. The ‘traditional’ medicine preparatory process is considered as the only knowledge possessed by ‘traditional’ heath care practitioners that cannot be taken away. One respondent held that:

“Nowadays many people know of a handful of ‘traditional’ medicinal plants that we use. What they do not know is how to mix them to yield desired results - that will remain our knowledge”.

Observation also revealed a lot of medicinal plant outlets in the study area owned by ‘traditional’ health care practitioners and commercial gatherers. Some ‘traditional’ health care practitioners buy medicine plants from these outlets, although there is a claim that plants purchased from the local shops are less potent than those collected by ‘traditional’ health care practitioners from the wild. The establishment of medicinal plants markets is indicative of the rising need for medicinal plants in the study area. The implication of selling ‘traditional’ medicinal plants is unprecedented, and unsuitable harvesting methods will in turn affect the users.
The current study provides evidence that vegetation resources in the study area are used for the provision of firewood and health care as medicinal plants and in cultural activities. Such use has socio-economic spin-offs, as firewood is sold to community members at a price. The use of firewood as a source of energy is a well-known phenomenon in Africa, however, the selling thereof seems to indicate a considerable level of poverty and unemployment.

‘Traditional’ health care practitioners are the main collectors and users of medicinal plants used for the provision of primary health care. The number of medicinal plants used in the provision of primary health care in the area is not known, mainly because ‘traditional’ health care practitioners collect them outside the study area. This chapter has outlined the frequently-used plant species and noted that ‘traditional’ medicine are not used in isolation, but in conjunction with others. ‘Traditional’ health care practitioners have much more knowledge of ‘traditional’ medicinal plants than other members of the community, and by virtue of their knowledge and as far as resource conservation is concerned, they could be a useful resource for their communities.

The use of vegetation resources for cultural purposes is seen as a platform where knowledge on culture and plant species used is imparted to the next generation. This is likely to influence people’s attitudes towards the use and conservation of medicinal plants. People in the urban environment adapt their needs to the available resources.
Olea europaea subsp. africana is the main species used for building a hut during the process of seclusion for the initiates, and in its absence it is replaced by the Port Jackson tree. The use of different species shows that people can adapt their practices in response to what is available.

It is necessary to conduct a detailed study on the use of resources in culture in Khayelitsha to assess and evaluate people’s understanding of plant species in and outside Khayelitsha that are used for cultural purposes. The study could assist in formulating awareness programmes on resource utilisation and management, thereby influencing people’s attitudes towards the conservation of plants.

5.2  **Spatial Distribution of ‘Traditional’ Medicinal Plants in the Study Area**

The spatial distribution of the medicinal plants in Khayelitsha does not follow any predictable pattern. However, areas close to the wetlands outside residential areas appear to be favourable sites for medicinal plant collection. Respondents indicated that collection sites within Khayelitsha are dwindling mainly because of the increasing number of ‘traditional’ health care practitioners and the population. The northern part of Khayelitsha is fertile land characterised by wetlands. Areas bordering the wetlands are ‘traditional’ medicinal plants collection sites for Khayelitsha (Figure 5.1). The clustering of collection sites in and around the wetlands suggest that the wetlands are a rich source of medicinal plants, but the increasing number of ‘traditional’ medicinal plants users put pressure on the species found in the wetlands (Table 5.8).
Table 5.8  Some ‘Traditional’ Medicinal Plants in the Khayelitsha Wetlands

<table>
<thead>
<tr>
<th>Local Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ikhathazo</td>
<td><em>Alepidea amatymbica</em></td>
</tr>
<tr>
<td>Ilabatheka</td>
<td><em>Hypoxis latifolia</em></td>
</tr>
<tr>
<td>Imfincamfincana</td>
<td><em>Leonatis spp.</em></td>
</tr>
<tr>
<td>Inguduza</td>
<td><em>Scillia natalensis</em></td>
</tr>
<tr>
<td>Inhlabana</td>
<td><em>Aloe ferox</em></td>
</tr>
<tr>
<td>Intelezi</td>
<td><em>Aloe arborescens</em></td>
</tr>
<tr>
<td>Isidakwa</td>
<td><em>Dioscorea dregeana</em></td>
</tr>
<tr>
<td>Umhlabevuthwa</td>
<td><em>Datura stramonium</em></td>
</tr>
<tr>
<td>Umquma</td>
<td><em>Olea europaea</em></td>
</tr>
</tbody>
</table>

Source: Cape Metropolitan Council (1999)

On the southern part of Khayelitsha the proximity of False Bay and the sea (Figure 5.2) has a negative effect on ‘traditional’ medicinal plants. There is a belief among users that ‘traditional’ medicinal plants found in close proximity to the sea are not as effective as plants found far away from the sea. It is said that when medicinal plants absorb the salty seawater the efficiency of the plant deteriorates. Medicinal plants found in areas close to the sea are therefore not preferred. It is this belief that causes most users to collect medicinal plants from even outside the Western Cape Province. Respondents indicated that they often go to the Eastern Cape to collect specific medicinal plants they need.
5.2.1 ‘Traditional’ medicinal plant collection sites

The main collection site is the area north of Green Point (Figure 5.2). The site covers an area starting approximately 500m away from Green Point residence to the corner of Spine Road and the National Road (N2). The area has wetlands and is fertile. The fertility explains why this site is suitable for medicinal plant collection. Moreover, it is several kilometres away from the sea.

This site has plant species used by ‘traditional’ health care practitioners. Respondents indicated that some of the plant species used during the process of initiation were once found in this site. Examples include *Boophane disticha* and *Olea europaea* - the main species used during the process of initiation. However, due to high demand it is no longer found at the site. The widespread growth of arum lilies in the Green Point area of Khayelitsha led to the establishment of the Arum Lilies for Export Project in May 2000. The project was under the auspices of Tygerberg Administration. In the southern part of the site the arum lily plant species were once found in close proximity and in abundance. However, due to high demand there has been a drastic decline in the species found at this site. The decline cannot be quantified, but respondents indicated that the number of species found in this site is far less than it was a few years ago.

The area close to Green Point residential area is fenced-off and has been used for the Arum Lilies for Export Project. The criterion used for the Arum Lilies for Export Project was based on the fact that the arum lilies grow naturally in the area; hence no additional fertiliser was needed. Instead of identifying another site that might not be suitable for the project, it was decided that the best would be to use the soil where the plant is already growing. Though the project was structured such that 50% of the profits should filter down to the community through community
Figure 5.3 Medicinal Plants Collection Site in Khayelitsha (Green Point and Macassar)
organisations, it did not involve the direct users (‘traditional’ health care practitioners) of this plant. Community involvement was minimal - only five people were employed full time. An unknown number of people were employed on a seasonal basis (Asmal, 2000). These workers were not paid proportional to their harvest. It could therefore be deduced that there was no resource exploitation as a result of the nature of the work. Community users were not involved, and the lack of involvement of local users resulted in resource use conflicts.

