Negotiating conservation and development in a South African World Heritage Site

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Natural Resource Management, Governance and Globalisation
Master Thesis 2005:10
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ABSTRACT

In people-oriented approaches to conservation and development, social capital increases the capacity of local groups to participate in decision-making processes and manage local level initiatives by fostering relations of trust, reciprocity and by networking. As such, social capital represents an asset in finding possibilities for conservation and development. However, the effects of external intervention in developing and strengthening social capital are not clear and key questions relate to the nature of initiatives, the extent to which they need to add onto local incentives and whether they can help create social capital that will aid in conservation as well in development issues at a wider community level. The Greater St Lucia Wetland Park (GSLWP), South Africa, in 2005 was nominated a natural World Heritage Site in 1999 and in 2000 a new management organization— the Wetland Park Authority – was put in charge of promoting both conservation and economic development. The change from a previous fortress conservation approach has opened up possibilities for local communities to participate in processes that affect them, to find employment from tourism development and to implement local level initiatives for economic development. At the same time, fencing of the park and the reintroduction of wildlife seen as one of the means to achieve tourism development represents a controversial move to be negotiated with the neighboring communities. This thesis looks at three communal vegetable garden groups located in Mnqobokazi, one of the communities neighboring the park, and funded by the Wetland Park Authority as an example of how social capital within these groups may represent an asset for collaborative management approaches. The results were obtained by drawing on participatory observation as well as on thirty-six semi-structured and open-ended interviews with members of the community as well as officials from the Wetland Park Authority and Ezemvelo KZN Wildlife. The results show that differences in social capital among the three groups depend upon trust-building and rules-in-use. The implications are that outside incentives seldom build social capital on their own and in some cases they can undermine it by accentuating complex social dynamics. When the group has social capital, outside incentives provide an additional livelihood strategy. Lack of communication with the community and the Wetland Park Authority shows that adopting local initiatives to promote conservation and development at the wider community level depends upon how they are carried out and communicated among the stakeholder groups.
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# TABLE OF CONTENTS

**ABSTRACT**

**ACKNOWLEDGMENTS**

**TABLE OF CONTENTS**

1. **INTRODUCTION**
   1.1. Background
   1.2. Aims of the study
   1.3. Research questions
   1.4. Structure of the thesis

2. **LITERATURE REVIEW**
   2.1 Introduction
   2.2. Challenges to the international discourse on conservation
   2.3. A new paradigm for conservation: from top-down to bottom-up conservation approaches
   2.4. Limitations to bottom-up conservation approaches
   2.5. Social capital as an asset in negotiating legitimate conservation and development

3. **THEORETICAL FRAMEWORK**

4. **METHODOLOGY**
   4.4. Methodological approach
   4.5. Data collection
      4.5.1. Literature background
      4.5.2. Interviews
         4.5.2.1. Respondents from the Wetland Park Authority and Ezemvelo KZN Wildlife
         4.5.2.2. Respondents from the tribal authority of Mnqobokazi
      4.5.2.3. Interview issues
   4.5.3. Ethical issues
   4.6. Data analysis
   4.7. Critical reflection of methods

5. **CASE STUDY AREA**
   5.1. Location
   5.2. Biophysical environment – the Mkuze Wetlands
      5.2.1. Climate, hydrology and soils
      5.2.2. Flora and fauna
   5.3. The social system
      5.3.1. Brief historical background of north-eastern KwaZulu-Natal
      5.3.2. Current situation in Mnqobokazi
      5.3.3. Human environmental impacts on the hydrology of the lower Mkuze River and on ecosystem services provided by the wetland

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7
GLOSSARY AND ACRONYMUS

FAO – Food and Agriculture Organization
GSLWP – Greater St Lucia Wetland Park
Induna – headman of a ward, sub chief
Inkosi -- chief, head of a tribal authority
IUCN – World Conservation Union
LSDI or SDI – Lubombo Spatial Development Initiative
NGO – Non-governmental Organization
SEED – Social, Economic and Environment Development Unit
Tribal Authority – used interchangeably with community
UNCED – United Nations Conference on Environment and Development
UNDP – United Nations Development Program
UNEP – United Nations Environment Program
UNESCO – United Nations Education, Scientific and Cultural Organization
Ward – subdivision of a tribal authority area
WHCA – World Heritage Convention Act

TABLES AND BOXES

Table 1. Summary of respondents from Mnqobokazi by gender and position
Table 2: Summary of respondents involved with the gardens
Table 3. Physical description of the gardens
Table 4. Membership characteristics
Table 5: Economic situation of women interviewed. It includes percentages for women that belong to the gardens and their husbands, as well as for the total number of women interviewed.
Box1: Answers to the question: why and from whom are you getting funds for the garden?
Table 6: Summary of design principles that emerge from the organization of the garden groups.
Table 7: Summary of factors that potentially strengthen as well as limit relationships within groups and between the groups and the Wetland Park Authority.

LIST OF FIGURES

Picture in the cover page: Family harvesting sweet potatoes in the Mothokothe floodplain. The protected area is in the background.
Picture 1: Small plantations of sugar cane behind the tractor in Mothokothe
Picture 2: The canal that has been eroding separates the majority of the community from the fields in Mothokothe
Picture 3: The fence close to St Lucia Estuary
Picture 4: Woman weaving a mat with reeds from the wetland
Picture 5: Garden 2
Picture 6: Plants in the nursery of G3. In the foreground there are cabbages, onions and green peppers.
Picture 7: Sandy soil in Garden 3
1. INTRODUCTION

1.1. Background

Conservation and development goals are difficult to combine and often trade-offs are the norm (Barrett et al., 2005). In the past 20 years, attempts to bridge the gap between conservation and development have seen a proliferation of trials around the world. Many of these efforts have tried to counteract top-down and centralized approaches to biodiversity conservation in favour of more bottom-up, community-based approaches (Salafsky and Wollenberg, 2000). They have included a focus on locally-driven initiatives which foster local participation and empowerment, economic incentives as well as access to resources and sustainable utilization (Hulme and Murphree, 2001, Brown, 2002). In Africa, these initiatives represent a welcome change from the ‘fortress’ or fences-and-fine conservation approaches of the past and some identify the focus on local livelihoods as a paradigm shift in nature conservation (Berkes, 2004). International arenas such as the United Nations Conference on Environment and Development (UNCED) in 1992 and outcomes such as Agenda 21 have strengthened and developed the need for developing participatory approaches to management that enhance empowerment and allow for greater access to natural resources as a way to alleviate poverty (Woodhouse et al., 2000).

Despite high expectations on the success of people's oriented approaches, Hulme and Murphree (2001) argue that the way in which these approaches are implemented on the ground is not well known and their consequences to local livelihoods little explored. When ideas of combining conservation and development in an integrated way appear at the national and international level in the form of policies, they seldom discuss the potential problems faced on the ground. For example, the conceptualization of ‘community’ (Agrawal and Gibson, 1999), the provision of economic incentives (Gibson and Marks, 1995; Barrett and Arcese, 1995) and the development of participatory approaches (Emmett, 2000) limit bottom-up approaches to conservation. These issues represent a challenge for the devolution of powers to local users and have led some academics and practitioners to consider the reintroduction of fortress conservation as the only viable alternative for biodiversity conservation (Brandon et al., 1998). This view was challenged very strongly in Wilshusen et al. (2002) and Brechin et al. (2002), who argue that a much greater understanding of the political and social processes must be developed for a constructive work among conservationists, local people and other stakeholders to be morally just, but
also desirable and economically feasible.

In recognizing some of the above limitations, Brechin et al. (2002) argue that a people's oriented approach has failed in most cases due to implementation shortfalls and not because of its conceptual basis. Being both a matter of political and social processes, achieving conservation and development goals is often the result of compromises and trade-offs between the two (Barrett et al., 2005). In complex socio-ecological systems, different levels of governance such as members and groups within communities, conservation agencies, NGOs, local and national authorities as well as the international arena, pull the system in different directions. The strength of these forces is determined by differing aims and unequal power and access to resources of all parties involved (Brown, 2003). Interactions among and within several levels of governance affect the policies on the ground and their implementation. Thus, there is no "correct" level of conservation and development that can be planned or even achieved (Berkes, 2004). Rather, a framework is needed to encompass these different levels of governance thus ensuring that a process of negotiation and collaboration is initiated.

The ability to “negotiate agreements of understanding and responsibilities among all affected parties” is paramount for obtaining a process of socially just conservation (Brechin et al., 2003b). For example, this capacity is available when groups trust each other and are bounded by certain relationships of reciprocity, or what is referred to as ‘social capital’. Social capital represents one way to frame the issue of collaboration and negotiation in the field of conservation and development. It focuses on the effectiveness of social groups in organizing around issues that require collective action, such as the management of common-pool resources – access to forest resources and water distribution are an example (Pretty, 2003).

Defined as trust, reciprocity, rules and networks, this concept first emerged in the fields of economics and political science to deal with issues of development (Emmett, 2000) and more recently, conservation (Pretty, 2003). When there is social capital, relationships and reciprocity foster collective action in ways that decrease the overall transaction costs of working together. As a result, it takes less time and effort for the group to promote action. According to Ostrom (1990), ensuring participation, monitoring and enforcing rule compliance at the local level represent institutional arrangements for the management of
common pool resources that can lead to their sustainable use through time. However, the effects of external intervention in developing and strengthening social capital are not clear and key questions relate to the nature of initiatives, the extent to which they need to add onto local incentives and whether they can help create social capital that will aid in conservation as well in development issues at a wider community level.

Building trust is often very challenging in situations of past historical injustice and marginalization (Scheffer et al., 2003). In a country like South Africa, for example, racial segregation and exclusion from access and use of resources in protected areas – what is generally referred to as fortress conservation - was the norm until recently. Since the advent of democracy in 1994, new spaces are being created for the empowerment of black groups, historically marginalized in small and underdeveloped homelands. At present the national legislation is clear on the need to link conservation and development and it calls for including and benefiting communities in processes that affect them (South Africa World Heritage Convention Act, 1999). This new legislation also applies to the Convention concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) where the management in charge of World Heritage Sites in South Africa is responsible both to the international community as well as to the local people for local social and economic development.

1.2. Aims of the study
The present study is set in the northeastern part of the province of KwaZulu-Natal, in South Africa. The community of Mnqobokazi is one of several tribal authorities to border the Greater St Lucia Wetland Park (GSLWP), a natural World Heritage Site nominated in 1999. Like most of the other communities bordering the park, the people of Mnqobokazi depend on subsistence farming and small-scale commercialization on communal land, on pensions, grants for projects and other sources of income such as government jobs. An increasingly important activity consists of gathering local natural resources collected within the boundaries of the GSLWP (Dahlberg, 2005). The resources found inside the park include reeds, grasses, medicinal plants, firewood and small game. In periods of drought they also include pastures and fields. However, for the past few decades, the creation of reserves and protected areas by the provincial conservation agency (presently known as the Ezemvelo KZN Wildlife), as well as private enterprises such as Phinda Reserve have progressively eroded the subsistence livelihood strategies of the people of Mnqobokazi.
World Heritage status both opens doors and adds potential constraints to local livelihoods. Nomination for World Heritage status was initially encouraged by the provincial conservation agency as a way to protect the GSLWP against impending threats of mining but also against trends of human encroachment (Porter, pers. comm). Later, the South African government considered the nomination of the GSLWP as an 'anchor' project to foster tourism for the economic up-liftment of these marginalized rural areas (Walker, 2001). As a result, in the year 2000, the government established a new organization in charge of the World Heritage Site - the Greater St Lucia Wetland Park Authority (hereafter referred to as Wetland Park Authority) - as the promoter of conservation, tourism development and local economic development. To fulfill these varying goals, the Wetland Park Authority works on different issues. In Mqobokazi, it implemented communal vegetable gardens in 2003 to deliver concrete benefits at the local level and specifically to offer a different source of income for the poorest households. These gardens represent one example of the ways in which the Wetland Park Authority is trying to deliver benefits for development. At the same time, the nomination has added an additional constraint to the use and access to resources inside the protected area since part of the tourism project entails building a fence around the park for the reintroduction of wildlife.

By using the communal vegetable gardens located in Mqobokazi as an example, this thesis aims at evaluating the factors that are important for the emergence of social capital and the success of externally supported projects in order to achieve conservation and development. From a theoretical standpoint, there have been contradictory findings on whether social capital can be created with outside assistance (Grootaert and van Bastelaer, 2001). To accomplish this aim, the results section analyzes the history and organization of the communal gardens from different perspectives and narratives to evaluate the kind of incentives that may facilitate the development of social capital within the groups, the extent to which outside interventions may add onto local livelihoods as well as the ways in which they foster conservation issues at the wider community level. The organization within gardens is analyzed according to the factors that Becker and Ostrom (1995) have recognized important for the development of enduring institutional arrangements, such as monitoring, trust-building, rules-in-use and networks. While the concept of social capital did not influence the data collection, it emerged during the analysis of the interviews as a way to describe the possible impacts at the community level of communal garden groups.
fostering conservation and development. Moreover, in this thesis social capital is meant to highlight the importance of alternative views to economic capital that recognize the impact of social relations on development rather than to promote the creation of social capital at the policy level.

The second aim is to analyze the goals and actions of management structures such as the Wetland Park Authority in forwarding conservation and development through poverty alleviation strategies. The gardens represent an indication of the ways in which the Wetland Authority is mediating its space between its governmental and international mandate for conservation as well as its governmental commitment to poverty alleviation. As such, the communal gardens potentially represent a first attempt to relate to the community by linking benefits to conservation and an incentive-based way to increase trust. The second part of the discussion highlights the challenges in setting up projects that are legitimate to local people and conducive to achieving conservation and development. Taking into account historical legacy, divergence in worldviews as well as the presence of multi-interested communities and organizational mandates determines the extent to which these interventions can help create social capital that will aid in conservation and development at the wider community level.

1.3. Research questions

In order to reach the aims presented above, this study was designed to answer the following research questions. While the results of the study are analyzed in the context of the Wetland Park Authority, the discussion broadens the issue to the more general context of conservation and development beyond the boundaries of the park.

1. What are the mandates, goals and issues at stake within and among the three management structures - the Wetland Park Authority, Ezemvelo KZN Wildlife and the tribal authority of Mqobokazi– that have emerged from the nomination of the Greater St Lucia Wetland Park World Heritage Site?

2. What are the factors that lead to the creation of social capital – in the form of trust-building, reciprocity, rules-in-use and networks within the garden groups and between them and the Wetland Park Authority?

3. Do the garden initiatives facilitate awareness about conservation and development efforts and enhance collaboration and dialogue between these different interests at a wider community level?
1.4. Structure of the thesis
Chapter 2 puts the research questions in the context of bottom-up conservation approaches and attempts to draw insights from current research in ecology and development on the role of social capital for collaboration and effective participation in decision-making and implementation. Chapter 3 describes the theoretical framework of the thesis based on ideas around social capital and ideas developed by researchers in political ecology. Chapter 4 presents the methodological approach of this research study and describes the methods used in collecting background information, in conducting interviews in the field and in analyzing the results for discussion. A critical reflection on the methods is also provided. Chapter 5 describes the case study area in terms of both biophysical and socio-economic factors.

The results are reported in Chapter 6 and 7. Chapter 6 describes the nomination of the World Heritage Site and the mandates of the two management structures in charge, the Wetland Park Authority and Ezemvelo KZN Wildlife. The issues at stake with the tribal authority of Mnqobokazi, such as fencing and access to natural resources, are also presented. In chapter 7, the analysis of the interviews describes the development and organization of the three communal vegetable gardens and compares the level of social capital within the groups and between them and the Wetland Park Authority. The analysis also shows the effects of such initiatives at the community level. Chapter 8 provides a discussion of the results obtained in relation to the above stated aims and chapter 9 concludes by summarizing the most important findings. The appendices at the end contain, a list of the people interviewed, the topics discussed during the interviews and maps of the area under study.

2. LITERATURE REVIEW

2.1 Introduction
In Africa, powerful and persistent ideas have in the past century justified the enclosure of ever greater areas of land, excluding people in the name of preservation and conservation (Leach and Mearns, 1996). In the nineteenth century, the continent was seen as empty and pristine, - namely as 'the garden of Eden' - to justify its conquest (Adams and McShane, 1992). Perceptions of what the landscape “should look like” represented a powerful excuse for enacting what was essentially the appropriation of the land for the benefit of a white
ruling elite. In many of these areas, history was rewritten by the elite after local inhabitants were evicted to hide their claims to the land (Neumann, 1998). According to Neumann (1998:30), in many locations the creation of protected areas directly conflicted with local land uses and now these “landscapes are openly contested and politicized” (Neumann, 1998:30). Such protected areas “conceal the violence of conquest… mask the colonial dislocations and obliterate the histories of those dislocations” (ibid).

In the twentieth century powerful narratives, known as ‘received wisdom’ depicted Africa as being affected by land degradation, erosion and desertification trends (Leach and Mearns, 1996). Supported by the myths and ideas of the previous century, untested ‘crises scenarios’ have legitimized the rights of managers and technical experts to have a say as stakeholders (Roe, 1992; Roe, 1995; Dahlberg, 2005). They have thus justified the exclusion of local resource users from protected areas through paramilitary approaches. These included resettling entire communities onto what were often marginal lands and preventing their use of natural resources in what was now demarcated as protected areas by building fences and fining transgressors (Brockington, 2002; Neumann, 1998). As a results, these approaches have had deleterious effects both socially and economically leading to increased marginalization and thinning of livelihoods options (Neumann, 1998). Exclusion has also increased vulnerability of local stakeholders to more sudden and unpredictable events such as flooding and droughts (Bryant and Bailey, 1995). From a conservation point of view, top-down or fortress conservation approaches often failed in preserving the natural resources they were meant to protect (Hulme and Murphree, 2001).

Today we are faced with an incredible challenge, that of bridging the gap between poverty reduction and environmental conservation and of linking conservation to the development of the affected stakeholders. Since the 1980s, there has been a shift in paradigm and greater attention is paid to the fate of the people that inhabit ecologically important areas both in terms of their knowledge and their livelihood strategies. Since the 1980s, a myriad of projects and initiatives - known by many names such as community-based conservation, integrated conservation and development programs as well as wildlife utilization projects - have been developed at the local level to address economic marginalization and foster conservation. The premise is that local people have a more holistic understanding of their surroundings than what are referred to as ‘experts’ and have developed complex institutional arrangements (defined as rules-in-use) to use their resource base more
sustainably than far away governments (Ostrom, 1990; Mbaiwa, 2004; Brown, 1998).

This chapter describes the emergence of a people-oriented approach in Africa and presents the aims and the limitations of these approaches. A legitimate social and political process for the establishment of protected areas is called for. Social capital could be seen as a basis for legitimate and just negotiations between different stakeholders when local communities are empowered to influence decisions that affect their livelihoods and have control over their land. In the following chapter, a framework which incorporates elements of political ecology and social capital is described.

2.2. Challenges to the international discourse on conservation

The worldwide call for increased protection and conservation efforts in the developing world is based on reported losses in biodiversity and is not futile. Human activities are leading to the progressive degeneration of ecosystem functions and habitat loss. It is estimated that some one thousand species are lost each year as a result of human activity and that a primary cause is habitat loss and degradation (Brechin et al., 2003). While such changes affect both temperate and tropical forests, the trend is more worrisome in the case of the latter, where estimates suggest that one-fifth of forest cover was lost between 1960 and 1990 and a larger share is being degraded due to timber harvesting and atmospheric pollution (ibid). The ecosystem services that humans depend on, such as timber, water and fish, water and air purification, carbon sinks, recreation areas and habitats are being lost.

In resource-dependent societies, natural ecosystems directly provide for food, medicinal plants, fire wood and building material to name a few. Many resource-dependent groups live in areas that are now deemed to be 'hotspots' for biodiversity. There is considerable pressure at the international level to protect such areas. This pressure comes primarily from the North, where worrisome trends of global climate change fostered by air pollution and dramatic land cover changes, has prompted a renewed interest in the conservation of forests as potential 'carbon sinks'. This is heralded primarily by multilateral organizations, such as the World Conservation Union (IUCN), the United Nations specialized agencies - UNESCO through natural World Heritage Sites, FAO, UNEP, UNDP - as well as by non-governmental organizations, such as Conservation International and the World Wildlife Fund (Brechin et al., 2003b).

However, two important points are missing from the conservation equation. Interest in the
conservation of natural resources in the tropics pushes the burden of the negative externalities created by the First World to Third World countries. According to Brechin et al. (2002), environmental degradation is often caused by large scale exploitation by national and international mining and timber companies, pharmaceutical and oil firms that are closely lobbying at the community level governments in the First as well as in the Third World. Structural causes are dependent on laws, treaties, structural adjustment programs and international trade which drive unsustainable and often short-term local actions. Large exploitation in the tropics is driven by over consumption in the North. It is most often the nonlocal social, economic and political forces that can hinder the success of conservation measures and increase poverty but the paradigm of economic growth and free market structures are rarely challenged by mainstream society (Brechin et al., 2002; Bryant and Bailey, 1995).

Protected areas are increasingly a source of revenue for governments through tourism and are seen favorably by nongovernmental organizations, multilateral organizations and the North in general. In 1998, close to 6.8% of the land area in the world was protected under the World Conservation Union (IUCN) categories that impeded human access and use (Brechin et al., 2003). This figure increased to 10.2% if all IUCN categories were taken into consideration. The IUCN launched an appeal for each country to protect at least 10% of their total surface area (Magome and Murombedzi, 2003). In South Africa, achieving the 10% target represents a challenge in a country where the democratic government is attempting to strike a delicate balance between "the aspiration and needs of black people and the requirements of a powerful global environment" (ibid: 108). 7% of the surface area is currently under some form of protection, a large area of the country is unfertile and close to 85% of the population occupies 15% of the land. Moreover, between 1958 and 1988, close to 3.5 million people were forcefully removed from their land and are now claiming the restitution of their territories.

This leads to the second point, whereby international and national efforts for conservation often fail to recognize the huge social and economic implications that the delimitations of boundaries for protected areas have at the local level. In most cases, hotspots are often associated with long-term human inhabitation. International organizations portray biodiversity conservation as a global concern and in doing that fail to recognize the historical antecedents in the region as well as the role that globalization trends exert on
local resources and resource users (Neumann, 2005; Brown, 2003). For example, Brockington (2002) describes the progressive marginalization and final resettlement of different pastoralist groups when the Mkomazi reserve was created in Northeastern Tanzania in 1988. Since then, nomadic pastoralists have been denied access to pasture and water in an attempt to create a 'pristine' environment for wildlife. Neumann (1998) describes how the Meru people, residing in the area in and around Mount Meru, in northern Tanzania, have been progressively marginalized both spatially and economically. In this case, a scientific management approach legitimized the control by the state over land and resources. Marginalization was evident from increased tsetse incidence, cattle diseases, lack of employment, denial of land access, degradation close to the park borders, and lack of compensation for wildlife damages to fields and threat to personal life (ibid.). Despite promises of economic development, local livelihoods are usually the ones to pay the highest price.