5.2.2 Vegetation resources conflicts

Conflict over resources in Khayelitsha occurs between the community users (‘traditional’ health care practitioners) and Tygerberg Administration. The establishment of the Arum Lilies for the Export Project was the source of conflict between the two parties. There were increasing demands by the local community for land within the wetlands for horticulture. Tygerberg Administration was interested in sustainable conservation of the arum lilies and, to an extent, its economic spin-off. In the development of the Arum Lilies for Export Project the users of the arum lilies were marginalised, and that triggered conflict. The site of the project was fenced off to prevent access by other users, including ‘traditional’ health care practitioners, who had access to the area before. The fencing of the site was an attempt to prevent livestock from damaging these plants. The exact number of livestock in Khayelitsha is not known, but it was estimated at 500 (Oonyu, 2001).
The fenced-off arum lily area is defined by resource users as a rich medicinal plant site in Khayelitsha. Seeing that there is a link between resource use and the provision of ‘traditional’ health care in the community, fencing the site by Tygerberg Administration was viewed as an attempt to block the use of ‘traditional’ medicinal plants in the provision of health care. The concern is that the arum lilies were freely available to any member of the community before the establishment of the Project.

5.2.3 Firewood collection sites

Community members ordinarily use the far western part of the area mostly for firewood collection purposes. The western part of the area is heavily vegetated with shrubs and Port Jackson trees, a species used for firewood. Men are observed to be mainly responsible for collecting firewood. Traditionally firewood collection is the women’s responsibility, however, in the study area men and not women are collecting firewood. That could be attributed to the safety and security of women. Women are assaulted or raped while collecting firewood. Men collect firewood and sell it in bundles. As mentioned earlier, the firewood prices range between R15.00 and R40.00 depending on the weight of the bundle.

5.2.4 Initiation sites

Part of the Green Point area is used as an initiation site as well. The criteria used for an initiate site is that, it should be at a distance from the residential areas, preferably bushy, and it should have a river or any form of water supply. The water supply should not be the one that is used by the community. Initiates are strictly prohibited from walking into residential areas, and are also disallowed to use resources used by the community on a daily basis.
The main users of the site (as initiation sites) are people residing in Green Point and the sprawling informal settlement around it, particularly the informal settlement known as DM Temporal. Generally initiation sites are predominantly used during June and July and during November and December in summer. This period corresponds with school holidays.

5.2.5 **Macassar sand dunes**

The Macassar sand dunes play a major role for the surrounding communities, including Khayelitsha. According to the Cape Metropolitan Council (1999) it is estimated that surrounding communities depend partially on these dunes. These dunes provide a source of income for a number of locals who collect firewood from the dunes and sell it. The convoluted Macassar sand dunes do not only serve as a collection site for firewood, but also for medicinal plants. However, these dunes are not frequently used mainly because they are much closer to the coast.

In these medicinal plant collection sites the common property resources rule, as advocated by Miller (1996), applies. The resources are available for everyone to use. There are no rules or management procedures adhered to in the managing of and harvesting in these collection sites. The use of the resources without any form of management has culminated in a situation where the resources base has declined drastically. The decline affects the users because they rely on the use of these plant species in rendering primary health care to the community.
5.2.6 The impact of declining vegetation resources

In response to the decline of resources, users are compelled to collect resources outside Khayelitsha. Areas of plant collection include the Paarl Mountains and Stellenbosch area. In fact, more than 50% of the respondents mentioned that they collect medicinal plants anywhere in the province, but stressed that the above-mentioned areas are their first preference. Users have indicated that though they collect resources within the Western Cape, most of their medicinal plants are collected outside the province. As indicated before, more than half (55%) of Khayelitsha’s population is from the Eastern Cape (Cape Metropolitan Council, 1999). The mode of transport depends on the collection sites but predominantly motor vehicles are used, particularly when collecting medicinal plants from the Eastern Cape Province. Respondents indicated that relatives who live in the Eastern Cape Province, occasionally collect the medicinal plants and make arrangements to send the plants to Cape Town through public transport or other relatives or acquaintances.

The current study showed that about half of the sample (48%) is from the Eastern Cape. The number of years these users have been using vegetation resource ranges between 4 and 40 years. They are more familiar with the Eastern Cape than with the Western Cape. The specific location where the users collect medicinal plants in the Eastern Cape falls out the scope of the current project. Nevertheless it is worth mentioning that the collection of medicinal plants from the Eastern Cape has cost implications. It is the cost implication that prompted users to embark on the conservation by cultivation initiatives whereby they cultivate the most used plants species in their backyards. The cultivation of ‘traditional’ medicinal plants in Khayelitsha lessens transport costs for collection from other areas or provinces.
5.3 ‘Traditional’ Vegetation Resource Management Strategies and Approaches Adopted by Respondents

Resource management is of crucial importance in sustaining resource utilisation. Directly or indirectly, resources users covertly have a responsibility to ensure the sustainable management of the resources they use. It is well known that sustainable resource management holds true for conservationists and environmentalists. What is less known is that other primary users like ‘traditional’ health care practitioners have the same responsibility. For the latter resource utilisation serves as their lifeblood, as their practice depends on the availability of the resources; hence for their practice to be sustained there should be a constant supply of vegetation resources. Despite that, there is still insufficient knowledge about ‘traditional’ ideologies in resource conservation and management. Questions to be asked are: How was it possible that African people have been living in this world for such a long time without organising knowledge and discovering new knowledge? What knowledge did they use to manage and generate knew knowledge? How did they manage resources before the advent of the scientific mode of conservation? These are the questions that were asked in the IKS public hearing held in 2000. The answers to these questions are clouded by the secrecy that characterises indigenous knowledge practitioners, particularly ‘traditional’ healers.

This section investigates ‘traditional’ resources management strategies that are predominantly used by the 120 respondents who were chosen using the stratified random sampling in Khayelitsha. In order to have a better understanding of ‘traditional’ resources strategies used by ‘traditional’ health care practitioners, this chapter examines management strategies that are applied by the users at the current location.
The purpose is to determine ‘traditional’ resources strategies that are used in the urban environment and hindrances to the application of these strategies will also be outlined.

5.3.1 **Vegetation resource management strategies in the study area**

‘Traditional’ resources management measures are part of indigenous knowledge possessed by ‘traditional’ health care practitioners. However, these measures have not been exposed, and very little is known about ‘traditional’ resource conservation. The main reason is that most indigenous knowledge bearers’ practices are characterised by “secrecy”. The secret behaviour cuts across all spheres of resource utilisation, application and conservation. It is the secret behaviour of indigenous knowledge bearers that creates a misconception about their knowledge. To understand the context in which indigenous knowledge practitioners apply their secrets, it is crucial to understand the origin of their secretive behaviour.

The source of the secrecy is the African Customary Law. This law only recognised communal ownership of knowledge and little reward goes to individual innovations. In reaction to the communal ownership of knowledge, indigenous knowledge practitioners - particularly ‘traditional’ health care practitioners - resorted to “secrecy” to protect their knowledge. The secrecy has for long clouded the true value and activities of indigenous knowledge. The secretive behaviour stems mainly from the lack of public protection of intellectual property rights in the African customary law system, and the threat of stealing one’s knowledge (IK Notes, 2001 and IK Notes, 2003). The effect of the secretive behaviour has also been observed in this research in Khayelitsha.
Fifty-three per cent of the 120 respondents indicated that general resource management measures are taken to ensure resource sustainability. These measures are outlined in Table 5.9. However, three in five of the respondents indicated that these approaches are not always clearly seen in the urban setting. These approaches hinge on a number of factors, namely the availability of land, whether there is an organised community and enforcement by community leaders. The lack of a piece of land earmarked for use by urban practitioners curtails the manifestations of these approaches, as it is difficult to monitor the application of these unwritten rules.

Table 5.9  ‘Traditional’ Vegetation Resource Management Approaches

<table>
<thead>
<tr>
<th>Approach</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customary practices</td>
<td>51</td>
<td>43%</td>
</tr>
<tr>
<td>Resource annexation</td>
<td>10</td>
<td>8%</td>
</tr>
<tr>
<td>Number of ring barking</td>
<td>37</td>
<td>31%</td>
</tr>
<tr>
<td>Collecting limited quantity</td>
<td>22</td>
<td>18%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>120</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field Data

5.3.1.1  Customary practice of the respondents

The resource management approaches that respondents revealed stresses customary practices and rules. Two in five respondents (43%) indicated that beliefs, rules and taboos play an important role in the management of resources. ‘Traditional’ medicinal plants should be collected in accordance with traditions and taboos which prevent over-exploitation. Respondents held that taboos and unwritten rules have been used in the past. Resources were protected and managed
mainly by adhering to these unwritten rules. Built into these practices is respect for resources and the understanding that these resources must be available for the next generation.

The dependency on resources necessitated that these resources be treated with veneration and consequently be protected by users.

5.3.1.2 Ring barking

Respondents held that another long-standing practice was that of sustainable bark removal. Sustainable bark removal entails an understanding that the ring barking of trees and removal of whole plant roots are not allowed. ‘Traditional’ health care practitioners know that ring barking kills the species. Ring barking any tree species causes its immediate death. In KwaZulu-Natal ring barking has reduced the assegai and the large stinkwood tree drastically. These species were also formerly found in Transkei and the Eastern Cape Province (Enviro Facts 9, 1993). Respondents held that ring barking is forbidden because it is unsustainable, however they stated that, should one remove part of a tree’s bark (normally on the sides of the tree), one is expected to cover the part where the bark has been removed with cow-dung. Cow-dung is said to facilitate growth. In the absence of cow-dung black paint becomes the necessary option. It is said that the black paint prevents the negative effect of sunlight on the part where the bark has been removed.

This study did not ascertain the effect of black paint on trees that had barks removed. In Cameroon, sustainable bark removal has been taken to a level where a policy was formulated on the basis of guidelines developed. The policy states that only 50% of the available bark in the harvestable tree should be stripped. There should be a waiting period of at least 4-5 years, and only thereafter the remaining 50% may be removed. This period provides sufficient time for the bark to grow back (Bell, Marcelin and Ndam, 2003).
More or less the same is followed with regard to the cutting of plant roots that have medicinal value. Procedurally after cutting the roots of a plant, ‘traditional’ health care practitioners use a tape to cover the cut end of the roots, which is then buried in the soil. This is said to increase the longevity of the plants regardless of the part of the roots that have been removed.

5.3.1.3 Selective harvesting

Respondents held that traditionally health practitioners collected medicinal plants that would be used immediately. Plants were not always collected in bulk as a result of a lack of storage space. Selective harvesting is a form of harvesting that promotes conservation and sustainability in that users collect limited portions for use and leave the rest for other users. Such practice has a lot in common with principles of resource conservation, which stresses that resources are limited and hence should not be wasted (Miller, 1996). However, the dwindling resource challenge for the ‘traditional’ resource management approach, is that users in the urban setting collect more for themselves, thereby further diminishing the available stock.

5.3.1.4 Limited quantity in collection

Another important approach that guides resource management is the collection of limited quantity. Eighteen per cent (22) of the respondents adopted this approach. This approach stresses that users collect a limited quantity that is to be used immediately. However, collecting a limited quantity is challenged by a number of factors. The cost and distance travelled for collection forces users to violate the principle of limited quantity collection. According to ‘traditional’ health care practitioners harvesting in bulk constitutes unsustainable harvesting and is forbidden. However, the demand of the medicinal plants prompts users to collect more than they should,
regardless of the consequences of such bulk collection. Linked to the demand is the reason for the collection of medicinal plants. If the reason is commercially motivated, this mode of conservation is severely challenged and more often neglected.

5.3.2 Resource “Annexation”

A mere 8% mentioned resource “annexation” as an approach used in resource conservation and management. Resources annexation refers to an approach whereby users “annex” a piece of land and prevent other users from using it. The main aim is ownership and the control the resources found in the “annexed” land. On the positive side resource “annexation” protects resources; however, on the negative side, it triggers resource conflicts. Preventing other users from accessing a common property resource is a source of conflict. In Ntabazinduna, Zimbabwe, where annexation of a land was common, disputes over resources have risen (Clarke, 1994).

Although a huge majority of respondents raised ‘traditional’ approaches to resource management, the question is, to what extent these approaches are practiced in the urban environment, particularly in Khayelitsha? Resource management practices evolve continuously as the demand made on the society changes. According to Clarke (1994) old conservation traditions yield to the pressure of the modern world. The breakdown of customary practices is the function of land pressure, but also a function of younger people who have education and no longer believe in these customary practices (Clarke, 1994).
The above-mentioned approaches do not always manifest themselves in Khayelitsha. These approaches are general approaches that health care practitioners know should be followed in resource conservation. However, in Khayelitsha, these approaches are not easy to observe. What is observed in Khayelitsha is privately owned gardens in the ‘traditional’ health care backyard. From such observation it could be deduced that the resource ‘annexation’ in urban areas takes the form of private gardens where the users own and have control over the resources. However, in Khayelitsha and surrounding areas the respect for nature and vegetation resources has been destroyed by the existence of abject poverty. Poverty forces people to use resources unsustainably; hence 47% of the respondents held that there is no resource management approach that is generally adhered to by community users. The lack of resource management is attributed to the lack of an earmarked piece of land where ‘traditional’ health care practitioners can have control of the use of the resources, thereby applying their knowledge of resource management. A respondent in the group discussion succinctly summed up the view held by many respondents:

“The Government should give us land to cultivate ‘traditional’ medicinal plants. We will cultivate plants, monitor their growth and we will then show you how we protect these medicinal plants”.