2.3. A new paradigm for conservation: from top-down to bottom-up conservation approaches
In 1982, the World Congress on Parks and Protected Areas revised top-down approaches to conservation because of their failure in reaching their intended goals of arresting biodiversity losses. Moreover, it was recognized that the burden on local people be lessened (Brechin et al., 2003) through socio-economic incentives such as increased participation in decision-making – devolution of powers through partnerships - as well as for the sustainable utilization of natural resources (Brown, 2003, Adams and Hulme, 2001). Since then, there has been a growing awareness - at least theoretically if not always in practice - that conservation must “deal with local resource users as potential conservation allies and look for common objectives that would serve conservation while producing community benefits” (Berkes, 2004: 625).

This conclusion associates well with the ecological point of view which recognizes that ecosystems are complex, dynamic, unpredictable, and react in a nonlinear fashion to natural and human stresses (Levin, 1999). In protected areas, the extinction of wildlife, the inability of the state to protect its declining wildlife resources, and conflicts between local users and conservation managers, coupled with the increased marginalization of local livelihoods made the need for a change clear (Mbaiwa, 2004). Top-down management systems have proven incapable of dealing with uncertainty and dynamic changes in the
resource base (Holling and Meffe, 1996) as well as with the deep social and political complexities inherent in doing conservation work in the developing countries (Brechin et al., 2003).

2.4. Limitations of bottom-up conservation approaches

Despite great optimism in the success of community-based conservation and bottom-up approaches, long-term solutions to the quest for environmental and development goals have been elusive. Brown (2003) reflects on the fact that there is often a poor understanding of what the objectives - empowerment, participation and conservation vs. development - really mean at the practical level. According to Hulme and Murphree (2001), the way in which these ideas are implemented from policy to practice is not well known and little explored. Brechin et al., (2002) argue that failure is to be attributed to the shortfalls of implementation rather than on the ideas behind it. Recent research in the developing world has shown that trade-offs between conservation and development are the norm (Barrett et al., 2005). At present, several studies have identified four key limitations to the success of bottom-up approaches. These are an excessive focus on ‘community’ per se, failure of implementing participation, a narrow focus on economic incentives and a narrow focus on incentives at the local scale.

Community-based conservation is seen as central to resource management and a foundation for policy-making. Yet, according to Agrawal and Gibson (1999), what community really means and how communities affect outcomes of community-based resource management is not clear. The most widely used definition sees community as a small spatial unit with a homogenous social structure where norms are shared (ibid; Emmett, 2000). According to the first factor, smallness allows for increased social interactions and may lead to cooperation when managing common resources. However, this view ignores potential conflicts with nearby groups or within the group over the use of the resources, as well as the range in character of the resource itself (Agrawal and Gibson, 1999). It also ignores the fact that often large groups are able to craft long and enduring institutions for the management of common pool resources. For example, Ostrom (1990) describes the 1000 years old irrigation system in Valencia, Spain, in which thousands of farmers were involved and were able to organize monitoring and enforcement mechanisms for all users to be held accountable.

Even when sharing common language, religion, and dependence on the same resource,
communities are rarely homogenous socially or economically. In South Africa, for example, community has become associated with other referents such as class, race and the people (Emmett, 2000). To deal with this challenge, Brown et al. (2001) have tested a trade-off analysis approach in the case of a marine protected area in the Caribbean. The aim was to bring forward the different stakeholders, highlight the range of interests and allow for the ranking of their concerns. In the end, it was found that there was much more common ground than the groups had themselves had expected.

Thirdly, communities may share norms that aid in conservation - the sacred forests in the Androy region, Madagascar, are an example of such conservationist practices (Tengö et al., 2004) - and promote cooperative decision-making. Sacred forests, as small as 1 ha, are sacred burial grounds in which barriers to entry are enforced with severe sanctions. These forests provide multiple ecosystem services and as such they stand despite the high agricultural intensification of the area. However, norms may also promote exploitation of resources and may be context-dependent and evolving. For example, in Africa some people may be against wildlife because of its harm to cattle (Agrawal and Gibson, 1999).

Local participation has also been heralded by proponents of bottom-up approaches as the way to follow for greater transparency, legitimacy and conflict resolution. However, participatory approaches such as PRA (Participatory Rural Appraisal), or RRA (Rapid Rural Appraisal), are challenging both at a practical and conceptual level. Important questions are raised such as "who participates? What are their demands and expectations? What capacity do individuals and groups have to participate? Will they participate in all aspects of decision-making or only in selected phases? How do participants benefit from involvement?" (Brechin et al., 2002) Participation is based on the fact that there is a 'community' that is able to participate but the previous section showed how this notion is flawed in itself (Emmett, 2000). Lastly, the practical implementation of participatory approaches has shown to require high administrative costs, the need for skilled labor and the need for long periods of time for trust to be established (Adams and Hulme, 2001).

Depending on who decides what the problem is, participation could represent a top-down approach because the devolution of powers is decided at the top level and not by the grassroots level. In some cases, participation may also lead to conflict when the expectations of the people oppose the goals at higher levels of governance. For example,
“the devolution of strong property rights to the people of communal lands is a fundamental allocative and political issue” that may run counter powerful economic interests (Barrow and Murphree, 2001:30). Often, it is in the interest of the state to maintain control over land and natural resources and freedom to decide upon activities such as mining and logging.

The third limitation to the implementation of community-based conservation lies in its emphasis on economic incentives. Economic incentives may turn out to be insufficient to alter behavior of poor households and may add on the use of resources and patterns of activities, but may not be able to substitute them (Pretty, 2003, Brown, 2003). Moreover, according to Barrett et al. (2001:500), emphasis on economic incentives alone may ignore three other essential conditions:

1. “the authority, ability and willingness (of local people) to restrict access and use,
2. the technical capacity to monitor ecological and social conditions,
3. the managerial flexibility to alter the array of incentives and the rules of access so as to cope with changes in the condition of the resource or its users”.

Lastly, focus on economic incentives may not be very relevant and ignore the fact that often affected groups are more interested in issues of empowerment, recognition and equity (Berkes, 2004) as well as in being part of a legitimate process (Brechin et al., 2002).

The following section explores a middle ground for groups to negotiate fair and legitimate agreements and to collaborate on issues of interest for conservation and development goals. Social capital provides for an asset to negotiate the middle ground.

2.5. Social capital as an asset for negotiating legitimate conservation and development

Social capital is a flexible concept that has been used in a variety of empirical and disciplinary situations. It represents an important asset for local communities because it creates an arena that allows for dialogue, negotiation and collective action around issues of development and conservation in a legitimate and accountable way. Social capital represents an important form of capital that comprises four fundamental features: “relations of trust, reciprocity and exchanges; common rules; and connectedness in networks and groups” (Pretty, 2003:1913). The strength of inter- and intra-group relationships can promote collective action more effectively in ways that reduce the transaction costs of working together (ibid.). Transaction costs mostly refer to the time spent in organizing groups around issues of interest and the costs involved with promoting action that will be
followed by the group collectively. Like other sources of capital, social capital is not costless to produce and requires inputs of time, effort and sometimes money (Grootaert and van Bastelar, 2001). Unlike other sources, it emphasizes the role of personal interactions and institutions and it accumulates with use.

Social capital is also an important resource for development because it allows shifting the focus from need-based approaches of development to the knowledge, talents and skills present within the community. Without underestimating the constraints faced by communities, this approach highlights the fact that “people’s own, inventive solutions” need to be supported in “more flexible, messy, diversified interventions, based on the poor’s perceptions as to the assets prioritized for consolidation rather than on top-down blueprint recommendations” (Moser, 1998:16, as quoted in Emmett, 2000:514).

The way in which social capital is created is not well known (Gugerty and Kremer, 2001). Authors such as Putnam (1993) have demonstrated that it may be very difficult to produce social capital because it represents the result of long-term institutional development. Putnam (1993) compared the levels of development in Southern and Northern Italy, and identified a lack of social capital in Southern Italy, where the strong negative effects of criminal organizations such as the Mafia prevented social and economic development. Other authors argue that it is possible to create it in a relatively short period of time (Gugerty and Kremer, 2001) and the concept of social capital formation has been introduced to describe “deliberate process(es) of organizational capacity building” (Brechin et al., 2003b). This view is accepted by several international agencies on the basis of high correlations between social capital and development (Grootaert and van Bastelar, 2001). However, the impact that actors or agencies at higher levels of governance have on the emergence or strengthening of social capital has led to mixed results. While social capital seems to facilitate the interaction and collaboration within and between groups at the same level of governance, its creation among different levels of governance is less clear (Krishna and Uphoff, 2001).

Gugerty and Kremer (2001) examined three different projects in Kenya which attempted to build social capital with outside support. They found that donor concern did not influence measurable social capital outcomes. For example, several women farmers’ groups were given organizational training and agricultural inputs such as tools, seeds and pesticides.
However, the groups that were supported fared in no way different than the groups that were not supported with regards to harvests and economic returns. The only discernible change was a progressive intrusion of less disadvantaged men into the sponsored groups. The authors attribute this to the form of assistance—financial reimbursement of trips for training and physical tools that could be used in private farms—which was easily diverted into rent seeking and productive investment strategies on behalf of more educated groups. Their recommendation was for program inputs to be “less easily diverted and for beneficiary groups to have a clearer collective rational” (ibid.: 232).

The results from studies of social capital point to the fact that social capital is an important asset but that it is more difficult to strengthen it, especially with direct outside interference. For this reason, this thesis uses the tool in a heuristic way to describe qualitatively events and organizations rather than to evaluate social capital levels in a quantitative way.

3. THEORETICAL FRAMEWORK

The previous chapter explored how protected areas in Africa are often associated with contested histories. Such historical legacy is one of the most pressing issues when dealing with conservation and development on the ground. For example, conflict and historical power differences often lead to the lack of social capital (Scheffer et al., 2002). Such a situation challenges the ability to bridge between powerful actors and less powerful ones (ibid). In the case of South Africa, the legacy of Apartheid represents a large obstacle to the creation of social capital within groups and perhaps even more between different groups. Memories of exclusion, marginalization, conflict and distrust that typically characterized relationships between communities and protected areas are still real due to the legacy of colonial times in demarcating the land and confining people in homelands as part of the Apartheid regime (Picard, 2003).

In such a context, it is a challenge for those in power to bridge to the communities on equal terms, trust them, gain their trust as well as facilitate collaboration for collective action in conservation and development. And yet, for the process of conservation and development to be legitimate, just and sustainable, there is a need to overcome the past. For this reason, ideas for collaborative efforts are explored from the concepts of social capital as one of the potential tools for such process to take place. This chapter presents a theoretical framework
for the study of the communal vegetable gardens and the negotiations for the fence between the Wetland Park Authority and the tribal authority of Mnqobokazi. Elements from the field of political ecology, common-pool resource management and social capital are used and analysed through narratives.

Political ecology, deriving from the critiques of ecological anthropology and cultural ecology, was born in the 1970 to combine ecological concerns with “a broadly defined political economy” (Brooksfield and Blaikie, 1995, as cited in Brown, 1998). Political ecology focuses on “the contextual sources of environmental change, conflict over access to resources, and the political ramifications of environmental change” (Brown, 1998). The broader context - comprising levels of governance from provincial, state government to international – as well as historical patterns - profoundly influence actions at the local level. In this thesis, the actor-oriented approach taken from the field of political ecology is used to capture the motives and actions of the different actors involved - directly or affected - behind establishing communal projects within the larger institutional context of the Greater St Lucia Wetland Park. Such analysis allows elaborating "the role of place and non-place based actors" (Bryant and Bailey, 1995). In this thesis, the aims and interests of three of the many actors involved and affected by the Greater St Lucia Wetland Park - the Wetland Park Authority, Ezemvelo KZN Wildlife and the tribal authority of Mnqobokazi – are described with regards to current issues, such as the proposed fencing of the park, and in their proposals for negotiations.