A large number of the respondents (56%) held that resources in Khayelitsha are used without measures to prevent extinction. What is taking place in the study area could be likened to the phenomenon that Miller (1996) called “the tragedy of the commons”, where common property renewable resources which no-one owns but are available for all are over-utilised. The problem with the common property resource is that users do not realise the cumulative effect of exploiting the resources. Individuals hold the view that the little they use is not enough to matter. However, the cumulative effect has dire consequences for the users and could ruin the resources to such an extent that there will not be any left for the users to benefit from (Miller, 1996).
The reaction of the ‘traditional’ medicinal plant users to the decline is that they are forced to collect their ‘traditional’ medicinal plants outside the bounds of Khayelitsha and even outside the province. Almost all the ‘traditional’ medicinal plant users acknowledged that they collect a bulk of their ‘traditional’ medicinal plants from the Eastern Cape. They collect these plants with the intention to use them immediately, but they also cultivate some of these plant species in their private gardens in their backyards. The Eastern Cape is a preferred collection area. As mentioned earlier, the current study showed that about half of the sample (48%) is from the Eastern Cape. In the light of this finding it could be argued that respondents are familiar with species found in the Eastern Cape and their specific location.

5.3.3 Vegetation Resource Conservation Strategies and Backyard Cultivation

Fifty-eight per cent (70) of respondents have private gardens in their backyards, while 42% do not have private gardens. The 42% who do not have private gardens admit that these gardens are important and that they would like to own ‘traditional’ medicinal plants gardens but they do not have space in their backyards. The trend observed in the current study is that almost all the respondents who come from the Eastern Cape have private gardens, particularly those that are above 41 years old. Educational attainment does not seem to have any bearing with the need to have a private medicinal plant garden. However, those who have been practising for more than five years have gardens while those who have less than five years in practice do not have gardens yet. Through informal discussions, it appeared that having a private garden seems to be a necessity, particularly in the light of declining stock in the wild.
The majority of the respondents (52%) stated that having a private backyard garden ensures the availability of the multi-purpose and frequently used plants. These private gardens cut the need for travelling and the cost involved. Twenty per cent of the respondents mentioned that private gardens are the only way resource users could counteract the declining wild stock. The argument is that it is easier to take responsibility for the medicinal plants in one’s own private garden than for the medicinal plants that are available to everyone in the wild. A mere 9% of the respondents cited complications associated with the collection of these resources. The complications include a long process that needs to be followed to have an access and harvesting permit to certain areas. It is said that the absence of access permits often leads to arrest by conservation authorities. One in five of the sample of 120 said it is essential to have a private garden, but did not provide a specific reason for this statement.

Respondents indicated that most of the species they have collected outside the province thrive in the Western Cape. The soil type and the climatic conditions in the Western Cape affects only a few species used for ‘traditional’ medicine. Kraal manure is used to fertilise the soil. If ‘traditional’ health care practitioners cultivate plant species collected from other areas and even other provinces, and these species eventually thrive in the Western Cape Province without any artificial assistance, it implies that their knowledge of plant cultivation is relatively adequate. They have a working knowledge of medicinal plant species that could thrive and those that cannot thrive in the province. The cultivation of these medicinal plants reveals a great deal about the cultivation and resource management skills of ‘traditional’ health care practitioners.
5.3.4 Vegetation Resources: Conservation by Cultivation

An overwhelming majority of the respondents (90) mentioned medicinal plant cultivation as the main reason for wanting a piece of land. Roughly three in five of these respondents were above 41 years old and 33\% (40) came from the Eastern Cape. The cultivation of medicinal plants ensures availability in times of emergency, but more importantly conservation of species that are not easily obtainable due to the declining stock. Having a piece of land where certain species are cultivated for ‘traditional’ primary health care could therefore be interpreted as a measure of conservation by cultivating what is available for future use. What respondents raised in the current study confirm common practices of ‘traditional’ healers in the rural areas of Africa. Small plots of land near homesteads have been observed and used as home gardens throughout the African continent. These gardens serve family needs which include medicinal plants (Rukangira, 1997). In an urban setting these small plots take the form of private gardens, and that marks the transfer of rural practices into the urban areas.

The decline of medicinal plants in the study area necessitated that ‘traditional’ health care practitioners should collect their plants beyond Khayelitsha and more often outside the boundaries of the province. As stated above, collecting outside the province involves huge costs as the cost of public transport to and from the Eastern Cape is R440.00 and it takes 10 hours per trip. From discussions with the respondents it could be deduced that even in the Eastern Cape (the preferred collection area) there is also a decline in the number of plant species used by ‘traditional’ health care practitioners. The decline in the Eastern Cape is not surprising. Respondents indicate that the number of users is increasing rapidly in response to the demand. Cultivation of medicinal plants is cost-efficient and promotes availability in times of need.
‘Traditional’ practices surrounding the use of medicinal plants reflect a wealth of local knowledge and wisdom. This knowledge is disseminated through involvement in local practices. The use of medicinal plants is just one part of these practices. The conservation by cultivation initiative is beneficial because the plants are available in the wild - though dwindling - and they are then collected for cultivation in the home garden. ‘Traditional’ medicinal plants are of great value, directly and indirectly. Though medicinal plants are used for the treatment of certain ailments, their conservation is tantamount to the conservation of indigenous knowledge embedded in the use of the plants and their unique properties (Rukangira, 1997).

The cultivation of medicinal plants by ‘traditional’ health care practitioners should be seen as a possible way in which local people can use their own knowledge for survival. The conservation by cultivation project promotes the protection and sustainable measures in the use of medicinal plants using ‘traditional’ knowledge, and users are reaping the benefits thereof. The cultivation of medicinal plants in the private garden is a demonstration that ‘traditional’ health care practitioners have a potential solution to resource management. Through this initiative (conservation by cultivation) the whole question of land availability looms up again, and the lack of land seems to be the main problem facing users, as they cannot conserve the plant species they use, neither can they protect their ‘traditional’ knowledge. The repercussion thereof is that the knowledge cannot be passed from one generation to the other. Landlessness is linked to the dwindling of indigenous knowledge. The conservation of certain plant species is crucial for the survival of useful medicinal plants and the sustainability of indigenous knowledge, ‘traditional’ practices, and systems that have maintained the biological diversity over many years.
5.3.5 **Land Accessibility and Availability**

Conservation and the sustainable use of medicinal plants is a concern which raises a number of intricate issues of socio-economic and political issues of access to land, employment and vegetation resource management. According to the respondents the lack of access to a piece of land is a hindrance to ‘traditional’ resource management practices in the urban setting. There is virtually no land that is currently earmarked for ‘traditional’ medicinal plants in the study area.

The availability of dedicated land would be a platform from which ‘traditional’ health care practitioners could show their ‘traditional’ approach of resource conservation. Thus far little is known about how ‘traditional’ health care practitioners conserve plants. Respondents held that it could expose their skills to conservationists and environmentalists in that knowledge is shared between ‘traditional’ health care practitioners and conservation authorities. In addition to the above-mentioned benefits, it is argued that a dedicated land could be of educational benefit as well. Respondents held that pupils and students could have the opportunity to be exposed to the ‘traditional’ medicinal plants and learn the truth and the value of these plants. In the African continent it is argued that indigenous knowledge could help local people to appreciate the need to use biological resources in a sustainable manner, thereby reinforcing indigenous know-how (Rukangira, 1997).