Social capital has been identified as one of the key elements to establishing successful collaborative approaches for the conservation of natural resources and an important resource for development (Pretty, 2003, Emmett, 2000). According to Grootaert and van Bastelar (2001:6), measuring social capital is “difficult, if not impossible”, so proxy indicators that are contextually dependent are necessary. In this thesis, the narrative approach is used to get real life examples of the situations that led to building of trust, relations of reciprocity, establishment of norms and rules and development of networks within the garden groups, with the community and the Wetland Park Authority (Pretty, 2003).

According to Dahlberg and Blaikie (1999), “most environmental histories which choose to use both narrative and formal secondary sources have to interpret the interpretations of the
informants, which in turn requires some exogenously constructed logical “architecture”, or thematic framework. This helps to resolve a number of contradictions in the attribution of cause and effect by informants themselves”. While the present study is not an account on environmental history, the narrative approach is considered valid to express the complexity of the situation on the ground by presenting the different interests at stake among the different management structures. They highlight the possibilities and constraints that stakeholders, such as local leaders, farmers, cattle ranchers and women face in negotiating with the Wetland Park Authority and Ezemvelo KZN Wildlife. A composite picture of several perspectives allows for depth and richness of detail, as well as for assessing the gap between intention and effects of actions. Narratives are used to approach the important elements that build social capital in a way that underlines the tone of individual stories.

Becker and Ostrom (1995) describe design principles deriving from the study of long-enduring institutions for governing common-pool resources. Common-pool resources are characterized by excludability and subtractability. Excludability relates to the ability of users to exclude other resource users from the resource, while subtractability means that use by one person will decrease the overall amount for others. The design principles represent a summary of factors that emerged from the study of several cases of long-enduring institutions managing resources in a sustainable way. The principles rest on the idea that in order to address limitations in resources, it is important to have functioning institutions that are able to define clear boundaries for individuals and groups to access the resource (1), guarantee a proportional equivalence between benefits and costs (2) and allow for members that depend on the resource to collectively choose their own arrangements (3) and adapt in the face of changes (Becker and Ostrom, 1995). Moreover, once the rules are established, groups must be able to monitor the resource base (4), apply graduated sanctions (5) with people that fail to comply and agree on mechanisms for the resolution of conflicts (6). Given that local resources are also nested within larger institutional arrangements, local groups must have a minimal recognition of rights to organize from structures at higher levels of governance –provincial or national government as well as have tenure over their resources (7) (ibid). The eighth principles applies to enterprises nested in larger systems. In this thesis, the design principles are used to describe the organization of the garden groups as well as to derive the conditions and rules-in-use that allow for collective action to benefit all participants.
4. METHODOLOGY

4.1. Methodological Approach

This case study is based on the abductive approach, meaning that the results obtained are neither completely deduced from the theory nor completely induced from the data. Rather, the theory shapes the initial research questions but it is challenged and enriched as new data is collected and analyzed. The abductive approach used in this study is similar to the historical approach as defined by McAllister (2002) because it aims at highlighting the complexity of the real world rather than reducing it to a few causal variables. In this case, studies on conservation and development in Africa based on the framework of political ecology as well as previous studies in the lower Mkuze River area guided my research questions before going into the field. During fieldwork, attention was paid to both widen the scope and range of the study in order to understand the context in which actors at different levels of governance - such as the Ezemvelo KZN Wildlife, the Wetland Park Authority and some of the communities bordering the Greater St Lucia Wetland Park - were acting. Once the context was more clearly understood by means of interviews and participant observation, the communal gardens in Mnqobokazi were chosen as an example of the interaction between the community (or at least some of its members) and the Wetland Authority. During the analysis of the data, social capital emerged as a useful theoretical framework for suggesting new management options to the Wetland Authority.

4.2. Data collection

4.2.1. Literature background

Most references were found by exploring in detail the reference list of relevant literature on conservation and development in Africa, on socio-ecological resilience and social capital as well as on World Heritage sources and policy papers. The articles and books used for my theoretical framework were found by using database searches such as Web of Science and Academic Search Elite. To address policies at the national level, key informants provided information on which South African environmental laws were relevant to the current management of the park.

4.2.2. Interviews

Fieldwork, comprising interviews and participant observation, was conducted in South Africa from the end of March to the end of April 2005 for a total of five weeks. Three
weeks were spent in the tribal authority of Mnqobokazi, one week in St Lucia Estuary where the headquarters of the Greater St Lucia Wetland Park Authority - abbreviated to Wetland Park Authority - are located, and one week was spent in Durban at the University of KwaZulu-Natal. A qualitative approach based on semi-structured and open-ended interviews was adopted. The respondents comprised staff from the Wetland Park Authority, staff from Ezemvelo KZN Wildlife conservation agency and members of the community of Mnqobokazi (Appendix 1). The tribal authority of Mnqobokazi is described in chapter 5, while the mandates of the management organizations are described in depth in chapter 6. In Durban, university researchers involved in the area provided important information, advice and leads on who to contact once in the field.

4.2.2.1. Respondents from the Wetland Park Authority and Ezemvelo KZN Wildlife

Five staff members from the Wetland Authority and six staff members from the Ezemvelo KZN Wildlife were interviewed (Appendix 1). Additional interviews were arranged with two university researchers from Durban. One had collaborated with the Wetland Park Authority while a second was a wetland ecologist familiar with the Mkuze wetlands. The contacts were obtained initially from professors at the University of KwaZulu-Natal. In the field, a snowball effect was followed until names kept on being repeated. The sample questionnaires are presented in Appendix 2. The interview questions were developed for staff from the Wetland Park Authority and Ezemvelo KZN Wildlife. The aim was to assess the role of the respondent within the organization and the level of work and interaction with communities. This initial information guided the conversation towards some of the several topics presented. The interview time ranged from an average of 1:30 hours to a couple that lasted 2:30 hours.

Given the small size of the Wetland Authority, most of the staff involved in projects with the community of Mnqobokazi was interviewed. Moreover, the somewhat horizontal structure of the organization and high level of specialization called for such extensive interviewing. One of the Wetland Park Authority’s staff members in charge of the area where Mnqobokazi is located represented a key informant since he was interviewed three times to follow-up and discuss on results from the field. The Ezemvelo KZN Wildlife was a much larger organization and it was more difficult to get names and contact information. Therefore, only a small percentage of the staff was interviewed but to a large extent these were the most relevant because of their involvement in the area.
4.2.2.2. Respondents from the tribal authority of Mnqobokazi

In Mnqobokazi, thirty-six members of the community were interviewed, in the majority of cases with the aid of an interpreter (Appendix 1). An open-ended questionnaire was developed to understand the background household situation in terms of livelihoods strategies, access to resources inside the park and knowledge and interaction with the Wetland Park Authority and Ezemvelo KZN Wildlife. Interviews were about one hour long and freely followed the format of the interview questions in Appendix 2. If the respondent was a member of the garden, most questions developed around this issue. When the respondent belonged to the leadership, most questions aimed at the relationships with outside conservation and development management organizations, fencing and potential collaboration outcomes.

Table 1: Summary of respondents from Mnqobokazi by gender and position

<table>
<thead>
<tr>
<th>Respondents by gender</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary people</td>
<td>23</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td>People in leadership position</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Total interviewed</td>
<td>24</td>
<td>12</td>
<td>36</td>
</tr>
</tbody>
</table>

Table 2: Summary of respondents involved with the gardens

<table>
<thead>
<tr>
<th>Garden respondents</th>
<th>Female interviewed</th>
<th>Male interviewed</th>
<th>Garden Committee</th>
<th>Total garden members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members of G1</td>
<td>6</td>
<td>2</td>
<td>4 women</td>
<td>37 (7 male)</td>
</tr>
<tr>
<td>Members of G2</td>
<td>7</td>
<td>1</td>
<td>2 women</td>
<td>22 (2 male)</td>
</tr>
<tr>
<td>Members of G3</td>
<td>3</td>
<td>1</td>
<td>1 male</td>
<td>32</td>
</tr>
</tbody>
</table>

Thirty-six respondents represents a small percentage when compared to an approximate population of 7000 people, but they are representative of the groups that were directly and indirectly involved with the garden projects. One of the respondents was a key informant who provided valuable insights into the dynamics of the community and its relationship with the Wetland Park Authority. Some of the respondents were either involved with community-based development and conservation projects or in a leadership position within the community (i.e. local chiefs and the councillor), while the majority was chosen based on their involvement with the garden projects or lack of involvement. Given that women represented the majority within the garden groups and were the intended beneficiaries of the initiative, they are the majority among the respondents. The respondents who did not cover positions in the community leadership or within the garden groups were chosen with some attention for representativeness in terms of gender, age as well as location with respect to the boundaries of the protected area.
4.2.2.3. Interview issues

Some of the issues that need to be taken into consideration when doing qualitative research are the use and development of open-ended and semi-structured interviews, the employment of an interpreter and the use of a tape recorder. An interview guide was compiled before going into the field and it comprised a list of questions and topics that I wanted to get addressed based on a previous study of conflict in the area (Andrén, 2001). However, the list was kept open-ended so that respondents could describe their own situation and from there provide new examples and issues that were of present interest and/or concern. After a couple of pilot interviews, the interview guide for the community members was changed to address the new projects that had been developed with the Wetland Park Authority as well as new issues - such as the negotiations for the fence - that were in progress (Appendix 2). However, leads were always followed during the interviews for additional information. While the guide was easier to follow with the members of the Mnqobokazi community, in the case of park officials from both agencies, their position and degree of involvement in the Mnqobokazi area defined the kind of questions that were asked. These followed a dialogue form and since they rarely followed the format, they were each unique.

With regards to the interpreter, two days were spent explaining the aims of my research and my methods, as well as conducting two pilot interviews to test the questions. Moreover, during many interviews two interpreters were present at the same time, thus allowing for misunderstandings to be caught by one of them at least. They were also important for discussing the relevance of the questions. Abstract questions were avoided in order to diminish language misunderstandings and questions tried to relate as much as possible to facts and daily activities. For example, when asking about the garden groups’ organization and routine, I realized that sometimes answers were relevant to the current state of affairs, while in other cases they described what “should have been”. However, which applied each time was not discernible unless more specific questions were asked. In the community an interpreter was used in all interviews save for four where the respondents spoke English. In this case, a tape recorder was not used because during translation there was time to write down the answers. With park officials, a tape recorder was more helpful but used only in half of the interviews because of technical problems or the fact that there were no tapes to be bought in the area. The lack of the tape was compensated by the fact that more than one researcher was present in most of the interviews. This allowed for question to emerge from
different perspective and interests, for time to take notes during the conversation and for comparing notes afterwards.

4.2.3. Ethical issues

An interview does not represent a mere collection of data but a journey. It is a conversation between two people that may lead to new knowledge as well as to deeper personal changes (Kvale, 1996). Because interviews involve personal interaction, the moral implications need to be addressed throughout the whole research design. In this research study, care was taken to obtain the informed consent of the subjects to their participation in the study and to secure confidentiality through anonymity. The respondents are thus indicated with numbers following the Roman system (i.e., I, X). In the case of park officials, their participation was undertaken as representatives of the organization they work with. Unless they agreed otherwise, their names are given when relevant in understanding the context. Moreover, a draft is given to them before publication to ensure that the interpretation of their responses is relevant to the context and not extrapolated.