Almost everyone (80%) of the respondents stressed the need for a piece of land earmarked for ‘traditional’ medicinal plants. The piece of land is viewed as the reliable way of protecting ‘traditional’ medicinal plants. Respondents argue that there are certain customary practices that should be adhered to when dealing with ‘traditional’ medicine.
These customary practices cannot be guaranteed in the urban setting because of the lack of a specific area that community members know is exclusively used for medicinal plants. These customary practices are not tangible and not easy to monitor. ‘Traditional’ medicinal plants should be respected in the sense that if one had sexual intercourse one must not enter the area that has medicinal plants. Similarly there are taboos against the collection of medicinal plants by menstruating women. It is held that the power of the medicinal plant deteriorates when collected by menstruating women. These measures ensure that the plants are not damaged unnecessarily by ignorance or lack of knowledge thereof. On close examination, the use of customary practices could be interpreted as a reflection of an ecological mentality in tune with the idea that everything is connected. Such mentality enhances conservation measures. However, the main reason for the piece of land is the cultivation of medicinal plants which in essence promotes conservation of the plants that are predominately used in the provision of primary health care.

Of the total sample of 120 respondents only 20% held that though land is needed, earmarking a piece of land for ‘traditional’ health care practitioners might not work. There are too many ‘traditional’ health care practitioners in the area and they do not function as a unit yet. Making communal land available could trigger resource conflicts. This group is not saying that there is no need for communal land for ‘traditional’ health care practitioners, but it issues a warning signal that should the Government make such land available, it should be aware of the potential consequences. The current study indicated that ‘traditional’ health care practitioners in Khayelitsha have indigenous knowledge and skills in resource utilisation and conservation. Like vegetation resources conservations community users (‘traditional’ health care practitioners) are concerned about the unsustainable exploitation of vegetation resources. The solution could lie in
an integrated vegetation resources management approach that involves the local users. There seems to be an information gap between these two stakeholders (local resources users and resource conservationists), and that calls for researchers to fill in the gap.

5.3.6 Integrated Vegetation Resource Management

The main goal of the integrated vegetation resource management approach is to yield sustainable resource utilisation. The success of a conservation strategy in Khayelitsha hinges on the interaction and partnership between the actors, namely conservation authorities and resource users to deal with the identified activities. (Figure 5.4). According to Ansari, Phillips and Zwi, (2002), successful partnerships hinge on shared interests and the willingness of the partners to work together towards one or more common goals while maintaining their own agendas. However, the underlying goal of these activities should be to share knowledge and information and use resources in a sustainable manner. The approach necessitates that both conservationists and ‘traditional’ health care practitioners should be prepared to co-operate with each other, learn and listen and accept each other. However, the link between the two (conservationists and ‘traditional’ resources users) should be the researchers who should provide information from both ends. Researchers should provide information that will impact on decision-making throughout the process and make attempts to close the gap between stakeholders.
Figure 5.4  Integrated Vegetation Resources Management Approach

- Community resources users
- Researchers
- Natural Resources conservationists

- Community based resource conservation measures
- Knowledge and skills sharing
- Resource management workshops
- Cultivation and harvesting techniques

Sustainability

Source: Author
Understanding ‘traditional’ resources conservation serves as a point of departure in encouraging and promoting integrated resources management and learning about local knowledge on resources conservation solutions. The challenge facing local authorities today is to ensure continuity in the use of resource without the depletion of the available stock in the wild. In Khayelitsha there is a willingness among ‘traditional’ health care practitioners to protect resources. The cultivation of plants in backyard private gardens bears testimony and is a form of conservation promoting sustainability. The challenge is to encourage the practice of self-conservation. Appropriate incentives should be determined to enable community users to save and protect resources at the local level. Three appropriate incentives are identified, namely economic, social and institutional incentives (Rukangira, 1997).

Though ‘traditional’ health care practitioners argue that the main aim of using ‘traditional’ medicinal plants is not for commercial gain, an economic incentive could encourage them to conserve resources. Economic incentives involve the promotion of income-generating activities and indeed assistance in the marketing of the product. In Khayelitsha this could take the form of selling ‘traditional’ medicinal plants produced from the earmarked piece of land to ‘traditional’ health care practitioners.

Social incentives for the users involve training and providing information on conservation measure that raises conscience. From the integrated conservation measures perspective it is indeed necessary that in the process of knowledge exchange, technical, scientific advice and assistance is provided. The user’s knowledge should be acknowledged as well, but more so it should be protected and rights guaranteed. In this sense institutional incentives become important.
for the users and the people who possess the indigenous knowledge. Institutional incentive deals with guarantees of full property rights. Moreover, these incentives include the establishment of local committees and associations for planning and monitoring (Rukangira, 1997).

The study has shown that though a large number of respondents mentioned ‘traditional’ resources management strategies that are applicable to resources management, these practices and conservation measures are not effective in Khayelitsha. It seems that these practices are difficult to implement in the urban environment, the main hindrance being the lack of community organisation, community cohesion and the availability of land. Apparently the implementation of the practices hinges mainly on the community of users taking responsibility for the resources and having a sense of ownership of the resources. In Khayelitsha thus far, there is no piece of land set aside for ‘traditional’ medicinal plants utilisation. Respondents argue that in the absence of such land, it becomes difficult to show their conservation knowledge and resource management skills.

The current project revealed that ‘traditional’ health care practitioners rely on the availability of a piece of land where the users can make attempts to show their skills and the conservation knowledge that they possess. Despite the lack of an earmarked piece of land, ‘traditional’ health care practitioners have already made initiatives that are indicative of their resource management measures. This initiative involves owning private gardens in their backyard where they practice conservation by cultivation.
Conservation by cultivation is a resource management approach that respondents established in response to resource decline. Respondents are of the opinion that the stock continues to decline in Khayelitsha and beyond, and that is a concern. Counteracting the decline requires sustainable harvesting; however it is argued that sustainable harvesting cannot be effective in the absence of a controlled piece of land. The option then was to embark on a small-scale conservation by cultivation, which takes place in the ‘traditional’ health care practitioners’ backyards. A number of private gardens with medicinal plants have been observed. The cultivation of medicinal plants in private gardens results from the lack of land.

Respondents view land availability as a step in the right direction in the management of resources. It serves as a platform where conservation authorities and ‘traditional’ health care practitioners can share knowledge and thus bridge the knowledge gap. More importantly, respondents also feel that another spin-off from his joint initiative could be educational programmes that could educate people about the value and role of medicinal plants. At the moment such programmes are non-existent. An educational programme could enhance the transmission of indigenous knowledge to the younger generation. The final chapter highlights the conclusion and makes recommendation with regard to indigenous knowledge and vegetation resources utilisation and management in the study area.
CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The findings of the study revealed that the knowledge possessed by ‘traditional’ health care practitioners is a resource that enables local communities to have access to health care, even though this knowledge is not formally recognised. The convenient hours, affordability, accessibility and availability of ‘traditional’ health care practitioners to local communities are salient points that entice people to this health care system. In fact ‘traditional’ health care practitioners operate closer to people and are indispensable healthcare providers in many communities. Their role cannot be overemphasized as they serve as traditional counsellors and social workers in the community. The information presented in this study is not all-embracing, nor conclusive. There is a lot of information and knowledge possessed by South African health care practitioners that is yet to be disclosed. ‘Traditional’ health care practitioners are still skeptical about any relationship that they create with researchers and institutions that can help them to promote their knowledge. The knowledge possessed by ‘traditional’ health care practitioners is dwindling mainly because there are no current platforms that promote dissemination and documentation of this knowledge, particularly in the urban environment. Admittedly, cultural practices are carried out in the urban environment, but most of them are carried out in the rural areas. Medicinal plant use has a lot to offer South Africa, as these medicinal; plants are not only used for the provision of health care purposes but for cultural purposes as well.
The challenge that faces researchers and academia is to form workable and practical partnerships with the communities. As most communities in South Africa are illiterate, researchers need to ensure that they solicit the information possessed by community members and document it for the community and the preservation of the knowledge as such. Information revealed by the study could benefit policy makers, resources conservationists, the Government and the community.