The potential consequences that the study could bear upon the participants was also considered and these aspects were openly clarified during the interviews with members from the community. For example, a woman from one of the gardens was scared about revealing sensitive issues. In this case, anonymity was stressed and the questions dropped. At the end of the interview the respondents were encouraged to ask questions about the work, my background and the potential impacts of the study. Ideas were exchanged openly. For example, in several cases I described what I already knew, what I had learnt from the interview and what were my ideas driving the study. In the final thesis, some results have not been reported either because they represent sensitive issues on the legacy of Apartheid that need to be further explored before being reported or they are part of the negotiation process for the fencing of the Greater St Lucia Wetland Park.

1.3 Data Analysis

The analysis of the data obtained through interviews, participant observation and secondary data (such as laws, policies, historical facts and previous studies in the area) is divided into two chapters. Chapter 6 responds to the first research question:

1. What are the mandate, goals and issues at stake within and among the three management structures - the Wetland Park Authority, Ezemvelo KZN Wildlife and the
tribal authority of Mnqobokazi— that have emerged from the nomination of the Greater St Lucia Wetland Park World Heritage Site?

The aim of the chapter is to present the current context under which the Wetland Park Authority and Ezemvelo KZN Wildlife are operating and the conditions being negotiated for the economic development of Mnqobokazi. It describes the process that led to the establishment of the World Heritage Site as well as the role that different stakeholder groups are playing with regards to important issues that are under negotiation and development (ie. fencing and tourism development). This chapter is important in identifying the perspectives, mandates and actions of the management structures involved in area - the Wetland Park Authority, Ezemvelo KZN Wildlife and the tribal authority of Mnqobokazi - with regards to their agenda on conservation and development strategy. The role of these management structures in advancing conservation and development through poverty alleviation initiatives is discussed in chapter 8. These are not the only stakeholders present in the area and there are several other governmental (municipal and provincial) and non-governmental organizations involved. However, the three mentioned represent the most important ones with regards to the issues pursued in the study.

In chapter 7, the aim is to identify the different narratives that emerge within the community and among the external management structures to assess whether such narratives lead to the creation of social capital within the garden groups, between garden groups and at the community level. The chapter presents different perspectives on the history, development, current organization as well as internal and external support of the three garden groups. The narratives that emerge attempt to give voice to ordinary women and men belonging to the gardens or to the garden committees, ordinary community members involved in farming and weaving as well as community leadership and staff from the Wetland Park Authority and Ezemvelo KZN Wildlife. This part provides a tentative answer to the second research question:

2. What are the factors that lead to the creation of social capital – in the form of trust-building, reciprocity, rules-in-use and networks - within the groups and between the groups?

The analysis sets the stage to discuss in chapter 8 the kinds of intervention that build social capital and the extent to which external interventions need to add onto local livelihood strategies.
3. Do the garden initiatives facilitate awareness about conservation and development efforts and enhance collaboration and dialogue between these different interests at a wider community level?

The assumption behind the third research question is that garden groups can potentially forward the ideas and vision of the Wetland Park Authority to the rest of the community while communicating back to the Wetland Park Authority the ideas and visions of community members. In this case, the role of the gardens in promoting social capital is used to describe possible future scenarios and their implications on development with conservation at the community level. This part answers the third research question and contributes to the discussion on whether poverty alleviation projects help create social capital that will aid not only in development, but also in conservation.

4.4. Critical reflection of methods

The amount of information available when dealing with conservation and development is vast and multifaceted. When searching for papers, knowledge of useful articles was important for the “snow-balling effect”. Research of articles through keywords was less useful either because of the vastness of the topic (i.e. conservation, development, South Africa) or its narrowness (i.e. World Heritage). Thus, the approach (at least initially) to this research was open-ended. An evaluation of data sources was more easily done once in the field, where important secondary sources such as research papers and management plans were commonly mentioned. No contacts with staff from the Wetland Park Authority were made before going into the field because of the lack of such information on the internet. During the field period, it was sometimes difficult to get appointments with people working with and in the Greater St Lucia Wetland Park because of short notice. For example, it was not possible to get an appointment with some of the key individuals behind the inception and management of the Wetland Park Authority. Despite this, the most important links to my case study area were made since all the people directly involved with the gardens were interviewed.

Some of the issues that need to be considered when doing qualitative research are the risks of appearing like somebody from the government as well as the way in which interview answers are checked and verified. The first one was more relevant in the community. Even if my position as a student was defined at the beginning of the study, very often the
respondents asked what they would gain from my study or asked for specific help. Being taken as somebody who can help was unavoidable and in this case the responses have to be evaluated more carefully in the context of how the interview developed and the background of the respondent. Some issues, such as the fence, proved to be quite sensitive and the answers I got were often very emotional. While this per se represents a result because it highlights the relevance of the topic, it sometimes made it more difficult to continue so that this topic was kept for the end of the interviews.

Unavoidable biases are also part of the work since often very different positions and cultural differences made it difficult to understand what was happening. In order to cross-check some of the answers, several methods were used. At the beginning the conversation was kept very open allowing the respondent to clarify his position, work and mandate. However, as the direction of the discussion developed, reference to information obtained from other interviews that I felt was not being addressed was used to confirm the answers as well as to promote discussion and critical insight. This allowed the respondent to know what I was familiar with and it often gave rise to interesting discussions both with park officials from the Wetland Park Authority and Ezemvelo KZN Wildlife as well as with members of the community of Mnqobokazi.

During fieldwork, there were several occasions for discussing the answers obtained. In the community, both interpreters and key informant were important in discussing the interview results. Sometimes one of the interpreters would tell me at the end of the interview what he thought were incorrect or biased answers and give me his or her explanation. Other times, I would ask them about what I thought were inconsistencies, puzzling responses or responses that were to the point of what I wished to obtain, a bit too much to the point. Often information from the community was also verified with staff from the Wetland Park Authority and vice-versa. This was important not only for content, but also to verify the strength and length of the linkages that existed between and among these two groups.

During my interviews in the community and with the two park management structures, a gender and power bias was unavoidable but not impairing the results. With regards to interviews in Mnqobokazi, women represented the net majority within the garden groups while men represented the majority in leadership positions, an unavoidable result given that it represents the gender distribution of these groups. I decided who I wanted to interview
and then it was my interpreters who arranged the appointments with possible respondents. While I had control over representativeness in terms of gender and age, it was more difficult to account for wealth and family connections as well as for randomness. Power relations were difficult to account for, even though they often (not always) transpired through the attitude and behaviour during the interviews, as well as in the background section, as part of the interview questions on the household economy (Appendix 2). The gender perspective was also biased towards men when interviewing staff from the Wetland Park Authority and Ezemvelo KZN Wildlife since they constituted the majority of the respondents in the positions that were relevant to my study, such as staff on the ground. However, women’s perspective was also present and very important when dealing with communities (Dlamini, pers. comm.). In the end, the interviews were fairly representative and able to capture also outlier views that well fitted the research focus on having breath of context and depth of the garden initiative.

5. CASE STUDY AREA

5.1. Location

The present research study was conducted in the tribal authority (TA) of Mnbobokazi, located in the province of KwaZulu-Natal, South Africa, approximately 300 Km from the city of Durban (Appendix 3). Mnbobokazi borders two protected areas on three sides: the Greater St Lucia Wetland Park (GSLWP), a natural World Heritage Site nominated in 1999 and Phinda Reserve (Trygger, 2002). The Mkuze River separates Mnbobokazi from the Greater St Lucia Wetland Park on the North and East sides. To the east, the Mkuze River becomes a large wetland – the Greater Mkuze Wetland System - before entering Lake St Lucia. To the west lies Phinda Reserve, a privately owned reserve developed in the 1980s and geared at a high-end type of tourism. In the 1990's the state purchased a large property of farmland to incorporate it into the park system and connect the Mkuze Game Reserve (west of Mnbobokazi) to the Ozabeni section, now part of the Greater St Lucia Wetland Park. Known as the Link Property, this property has been claimed by the Tribal Authority of Mnbobokazi. As the map in Appendix 3 shows, the Tribal Authorities of the Nibela and the Makasa are situated to the South of Mnbobokazi.

The Greater St Lucia Wetland Park– nominated World Heritage Site in 1999 - consolidates 16 parcels of existing protected areas as well as several new parcels of land and comprises
important ecosystems such as the entire estuarine systems of Lake St Lucia, Lake Sibaya and Kosi Bay. It also directly borders eleven Tribal Authorities, of which Mnqobokazi represents one of the them. In 2000 a new management authority, the Wetland Park Authority was put in charge of a larger areas comprehensive of the Mkuze Game Reserve located close to the Lubombo Mountains in the interior west. The area comprehensive of the World Heritage Site covers 325 000 ha and runs for 230 km from the South of the St Lucia Estuary to the Mozambican border, where a transfrontier park is under negotiations.

5.2. Biophysical environment – the Greater Mkuze Wetland System

5.2.1. Climate, hydrology and soils
The climate in the coastal area of Northern KwaZulu-Natal is moist-subtropical. In January, mean temperature is 31.5°C, while in July it is 25.5°C (Ellery et al., 2003). Most precipitation occurs during the hot, wet summers, while winters are characterized by a dry and mild climate. Precipitations present a East to West gradient, from an annual rainfall of 1000-1100 mm along the coast to approximately 600 mm at the base of the Lubombo Mountain range, where the climate is dry-subtropical (ibid). Abundant precipitation in the coastal areas have led to the leaching of soils and the creation of impermeable layers suited for the formation of wetlands such as pans (McCarthy and Hancox, 2000).

The Mkuze River, a non-perennial river separating the Mnqobokazi community from the Greater St Lucia Wetland Park, is 290 km long and the catchment covers an area of 4820 km². Rising to the east of the Drakensberg Escarpment, the Mkuze River flows east through the Lubombo Mountains, across the KwaZulu-Natal coastal plains where it forms the Greater Mkuze Wetland System and in the end drains into the northern part of Lake St. Lucia, in the Greater St Lucia Wetland Park (Ellery et al., 2003). The Greater Mkuze Wetland System - covering a surface of 450 km² - represents a very dynamic system both spatially and temporally. It receives clay and silt sediments mainly from wind as well as from flooding events (McCarthy and Hancox 2000:223; Trygger, 2003). Therefore, the Greater Mkuze Wetland System has high soil fertility and great water retention during long periods of the dry season (Neal, 2001) that allow for small-scale subsistence agriculture to take place when other places become unsuitable for cultivation. Otherwise, soils are generally a light fine sandy, low in nutrients, low in moisture capacity, and leached or waterlogged in the coastal areas. In the Tribal Authority of Mnqobokazi, soils are generally sandy and low in fertility save for the locally known Mothokothe area, a local floodplain
that it is part of the Greater Mkuze Wetland System and that is used for intensive agriculture (picture 1).

5.2.2 Flora and fauna
The vegetation of the Greater Mkuze Wetland System is highly diverse in both species and communities. High levels of biodiversity are the result of the wetland ecosystem, the location in a tropical and sub-tropical transition zone as well as the exposure to east-west gradients in precipitation (Neal, 2001). There are 671 species identified (Goodman, 1987) and fourteen different plant communities (Stormanns, 1987) which are affected by different geological substratum, geomorphological process of sedimentation and hydrological processes such as flooding (Begg, 1989). These communities include four broad vegetation types such as the hygrophilous grassland, marsh, swamp and forested wetland habitat (Neal, 2001). Grasslands dominate the lower lying areas, while woods are more characteristic of more elevated zones (Ellery et al., 2003). The Greater Mkuze Wetland System are also important for their high diversity of amphibians - which include hippopotamus, reptiles - such as crocodiles - and birds (feeding grounds for migratory birds), and at present harbour 32 rare and endangered species (Begg, 1989).