The findings of the current study could encourage policy makers, natural resources conservationists and planners to deepen their understanding of indigenous knowledge and internalise the growing significance of this knowledge. These stakeholders could strive to promote indigenous knowledge as an instrument that could be used for sustainable development and a tool to empower local people. In the past, custodians of local knowledge have been denigrated, demeaned and coined primitive. The documentation and recognition of this knowledge is very important for them, as it means a paradigm shift aimed at sustaining knowledge, culture and other related activities.

Nature conservationists need to learn and accept the existence and value that indigenous plants have for local communities. Moreover, this study attempted to expose conservationists to indigenous knowledge and ‘traditional’ practices in vegetation resources utilisation and conservation. Resource conservation practiced by ‘traditional’ practitioners, could serve as a basis upon which more knowledge could be solicited about the use and conservation of resources by people who have a ‘traditional’ lifestyle.
The study provides an insight into resource utilisation and conservation in an urban setting. Moreover, it highlighted the issue of landlessness which is very important in assisting communities to earn a living, seeing that there is high unemployment rate. Attempts by the Government to accord recognition and support indigenous knowledge and its custodians would suggest that the Government realises the role that indigenous knowledge has played in the past and the role it can play in the future, particularly in the provision of health care services.

The study documented knowledge of ‘traditional’ health care practitioners in Khayelitsha. The documentation per se is an achievement for the community in the sense that their knowledge and concerns can be shared with readers. Studying ‘traditional’ health practitioners’ knowledge of resources conservation is an indication to the community that their ‘traditional’ skills are accepted, and that they have a role to play in resource management, and that can encourage and capacitate users. These attempts could promote the involvement of resource users, including ‘traditional’ health care practitioners, in resource management.

Issues of resources conflict (between conservationists and ‘traditional’ health care practitioners) in most cases stem from misunderstandings and misconceptions, among others the misconception that ‘traditional’ health practitioners destroy the environment and resources. Yet these very resources are the lifeblood of the practitioners. A better understanding of the community resource users’ concern (the declining stock of resource users) could improve the relationship between conservationists and users, thereby forging a better understanding. Moreover one could add to the above mentioned general conclusion three specific conclusions that relate to the objective of the current study:
(a) **Utilisation of Vegetation Resources**

Khayelitsha epitomises just one geographic area in the urban environment where ‘traditional’ medicinal plants are used. Use of vegetation resources includes firewood, health provision and cultural purposes. Vegetation resources are used for socio-economic purposes in Khayelitsha. There are wood sellers in the area who collect and sell firewood. These wood sellers are mostly men. Use of vegetation resources in cultural activities includes the use of vegetation resources in initiation ceremonies like the initiation of ‘traditional’ health care practitioners. The initiation of ‘traditional’ practitioners involves a period where people who are initiated take ‘traditional’ medicine to purge and purify their bodies in preparation for the encounter with ancestral spirits.

Traditionally, the transition from boyhood to manhood starts with ‘traditional’ health care practitioners administering ‘traditional’ medicine to the young men in preparation for the transition period. The current study has singled out species used for cultural purposes.

Use of vegetation resources for primary health care shows that many people still value indigenous knowledge and the services of ‘traditional’ health care practitioners. ‘Traditional’ medicine is used by people, particularly Africans, in the province because of the inaccessibility of Western medicine as a result of cost, and more importantly the belief in this form of health care. The current study outlined frequently used plant species and affected plant families. It should be noted that the species used are not always collected within the area. Most of these plants are collected outside the areas and even outside the Cape Province. ‘Traditional’ medicinal plants are used to treat a variety of ailments. These plants are not used in isolation, but a combination of plants is used for a particular ailment. Though the plant species used in the
provision of ‘traditional’ health care was mentioned, the method of mixing and combining the species used remained a secret of the ‘traditional’ health care practitioners. Interestingly, respondents showed knowledge of the toxicity of certain plants species. The current trend in the utilisation of vegetation resources for primary healthcare in the study area seems to suggest that ‘traditional’ practices associated with use of vegetation resources will continue to play a significant role in the socio-cultural life of the respondents. The challenge is to document the vast store of indigenous knowledge and practices.

Secrecy is the most probable method of preventing the usurpation of the knowledge held by ‘traditional’ health care practitioners. Secrecy is traced from the colonial and apartheid eras when users of this knowledge made attempts to prevent it from being known and therefore used by unauthorised White people. Nowadays the secrecy is linked to recognition of ‘traditional’ health care practitioners and their practice. ‘Traditional’ health care practitioners argue that they will reveal their knowledge of plants once they have been given recognition. The Government wants a healthy nation either doctoried by Western trained doctors or ‘traditional’ health care practitioners. However there are certain problems that the Government is facing.

The question of accountability seems to be the main problem. Attempts are underway to establish a ‘traditional’ health care practitioners’ regulatory body to promote the accountability of ‘traditional’ practitioners. The efficacy and efficiency of ‘traditional’ medicine is still an issue that the Government would like to investigate further. Despite these hurdles, the resilience of ‘traditional’ medicine enabled it to compete with well-established Western medicine. There is a claim that people who are HIV positive go to ‘traditional’ health care practitioners secretly. After
‘traditional’ medication has been administered to them for several months they become much stronger. Such results seem to suggest that ‘traditional’ health care practitioners give people medication that boosts the immune system. Perhaps a project aimed at verifying this claim should be established. Analysis of ‘traditional’ practitioners’ ‘minutes’ and other documents revealed that ‘traditional’ practitioners claim to have knowledge that they will not make public until the Government gives them due recognition.

‘Traditional’ medicinal plant users, like environmentalists, are faced with the same problem of dwindling resources. The decline of ‘traditional’ medicinal plants has social and ecological consequences. Plants are collected for their medicinal value and in the process these plants are made to extinct. The decline in the number of medicinal plants means that collectors and consumers will suffer. Perhaps the decline of medicinal plants has severe impact on users because the vegetation resource is their livelihood. The practice of ‘traditional’ healing depends entirely on the availability of these vegetation sources.