5.3. The social system
5.3.1. Brief historical background of north-eastern KwaZulu-Natal
According to Bruton et al (1980), the human history of the region started in the early Upper Pleistocene but it was only in 1440-1460 A.D. that the modern Bantu reached the area around the Mkuze Game Reserve and through slash-and-burn agriculture slowly replaced forests with savannah grasslands and hygrophilous and riparian forests with sedges and reed swamps. With the advent of the British and the Boer to South Africa, the northern region of KwaZulu-Natal was one of the last regions in South Africa to be colonized due to
a high incidence of malaria. The region was exploited by colonial powers from the mid 19th century mostly for game and game reserves were thus set aside for colonial hunters (ibid.). Of these, the St Lucia Game Reserve is one of the oldest existing game reserves in the area.

British colonization of the area was characterized by warfare with the Boers or Afrikaner as well as with the Zulu kingdom. When Zululand was annexed by the British government in 1897, the land was divided into land for commercial farming, private game and forest reserves as well as native reserves, leading to the displacement of the Zulu (Dahlberg, 2005). Native reserves were established to prevent disputes over the land and in 1904, "three fifths of Zululand were divided into 21 locations" and set aside for the Africans, while the rest was left for purchase by whites alone (Andrén, 2001). Traditional chiefs (also known as Inkosi) were allowed to administer the locations on account of the British ruler but their traditional power was undermined and dependent on the Colonial Office (van Zyl et al., 1996; Morrell, 1996). When South Africa became a Union in 1910, territorial segregation was legislated, Africans lost the right to buy land and further displacements and forced removals to crowded reserves became the norm. By the time Apartheid came into full swing in 1948, living conditions in the reserves and homelands were harsh, with poor or non-existent infrastructure, non-existent employment opportunities and degraded health conditions.

The inhabitants of Mnqobokazi trace their history back at least 200 years (Dahlberg, 2005). The local history is mostly remembered as a “struggle to make a livelihood as access to, and control over resources diminished over the last hundred years” (ibid:5). Segregation laws and the establishment of protected areas and reserves are for the most part responsible for the decrease in access to natural resources. In the 1970s, clearing for a missile testing ground also led to the forced removals of a neighbouring community, the Mbila, from the Ozabeni section, an area located north of Mnqobokazi. Many of them resettled in the neighbouring tribal authorities of Mnqobokazi and Nibela among others. Larger forced removals were planned for Mnqobokazi itself, but dropped because of their impracticability (Andrén, 2001). The missile testing grounds were then handed over to the Natal Parks Board for conservation and it is only recently, after the democratic elections in 1994, that the Mbila have lodged a land claim on the area. While winning the claim, the Mbila have not been given the right to move back to the area and are currently negotiating
access to a smaller section of the Ozabeni for cattle grazing.

5.3.2. Current situation in Mnqobokazi
The community of Mnqobokazi lives in a scattered settlement. There are 7952 people living in the tribal authority, which represent 25.5% of the population in the district municipality of the Big Five False Bay and only 1.4% of the population in north-eastern KwaZulu-Natal (the total in the region of Umkhanyakude is more than half a million) (Census South Africa, 2001). More than half of the population is below 15 years old (Andrén, 2001). Although there are five distinct groups living around the Greater St Lucia Wetland Park, Zulu, Tonga, Swazi, Shangaan and very few Gonda speakers, the community is characterized by Zulu-speaking people who belong to the Zulu ethnic group. Ordinary people for the most part speak Zulu, while members of the leadership and teachers also speak English (pers. obs). According to the 2001 census, only 0.3% of the population has been living in the community for less than five years (Census South Africa 2001). Of the respondents, 36.1% were not born in Mnqobokazi, but they had all settled in the tribal authority before 1986 either because of removals or as a result of marriage.

Mnqobokazi is located on communal land and defined as "state-land legally occupied" (Andrén, 2001). A traditional local chief, known as the Inkosi, administers the tribal authority with the aid of seven Indunas (local sub-chiefs) and responds to the tribal authority council. An important duty of the Inkosi is to allocate communal land, which cannot be bought, leased or rented. Traditionally women are not allowed to hold land under their name, however the KwaZulu-Natal government has changed the legislation to allow for legal inheritance (ibid.). Since democratic elections in 1994, the traditional leader is accompanied by a councillor who is responsible for bringing economic and social development from the municipality level of government. While the traditional leader follows family and gender lines and is in power throughout his life, the councillor is elected by the community but they are both paid by the government.

The community depends on subsistence and small scale commercial agriculture in the floodplain, harvesting of fibrous plants from the wetland, pensions, child grants and salaries from government occupations and poverty alleviation projects (Andrén, 2001). Some of the current projects include wetland restoration activities, alien plant removal and building of infrastructure (XXXII). Many households own plots close to their homes, but
the most extensive agricultural area lies in the floodplain of the Mkuze River, in an area known as the Mothokothe. Reliance on agriculture does not show in the 2001 census under the categories for subsistence livelihoods and for small-scale agriculture. Therefore, it is reasonable to assume that of the 93.1% of the working population that falls under the ‘not applicable’ category, a large part may be farmers, harvesters of fibrous plants and people engaged in the informal sector. Andrén (2001) found that according to the 1996 census, unemployment rates were around 47% and income levels really low. In 2001, 8% of the head of household are considered to be paid employees (Census South Africa 2001). The major sources of cash income are teaching, health assistance jobs and pensions. Others own small businesses such as tuck shops, sell fruits and vegetables along the roadside or sell wine produced from the iLala palm (Andrén, 2001).

Educational levels are low, with 1% of the population attending college and 1.9% finishing high school (Census South Africa, 2001). 25% have not attended any school, 35% have attended some primary and 14% are not applicable. These values are very similar to the percentages at the municipality level and at the district level. The western healthcare system is also deficient. For example, there is only one clinic in the village, despite the high incidence of HIV, influenza, tuberculosis and pneumonia (Trygger, 2003). The rate of infection of HIV in KwaZulu-Natal is one of the highest in the country and according to Andrén (2001), 86% of the pregnant women who register at the clinic in Mnqobokazi are HIV positive. Despite the paucity of services and the gravity of the health situation, Trygger (2003) showed that people in Mnqobokazi complement the western healthcare system with access to traditional healers when health conditions are serious and rely on household remedies as a first option in case of disease. These remedies are made from wild plant species that are common in the area.

The access and service infrastructure has been recently improving while not many years back Mnqobokazi and the neighbouring communities were considered to have the most inadequate service of the whole of KwaZulu-Natal (Andrén, 2001). There is one newly constructed tar road connecting Mnqobokazi to other towns in the region, but no general access to electricity and running potable water. Only 2% of the households have access to electricity, as opposed to the 20.6% at the district municipality level and 96% rely on candles for light (Census South Africa 2001). Moreover, 28% collect water from a nearby stream and only 3% have access to piped water within 200 m from the household. The
municipality has provided the community with large tanks that are refilled once a week. Moreover, as part of poverty alleviation programs, the government is currently providing toilets to all the households in the village and employing locals for the work (pers. obs). At the time of writing this project was extended to include housing. In the absence or scarcity of telephone lines, cellular phones have become an important means of communication (pers. obs.).

5.3.3. Human environmental impacts on the hydrology of the lower Mkuze River and on ecosystem services provided by the wetland

The environmental impact of local people’s activities on the landscape has been comparatively low due to low levels of mechanization and commercialization of agricultural products (Ellery et al., 2003). However, the excavation of two canals in the 1970s substantially modified the hydrology of the area. The Mpempe Canal was excavated in 1971 to shorten the route of the Mkuze River and increase inflows into Lake St Lucia. This decision was taken by both the Natal Parks Board (now Ezemvelo KwaZulu-Natal Wildlife) and the St Lucia Scientific Advisory Committee to reverse the effects of hypersalinity in the lake caused by a prolonged drought (ibid.). Negative effects included growing erosional rates of the canal bed, reduction in the recharge of the northern floodplain pans as well as obstruction to the movement of local farmers and pastoralists during the flooding period to their fields located in Mothokothe (ibid). In 1986 a private landowner enlarged an existing hippo trail (now known as the Tshanetché Canal) to supply water for irrigation and for livestock that was very quickly eroded. This has led to the undercutting of the banks and to the diversion of close to 80% of the water from the river into the new canal (Ellery et al., 2003). The three gardens analysed in this thesis are located within close reach to the Mpempe canal and depend on it for water supply.

Picture 2: The canal that has been eroding separates the majority of the community from the fields in Mothokothe
The Greater Mkuze Wetland System provides important ecosystem services. Ecosystem services are important for the livelihoods of the adjacent rural communities. The wetlands filter underground water, attenuate and delay the flood peak allowing for storage of water during longer periods of time, provide for large areas of sediment-rich soil after flood events and represent an ecologically important site for biodiversity and productivity (McCarthy and Hancox, 2000:220). The community of Mnqobokazi relies on the soils from the floodplain for small-scale subsistence farming and grazing, and utilize a great variety of the wetland’s natural resources both for subsistence and as a source of income from tourist markets, sometimes as far as in Durban (Ellery et al., 2003; Dahlberg, 2005). These resources include reeds for building and thatching, firewood, papyrus (Cyperus papyrus) for mats and baskets, medicinal plants, iLala palm (Hyphaene coriacea) for wine, fish and occasionally small game (Andrén, 2001; Trygger, 2003; Ellery et al., 2003).

6. WORLD HERITAGE STATUS AND THE GOVERNMENT'S MANDATE FOR CONSERVATION AND DEVELOPMENT

The first part of this chapter describes the processes that led to the nomination of the World Heritage Site. It describes the establishment of a new organization for the management of the site, the Wetland Park Authority and the mandates of both the Wetland Park Authority and the conservation agency known as Ezemvelo KZN Wildlife. A description of the issues at stake with the tribal authority of Mnqobokazi as well as the aims of different stakeholders, sets the stage for the analysis of the conservation and development strategy adopted by the management in charge. This chapter attempts to answer the first research question on the mandates, goals and issues at stake among the three management structures - the Wetland Park Authority, Ezemvelo KZN Wildlife and the tribal authority of Mnqobokazi - and provides ground for discussing the role of management structures such as the Wetland Park Authority and Ezemvelo KZN Wildlife in advancing conservation and development through poverty alleviation initiatives.

6.1. The nomination of the Greater St Lucia Wetland Park World Heritage Site

The nomination of the Greater St Lucia Wetland Park as a World Heritage Site in 1999 was the result of a long struggle conducted for the most part by the Natal Parks Board against a mining proposal. Until 1998, Natal Park Board was the conservation agency in charge of conservation in what is now the province of Kwa-Zulu Natal, while the KwaZulu-Natal
Directorate of Nature Conservation was in charge of the rest of the areas (Andrén, 2001). They amalgamated in 1998 under the name of Nature Conservation Service (NCS), later known as the Ezemvelo KZN Wildlife for marketing reasons (Derwent and Porter, 2003). This section is mainly based on one long interview conducted with the Head of Planning at the Ezemvelo KZN Wildlife provincial conservation agency, the main author of the nomination proposal to the World Heritage Committee, as well as on references obtained during the interview.

During the 1980s, Richards Bay Minerals company conducted mining prospecting for a project that was worth at least 6 billion Rand. In 1989, the company requested the authorization to mine titanium ore along 25 Km of the eastern shores of Lake St Lucia, specifically targeting the forested sand dunes (Porter et al., 2003). The area for mining had been transformed in the previous thirty years through activities such as commercial forestry, and through pressure from displaced communities in the form of grazing, poaching, wood gathering and land invasions (Marshall, the Sunday Independent, 27/03/05). After the eviction of several settlements belonging to the Mbila group in the 1970s, the area was included in a missile testing ground (ibid.; Andrén, 2001). However, the prospects of mining raised a huge uproar from both local and international environmentalists, calling for one of the largest and most controversial Environmental Impact Assessments ever developed in the country (Porter, pers. comm.).

An independent Review Panel headed by Judge Justine Leon entrusted the Natal Parks Board with the technical review of the Environmental Impact Assessment and with the development of an alternative to mining. According to Porter (pers. comm.), the mining company stated that it would create local jobs and that it would rehabilitate the sand dunes to their natural state. The environmental side opposed this view arguing that tourism development and conservation would represent a more sustainable alternative to mining also for local people. Public hearings held in Durban and St Lucia showed that local people were mostly in favour of mining because of the job prospect and openly uncovered the fact that both conservation agencies lacked legitimacy and support for the management of the Greater St Lucia Wetland Park despite the fact that they provided 400 to 500 jobs to local people. According to the Ezemvelo KZN Wildlife spokesperson, the lack of support and legitimacy were due to misinformation (Porter, pers. comm.). According to Andrén (2001:50), the Natal Parks Board lacked the support of the people because "they were
considered by many a pseudo military tool for the Apartheid government" and because people in the communities had a poor understanding of what conservation meant and what the job of the agency was.

In any case, the final recommendations of the Review Panel in 1994 discouraged mining of the eastern shores (Porter et al., 2003). At this point it was up to the new democratic government to take the challenge and find a way to end the controversy. With the advent of a new democratic government, South Africa attempted to deal with issues of economic redistribution - in the form of housing, water and employment opportunities - in the Reconstruction and Development Program of 1994 (ibid.). However, in 1996 pressure from both national and international corporate businesses and international donors, redirected the efforts towards a more liberalized economy dominated by the new macro-economic framework - known as Growth, Employment and Redistribution or GEAR - that would be globally competitive (Scoones and Wolmer, 2003; Lemon, 2004). GEAR is based on a “trickle-down, redistribution through growth method” (ibid.).

The Spatial Development Initiatives (SDI) are strategic programs developed within the GEAR framework and applied throughout the country. A product of the Ministries of Trade and Industry as well as the Ministries of Environment Affairs and Tourism, the Lubombo Spatial Development Initiative (LSDI) has been investing in roads and connected infrastructure in the northeastern part of KwaZulu-Natal in cooperation with the governments of Mozambique and Swaziland. The aim is for "the development strategy to be implemented with extreme speed and urgency" (...) to “generate economic growth by making maximum use of the inherent but under-utilized potential of the area”, “maximize job creation” and “broaden ownership patterns in the region” (Lubombo Spatial Development Initiative report: 3). The Lubombo Spatial Development Initiative (LSDI) focused on upgrading transportation corridors for the development of activities as varied as agriculture, industry and tourism adjacent to the transport lines. As part of this initiative, the government also urged conservation and tourism development to be pursued as alternatives in the Greater St Lucia Wetland Park Authority. World Heritage status was seen as a way to end the dispute, protect the site in the long term and create a magnet attraction, referred to as 'anchor' project for tourism and economic development (Porter et al. 2003).
“The idea that a World Heritage should be pursued urgently” was thus put forward after 1996 (Porter, pers. comm.). During the preparation of a nomination proposal, a consultation process with the affected stakeholders, comprising of the neighbouring communities, is required by the World Heritage Convention Guidelines. The public consultation process proceeded in the Greater St Lucia Wetland Park through written comments, a difficult task amidst a largely illiterate population. During this phase, conservationists tried to put across to local communities the idea that they would be better off with tourism, that there would be capacity building and that the jobs derived from tourism - for example building infrastructure, guiding and cooking - would be preferentially given to locals.

The consultation process was carried out through announcements in newspapers and in local schools and libraries. However, only 150 letters - in a region that hosts close to half a million inhabitants - were received and most came from pro-mining parties (Porter, pers. comm.). The outreach effort was very poor and according to Andrén (2001), at the time of her study in 1999 none of the people interviewed in Mnqobokazi knew about the World Heritage Site. At the time there were “no guidelines, no resources and no training of staff” within the conservation organizations concerning outreach efforts (Porter, pers. comm.). Despite the failure of the consultation process, the results were considered to support the establishment of a World Heritage Site and the nomination proposal was carried out by the newly amalgamated conservation agency, the Nature Conservation Service, later known as Ezemvelo KZN Wildlife. The World Heritage Committee accepted the World Heritage Site in December 1999. It now consolidated 220 Km of coastline, 16 parcels of protected areas for a total of 325,000 hectares of land, including a marine park. The nomination also settled the fight against mining.

The Greater St Lucia Wetland Park was nominated a World Heritage Site on December 1st, 1999, the first of the kind in South Africa. In the same year the South African government promulgated the World Heritage Convention Act (WHCW, n. 49) to “create(s) a legal and administrative framework to effectively manage and develop the South African World Heritage Sites” (Porter et al., 2003). The WHCA allowed the government to have an organization directly responsible to the government and to introduce a specifically South African dimension to the enactment of the World Heritage Convention “by seeking to balance preservation and conservation with job and wealth-creating economic development in a sustainable manner” (ibid.). At present, South Africa is one of three countries in the
World to have integrated the World Heritage Convention, an international agreement, into its national law and has adapted the international convention to suit its own policies and legislation. The WHCA is applied side by side with other pieces of legislation that apply to conservation agencies such as Ezemvelo KZN Wildlife. These include the National Environmental Management Act (1989, revised in 1998), the Protected Areas Act and the Biodiversity Act. The latter two were introduced in 2003 to formalize the procedures for cooperative governance. This framework allows fostering partnerships with neighbouring communities with regards to resource use and access in the protected areas (Scott, pers. comm.).

With regards to Greater St Lucia Wetland Park World Heritage Site, Andrén (2001) found that at the time of the nomination Ezemvelo KZN Wildlife and LSDI were in conflict over who would manage the site, a clear example of what the author considered to be a conflict between conservation versus development goals. The conservation agency felt entitled to manage the site because of its competence in conservation issues as well as its leading role in the nomination. However, on the outreach side it was hampered by long-standing conflictual relationships with some of the tribal authorities surrounding the present World Heritage Site. The LSDI, on the other hand, was favoured by the lack of past negative legacies (it was the product of the new democratic government) and by its focus on economic development rather than on conservation. However, some of the LSDI’s development projects - such as the tar road built to connect the Greater St Lucia Wetland Park to the Mozambican border - had been carried without proper consultation with the communities. Whether this was the exception or the trend was not clear at the time of Andrén's (2001) fieldwork in 1999. In 2000, the government nominated the Wetland Park Authority as a representative of the LSDI to manage the Greater St Lucia Wetland Park under the direct supervision of the Minister of Environmental Affairs and Tourism.

6.2. The mandates and objectives of the Wetland Park Authority and Ezemvelo KZN Wildlife

The mandate of the Wetland Park Authority is to focus on the conservation of the Greater St Lucia Wetland Park, comprehensive of both the World Heritage Site and the Mkuze Game Reserve, on tourism development in the area and on the socio-economic development of the tribal authorities bordering the park. To fulfill these objectives, the Wetland Park Authority is organized as a flat organization divided into four units - the
Conservation Unit, the Commerce and Finance Unit, the Social, Economic and Environment Development Unit (SEED) and the Research and Policy Unit – responsible to the CEO and the Executive Board (Porter et al., 2003). The organization has less than twenty employees and as a result each unit either administers its responsibilities directly or out sources through specialist organizations (ibid).

With regards to conservation, the Ezemvelo KZN Wildlife has been given the mandate, through a memorandum of agreement, to carry out the day-to-day management activities for wildlife and natural systems protection in the park on behalf of the Wetland Park Authority (Derwent and Porter, 2003). Responsibilities of Ezemvelo KZN Wildlife include ecological research, monitoring of the resource base, enforcement but also development of partnerships with people (Taylor, pers. comm.). Partnerships are part of the cooperative governance strategies demanded by the government and are aimed at improving the relationships with the local people with regards to conservation issues (Scott, pers. comm.). In the Greater St Lucia Wetland park, they include initiatives such as community levies, creation of local boards as well as environmental education and awareness outreach. Community levies rely on tourist’s entrance fee to the park and are used for community projects, such as the building of schools. According to Andrén (2001), local boards are meant to unite different stakeholders groups to compile and monitor the implementation of a management plan, perform local decision-making, integrate protected areas and surroundings and facilitate economic development. However, their relevance is very little in terms of decision-making and some of the staff members from Ezemvelo KZN Wildlife regard communication to be still very poor. They recognize that local people need to be brought on board and both learning and sharing of information need to follow a two-way path (Ndlovo, pers. comm.). The issue of communication is complex and will be discussed in more detail in chapter 7 and 8.

Within the Wetland Park Authority, the SEED unit has to deal with several challenges at the community level, such as land claims, empowerment and economic development. At present 12 different groups are negotiating over 60% of land within the protected area (James, pers. comm.). The groups that were forcibly removed from areas now belonging to the Greater St Lucia Wetland Park World Heritage Site, such as the Mbila, or that had owned land taken over by white farmers, such as the tribal authority of Mnqobokazi, have been entitled to lodge claims since the end of Apartheid (Andrén, 2001). Even though the
Wetland Park Authority has no mandate for resolving the land claims, the nomination has rendered it an affected stakeholder. It has thus complicated the arena for the tribal authorities with a claim on protected areas given that the Wetland Park Authority is reluctant to enter into negotiations until land claims are settled and it is unwilling to manage a landscape fragmented by several land claimants (James, pers. comm.).

Though the World Heritage legislation (WHCA, 1999), the Wetland Park Authority provides two means for the empowerment of the tribal authorities surrounding the GSLWP and local stakeholders such as farmers and investors. These include participation in the Wetland Park Authority Board and in the Local Area Planning process, part of the Integrated Management Plan (IMP, chapter 1, draft, 2005). At the management level, two representatives from the tribal authorities participate in the Board (composed of max. 9 members) that is in charge of overseeing and directing the path of the organization (James, pers. comm.). Likewise, communities have the possibility of reviewing the Integrated Management Plan (IMP), a five-year management plan that covers issues such as zonation within the Greater St Lucia Wetland Park, development in the surrounding communities and development of tourism activities.

The IMP is also the first of its kind to have been developed in South Africa. It represents a model and as such it lacks experience, adequate information and research upon which to base its decisions (IMP, chapter 1, draft, 2005). Within the IMP framework, the Local Area Planning Process represents an instrument for activating investments and development in communal land adjacent to the park (Fakude, pers. comm.). Each community can decide on the nature of activities to be carried out in their communal land in collaboration with the Wetland Park Authority, such as community projects and training in catering to tourists. So far, the Wetland Authority has decided on three pilot areas (to which Mnqobokazi was added during our fieldwork) for skill training related to tourism and assistance with small businesses. However, communities cannot decide on activities and projects within the protected area and do not have decision power over the macro-economic framework that structures the overarching strategy of development, such as the one that directs the Spatial Development Initiatives (James, pers. comm.).