Several attempts have been made by the Government to deal with issues of vegetation resource conservation. This includes attempts to regulate the utilisation of vegetation resources, establishment of conservation areas, and preventing communities from using resources within the conservation areas. Observation has shown that little positive outcome has been recorded with these attempts. Users poach large amounts of medicinal plants from the nature conservation areas and use them in the provision of primary health care. The poaching of resources necessitate that attempts be made to involve users in the process of managing the vegetation resources. As mentioned before ‘traditional’ health care practitioners are the main users of vegetation
resources, and that alone necessitates that the knowledge of this group of users be investigated and documented so that it can be used in the process of resource conservation. ‘Traditional’ resource ideologies and management has been neglected in the management of resources.

(b) **Spatial Distribution of ‘Traditional’ Medicinal Plants in the Study Area**

The spatial distribution of medicinal plants in Khayelitsha does not follow any well-defined pattern. However, areas along the main wetlands outside the residential area are the main collection sites for medicinal plants. Medicinal plants found close to the sea are not preferred as there is a belief that the brackish water of the sea has a negative effect on the efficacy and the efficiency of the plants. The availability of medicinal plants has declined such that ‘traditional’ health care practitioners are forced to collect outside the area. The collection of medicinal plants further away is also fueled by the subtle belief that medicinal plants collected from areas visited by a number of people per day are not potent. Preference is therefore given to areas that are far away from the residential area.

It is partly the above-mentioned points and partly the declining stock in the area that force ‘traditional’ health care practitioners to collect their medicinal plants outside the study area. Both the Paarl Mountain and Stellenbosch areas are preferred for medicinal plant collection. ‘Traditional’ health practitioners face innumerable problems in the process of collecting medicinal plants in many areas in the Western Cape Province. They are criminalised by Government agencies when collecting medicinal plants.
They are not allowed to collect in certain areas and at times a permit is needed for them to collect for certain periods. Poaching results from the restrictions the Government places on plant collection in certain areas.

The problem experienced by ‘traditional’ practitioners poses a challenge for the Government agencies. The challenge is an attempt to understand and accept ‘traditional’ health practitioners. It is in the light of such knowledge that attempts could be made to work out an integrated programme of resource management in the province. Faced with the dwindling stock and the problem highlighted above regarding the collection of medicinal plants, ‘traditional’ health practitioners are forced to collect outside the Cape Province.

The study indicated that a number of ‘traditional’ health care practitioners collect ‘traditional’ medicine outside the province, with the Eastern Cape being the most preferred province. The reason for the preference is attributed to the fact that most inhabitants of Khayelitsha are from the Eastern Cape. The collection of medicinal plants from the Eastern Cape has cost implications for the users. It is the cost that forces people to collect more to avoid spending another amount of money on transport cost. The collection of medicinal plants outside the study area has implications for attempts to conserve local resources. Seeing that users collect outside the province, they may not always be active participants in local projects that are aimed at conserving these plants.
(c)  ‘Traditional’ Resource Management Strategies

The question of resource conservation and management has its source in the concerns that says African people have been in the world for a long time and they earned a living and interacted with the environment. How was it possible that they failed to organise knowledge of resource conservation based on their experience?

There are a number of ways in which people with a ‘traditional’ life style have organised their knowledge and managed their resources. The first approach is customary practices, where unwritten rules and beliefs are applied. These practices hinge on respect for the resources and the people who enforce these practices. Adhering and conforming to these practices save resources. The older generations are the ones who are well informed about these practices. These customary practices are applied in Khayelitsha, but only to a limited extent.

The second mode of resource conservation is selective and limited harvesting. This approach is premised on the notion that collectors and users should collect limited species for use when the need arises, and users should be selective. Species that are not going to be used immediately should be left behind to thrive and for other users to collect and use. This approach is challenged in an urban setting mainly because of the lack of a widespread availability of medicinal plants. Collectors collect more for themselves, and that impacts adversely on the sustainability of these resources. Though selective harvesting is a useful approach it is not easy to monitor and one cannot be sure that people adhere to it.
The third approach disallows ring barking of trees used for medicinal purposes. Ring barking is not allowed as it kills the species. Medicinal barks of trees could only be removed on the sides of the tree. Immediately thereafter, cow-dung should be applied to the areas where the bark has been removed. In the urban setting where cow-dung is not always available, black paint is used. The paint is said to have the same effect as cow-dung. It protects the plants against sunlight and promotes the growth of plant tissues.

The fourth approach is resource “annexation” which is premised on attempts by users to fence off certain areas for their use only. This occurs in areas close to a homestead. In the urban setting resource annexation takes a different form, and that is the private backyard gardens where conservation by cultivation is practiced. In response to the alarming rate of resource use and decline in the area, as a short-term solution, attempts have been made by ‘traditional’ health care practitioners to cultivate the priority species in their private backyards. This attempt promotes conservation by cultivation on a small scale. The conservation by cultivation approach serves the needs of individual users. The cultivation and the use of medicinal plants reflect and promote indigenous knowledge and wisdom. Conservation by cultivation is indicative of the fact that ‘traditional’ health care practitioners think of the sustainability of resources upon which their practice depends. The conservation by cultivation initiative ensures availability in times of emergency. Users manage these species and these species thrive well. The main challenge in realising ‘traditional’ approaches to resources conservations seems to be the lack of a piece of land earmarked for ‘traditional’ practitioners’ use.
The fact that medicinal plants are cultivated in backyard plots with little additional fertiliser indicates that the practitioners are concerned about the dwindling stock and are doing something about it. The cultivation of these medicinal plants in ‘traditional’ health care practitioners’ private gardens is a practice that needs to be promoted as it not only sustains indigenous knowledge, but also protects certain species.

A long-term strategy depends on the reaction of the City of Cape Town’s Tygerberg Administration towards the users’ initiative. It is important that the conservation by cultivation initiative be enhanced. The City should make attempts to provide a piece of land earmarked for ‘traditional’ medicinal plants in the area. Given the results of the study, the preservation of ‘traditional’ knowledge and recognition thereof is very important, and hence people should take responsibility for preserving it for future generations. Responsible people such as environmentalists and conservationists should pioneer cultivation of medicinal plants to promote continuity of ‘traditional’ skills and practices without over-exploitation of the environment. The use of traditional medicine will continue regardless of recognition of its administrators.

6.2 Recommendations

Based on the findings of the study it is possible to make the following recommendations.

a) Utilisation of ‘Traditional’ Medicinal Plants

i. On close examination of the priority species, a reasonable number of the species used relate directly to women’s health. On the basis of these results it would be advisable to conduct a study that looks into the relationship between women and medical health care professionals, with specific reference to treatment at the health care centres.
ii. The verification of the safety, efficacy and efficiency of the identified species (especially the prominent family species) deserves attention in a study of its own. A pharmaceutical analysis could reveal the active ingredients in these plants. Similarly, the claim that certain plants or combinations cure certain ailments is worth detailed investigation.

iii. ‘Traditional’ medicinal plants are studied by different researchers across the country in an attempt to determine and enhance our understanding of indigenous knowledge and its contribution to the corpus of knowledge that exist about ‘traditional’ medicine and ‘traditional’ health care services. It would be commendable if attempts could be made to compare and triangulate the names of the plants used, as well as their uses in the different provinces in the country.

b) Spatial Distribution of Vegetation Strategies

The use of the Geographic Information System (GIS) in the location and proximity analysis of the resources suggests that the GIS has a role to play in indigenous knowledge activities - especially the management of vegetation resources. ‘Traditional’ medicinal plants are collected within well-defined areas. Physical co-ordinates of the collection sites could be determined by using a Global Positioning System (GPS). It is recommended that in future that technology tool be used to determine the accurate co-ordinates of a specific plant species collection site.
c) **‘Traditional’ Resources Management Approach**

i. On the basis of the skills and knowledge that ‘traditional’ health care practitioners have, it is recommended that a trial run of ‘traditional’ health care practitioners’ skills and expertise be audited at a broader scale where the skills could be studied in depth to get feedback on conservation by cultivation.

ii. An attempt should be made to establish an integrated resources management approach in the province where community resources users (‘traditional’ health care practitioners and resource conservationists) could share knowledge and skills.

iii. ‘Traditional’ health care practitioners claim that the application of cow-dung or black paint on the areas where one has removed tree bark is useful in the conservation of the tree. Such claims need to be verified.

iv. The cultivation of certain plant species in ‘traditional’ health care practitioners’ backyards poses a challenge. Noting that some of these species are collected from the Eastern Cape and thrive well in the Western Cape, it is recommended that attempts be made to do a pilot project on these species to determine their success rate in the province.

v. A number of nature reserves in the Western Cape are perceived as medicinal plant collection areas for ‘traditional’ health care practitioners and commercial gatherers alike, yet there are no formal studies conducted about this perception. There is a dire lack of substantial information that can serve as a strong base for research work that is still
unknown. A formal and scientific investigation aimed at verifying these perceptions is essential. Similarly, quantification of ‘traditional’ medicinal plants species that are poached in these nature reserves is of critical importance in understanding the quantity in relation to the perceptions.

vi. An official site should be earmarked for the conservation by cultivation initiative and management of medicinal plants, and a study should be conducted to identify plants from other provinces that thrive in the Western Cape.

vii. In the light of the issues and concerns that the study managed to unearth, it is worth recommending that more money be made available by the Government to ensure that the knowledge and information that custodians of indigenous knowledge have about medicinal plants is recorded and protected. Linked to the protection of this knowledge is the issue of the protection of the intellectual property rights of the local community.

viii. Given the sensitivity of custodians of indigenous knowledge towards research and researchers in general, it will be commendable if a strategy document could be drafted. The aim of such a document could be to highlight codes of conduct and protocols pertaining to indigenous-knowledge-related research.

ix. Attempts should be made to develop community-conscious researchers across the discipline of social and natural science. Such attempts could establish and strengthen a link between national development strategies, and local knowledge and capacities in different communities.
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APPENDIX 1

UNIVERSITY OF THE WESTERN CAPE

Department of Geography and Environmental Studies
Indigenous Knowledge Research

Introduction

This indigenous knowledge research interview is conducted primarily for the collection of data, which will be used for *academic research only*. Indigenous knowledge pertaining to the use of natural resources (plants and trees) is declining at a rapid rate yet the use of such resources is still high among the disadvantage people. The aim of the research is to elicit the indigenous technical knowledge possessed by local people who are using these resources. The information provided in this research will be treated with complete confidentiality.

Interview Schedule

Place

Name of the interviewee

Tel no: (Contact purposes only)

Socio-economic characteristics

1. Sex

2. Educational status

3. Employment status

4. Years using natural resources

5. Previous location of the interviewee

6. Number of years in current location

7. Age range

8. Category

<table>
<thead>
<tr>
<th>Female</th>
<th>Male</th>
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<tbody>
<tr>
<td>None</td>
<td>Primary</td>
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<td>Employed</td>
<td>Unemployed</td>
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| ‘Traditional’ Healer | ‘Traditional’ Surgeon | Trainee | Other |
(A) Vegetation Resource

(i). Vegetation resources utilization

1. List all uses of vegetation resources in this area

2. List all plants that you use for medicinal purposes and their corresponding uses

3. Any other comments
(ii). **Cultural Use**

1. According to your knowledge, does vegetation resource play any role in your culture?

<table>
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<th>Yes</th>
<th>No</th>
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2. If there is any role played by vegetation resources to culture activities, please indicate

<table>
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<th>Species name</th>
<th>Uses in culture</th>
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3. Which vegetation resources are predominantly used in cultural activities in the area?

4. Which vegetation resources are used during the process of transition from boyhood to manhood (Please specify)

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<tr>
<th>Plant Resource Name</th>
<th>Uses</th>
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5. Any other comments
(B) **Spatial Location of ‘Traditional’ Medicinal Plants**

**Location**

1. Where do you collect ‘traditional’ medicinal plant in the vicinity of Khayelitsha?
2. Where else do you collect ‘traditional’ medicinal plant in the Western Cape?
3. Are there areas beyond the Western Cape where you used to collect these plants?
4. What mode of transport are you using to reach your collection areas?
5. Any other comments

(C) **“Traditional” Vegetation Resources Management Approach**

**Management issues**

1. According to your own knowledge, what ‘traditional’ natural resources management practices are employed in the utilisation/cultivation and management of ‘traditional’ medicinal plants?

Are the vegetation management strategies mentioned above used in Khayelitsha. If not why?
3. What measures would you recommend for sustainable harvesting of vegetation resources in the area?

4. Do you think it is important to preserve or earmark an area for your medicinal plants? Give reasons for your answer?

5. Do you own a garden where you cultivate some of the species that you use? How is the garden helpful to you?

6. Concluding remarks

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY
APPENDIX II

Standard Interview Record Form (SIRF)

Data :------------------------------------------
Time :------------------------------------------
Venue :------------------------------------------
Background Description :------------------------

<table>
<thead>
<tr>
<th>Issues, Problem, Question, Accounts</th>
<th>Summary of the Responses or Emergent Themes</th>
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Additional Comments/Observation

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Recorded by................................................................................................................................

UNIVERSITY of the
WESTERN CAPE
APPENDIX III

Guidelines For Focus Group Discussion

A. Preliminaries

Data of discussion -----------------
Venue --------------------------
Duration------------------------
Any other observation worth noting ----------------------------------------

B. Traditional Medicinal Plants Database

- What plant species are utilized for primary healthcare and what are they used for?
- What species are used for cultural purposes? Why?
- Why are people using traditional medicinal plants?

C. Spatial Distribution of Traditional Medicinal Plants

- Where are these medicinal plants collected?
- Is there any relationship between the collection area and the potency of the plant collected?

D. Traditional Vegetation Resource Management Strategies

- What traditional resource measures do the users employ in the conservation of traditional plants?
- How can traditional resources management approach help in the conservation and sustainable use of medicinal plants?

Comments

Suggest traditional ways in which vegetation resources can be conserved in the area ------
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Thank you very much for your participation