Tourism development and zonation of the park are part of the overarching strategy to foster economic development, while details on the exact boundaries for building a proposed fence
and type of activities are to be negotiated with individual communities. Previous conservation organizations were ill equipped to optimise the potentials of the area and offered little product differentiation (IMP, chapter 1, draft 2005). Moreover, "infrastructure deficits, skill shortages, the prevalence of malaria, and the lack of a coherent destination market" represent challenges that have been addressed in the past eight years by the LSDI first and by the Wetland Park Authority since its establishment (ibid.). At present, the Wetland Park Authority dedicates ongoing efforts at attracting investment for lodges and hotels as well as giving concessions for boat, game drives and guiding. As stated in Derwent and Porter (2003), the aim of the new tourism projects is “to create jobs, stimulate economic growth and generate revenues that will reduce conservation’s reliance on (government funds) – while conforming to strict environmental guidelines” (ibid.).

The next section outlines one of the ways devised to foster tourism – the reintroduction of wildlife and the fencing of the park – and presents different perspectives on the potential impacts of the proposed fence on the community of Mnqobokazi. Even though the Wetland Park Authority has announced that negotiations will be conducted, such process has not officially started yet in Mnqobokazi. While this is only one of the several issues at stake in the community of Mnqobokazi, the controversy over the fence demonstrates the approach taken by the Wetland Park Authority in attempting to unite conservation and development. Moreover, the outcome of the negotiations will determine future relationship between the tribal authority and the Wetland Park Authority.

6.3. Perspectives on the proposed fence

The World Heritage Site is an anchor project for spurring local economic development through tourism. One of the means to attract international tourists includes reintroducing wildlife such as elephants, lions and rhinos in the south-centre part of the Greater St Lucia Wetland Park, around Lake St Lucia (James, pers. com). Both the Wetland Park Authority and Ezemvelo KZN Wildlife are aware that many of the jobs created from tourism, such as building infrastructure, are not sustainable because they are temporary. However, they consider catering to tourist facilities as one of the best potential alternatives for the region (Porter, pers. comm.). To accomplish this, the Wetland Park Authority aims at putting a fence to keep wildlife inside and to prevent the negative effects of animals encroaching into communal land and leading to threats to humans, transmission of diseases to cattle and trampling of crops (Neumann, 1998). Fencing as such seems to be one of the most viable
ways to ensuring a product that is competitive internationally and leading to job opportunities at the local level.

Reliance on benefits from tourism leads to controversial results. In Mnqobokazi, while tourism can create local job opportunities, subsistence livelihoods which depend on access to natural resources such as grasses, firewood, medicinal plants, building material inside the protected area might be heavily affected. The boundary between the Greater St Lucia Wetland Park and the tribal authority of Mnqobokazi is officially marked across the middle of the Mkuze Wetlands (see Appendix 3). However, several meters of peat land make it physically impossible to put a permanent fence (Dahlberg, pers. comm.). A compromise is thus necessary on both sides to allow for the fence to encroach onto communal land in some areas and to maintain the fields that are already established in the protected area at the margins of the Mkuze River (i.e. in the local area of Mothokothe) as well as the rights of access to local people.

A note of caution is given with regards to this issue, one of the many at stake between the two management organizations. During interviews, a range of conflicting responses and reactions emerged with people from Mnqobokazi in terms of what they knew about the fence, the negotiation process and the expected impacts on the community. In my opinion, conflicting answers are partially the results of widespread uncertainty over the negotiation process and outcomes. The different perspectives, expectations and possible trade-offs are reported in the following sections because they highlight the presence of different interest groups and they raise important issues with regards to the role and impact of the gardens at the community level. Most importantly, the different perspectives challenge one of the assumptions behind community development and integrated conservation and development. The assumption is that trade-offs are always possible when based on economic incentives, and issue discussed in chapter 8.

6.3.1. Perspectives from the Wetland Park Authority
The fence represents a relevant issue at stake – albeit not the only one – and its negotiation is part of the process of establishing a legitimate trend for conservation and development. The Wetland Park Authority has legislative as well as financial power to impose the fence, yet it is more interested in creating a collaborative environment rather than to raise conflicts. Moreover, the Wetland Park Authority is well aware of the dependence of local
people on the resources located inside the protected area. Both staff from the Wetland Park Authority and Ezemvelo KZN Wildlife highlighted the fact that people need to be brought on board for a legitimate negotiation process to be established and for the fence to be accepted (Fakude, pers. comm.; Ndlovo, pers. comm.). In the nineties, the Ezemvelo KZN Wildlife bought the Link Property from a white farmer and built a fence to separate it from Mnqobokazi. Quickly afterwards, the fence was destroyed and today only the poles are visible (Andrén, 2001). At the end of 2004, the Wetland Park Authority announced to the community that it would hold a negotiation process in Mnqobokazi. It explained the importance of the fence in terms of creating employment from tourism activities and outlined the negotiation process. At the time fieldwork was conducted there had not been any follow-up public meetings.

The interviews uncovered some of the trade-offs that are possible to achieve between the Wetland Park Authority and the tribal authority. For example, to reach a compromise with the farmers and others, the Wetland Park Authority is willing to leave cultivated fields outside the fence (Fakude, pers. comm.). In exchange, farmers cultivating in Mothokothe are expected to avoid using fertilizers and to avoid planting gum trees (Eucalyptus spp.), which affect the local hydrology and availability of water in the wetland. Likewise, the Wetland Park Authority intends to secure the support of the women that rely on the collection of resources inside the protected area by establishing a permit system, access gates and providing guard assistance against animal attacks (Fakude, pers. comm.). Ezemvelo KZN Wildlife already provides permits inside the protected areas. During two-three weeks a year, when papyrus plants (the local name is ncema) are ready to be harvested in the southern part of the Greater St Lucia Wetland Park, Ezemvelo KZN Wildlife offers daily guard support to harvesters (Dlamini, Mbuysia and Grobleo, pers. comm.). However, the plants collected in Mnqobokazi are accessible year round as household needs arise. Once wildlife is reintroduced, guarding women throughout the year may prove to be an effort well beyond the capacity of Ezemvelo KZN Wildlife and the Wetland Park Authority together. At the time of the interviews, it was not clear where the funding and human resources would come from.

The development facilitator in charge of the area did not think that Mnqobokazi would constitute a problem during the negotiations. This perspective could be the result of dialogue between the developmental facilitator and members of leadership who welcome
the project as a first step towards creating jobs. It could also be due to the fact that overall the issues at stake with Mnqobokazi are not as complicated as in other communities, where larger land claims render the situation much more difficult to handle and much more adversarial. A third possibility is that relations have actually improved since the end of the nineties, when most people were not aware of the impending nomination, there was tension within the community and lack of communication between conservationists and community (Andrén, 2001).

**Picture 3: The fence close to St Lucia Estuary**

### 6.3.2. Perspectives from members of the leadership in Mnqobokazi

Within the tribal authority of Mnqobokazi, the fence represents a controversial issue and at the time fieldwork was conducted, the leadership was divided. Of seven leaders interviewed in both traditional and government positions, three leaders were positive about the outcomes of the fence. They were aware of what the Wetland Park Authority was willing to compromise on with regards to the maintenance of fields and access to resources inside the protected area. However, two of them were not dependent on the harvesting of resources inside the protected area and did not depend on agriculture for their livelihoods.

The positive members of the leadership trusted the Wetland Park Authority's claim that more jobs would be created with tourism, even though one of the leaders did not know what types of jobs would be available. One of them acknowledged the role that the park was played in employing members of the community for building, working in the gardens and contributing to the removal of alien plants from the protected area. He said that the private Phinda reserve was a good example because it had contributed significantly in funding the building of schools in the community and had trained and employed people from the community as electricians, welders and construction workers (XXXII). When one of the interpreters queried him on the scarcity of people from Mnqobokazi employed by Phinda reserve, he said that indeed there were fewer employees. Some had left and others were fired, possibly because they had taken advantage of their access to the reserve to hunt or to let other people know where to hunt (XXXII).
Four of the respondents from the leadership were far less optimistic. Two did not want to comment about the fence and said that they were uncertain about the whole issue. They were waiting for the negotiations to occur. The third one thought that the fence would be put far from the community and would not affect fields nor access to natural resources. A farmer who belonged to the leadership was strongly against the fence. He said that the community was dependent on access to resources and that the restrictions from the Wetland Park Authority would have an impact on poorer households. “If somebody from the community is hungry, they can go and fetch as much iduma as they want to buy food. Even if there are permits, they won’t be enough (...) The Authority said that the park will bring in tourists. My question is, can the profit be divided among the community members when the tourists come? (X). He did not believe that the jobs created from tourism would outweigh the losses incurred by household livelihoods from reduced access to the wetlands, especially during periods of drought.

6.3.3. Perspectives from ordinary people in Mqobokazi

The results reported above derive from interviews conducted during fieldwork and represent what the Wetland Park Authority and the leadership considered a range of possible outcomes. Within the community, the fence proved to be a sensitive issue, prone to a variety of responses from farmers, women dependent on the collection of fibrous plants and cattle owners. At that time the negotiations were stalled due to pending land claims in a nearby community and no further meetings had been called in Mqobokazi to discuss the issue of the fence. The delay in starting the negotiations had intensified tension and uncertainty among ordinary people in Mqobokazi and 86.2% of the people who were asked about the fence (29 respondents, including members of the leadership) knew about it. Of these, only 20% were hopeful that tourism development of the area would create local jobs.

Many of the farmers and women who collect fibrous plants from the wetland were less positive. Farmers did not know where the fence would be placed and were afraid that their fields would end up on the other side of the fence and become inaccessible. Women were worried about their continuous access to grasses for weaving -. For 80% of the women interviewed (24 respondents), cutting and weaving mats from grasses such as *Cyperus papyrus* (iduma) and *Cyperus rotundus* (induli) is of great economic importance. While produce from the field is primarily for subsistence and only in good years for selling,
weaving mats and baskets represents a reliable source of income. Many of the women interviewed travel to Durban not only to sell their mats and baskets, but also to buy school supplies, clothing and food at lower prices than in Mnqobokazi. One of the women from the village asked me “what would happen if we refused to have a fence?” (XXII), a question to which I had no answer.

A possibility is for women to work within a permit system. Ezemvelo KZN Wildlife already administers a permit system in the northern part of the community for access to the wetland. The Wetland Park Authority plans to introduce permits along the entire boundary once the fence is introduced. The permits are free but need to be validated once a month and renewed every six months at a local Ezemvelo KZN Wildlife camp.

13 respondents were asked about the permit. Of these, eight would accept the permit. One of the women thought the permit was an improvement from past situations in which you could be arrested for harvesting in the protected area. Some of them already get a permit to access resources north of the community. However, five respondents considered the permit to be a nuisance. One of the women said that the permit was acceptable as long as there was no wildlife while another one said that if wild animals were to be introduced, she would have to find a way to manage with her fields alone. One of the women was angry at the fact that guards would throw away the cut reeds and fine the women that were caught without a permit. Knowing that there was a set day to validate and renew the permit that could not be changed – a day on which the journey to the guard camp might not be possible - was considered to be humiliating. One farmer was complaining that it took 4 hours to walk to the office where permits were given and back to his place.

During her fieldwork in Mnqobokazi in 1999, Andrén (2001), found that cattle grazing was an important activity for local livelihoods. In the interviews, an average of 32 heads of cattle per household was estimated. During the present fieldwork, cattle ownership was much lower. Only three respondents owned cattle (6-10-42) while another claimed to have lost his cattle due to disease. While the present study did not cover extensively the topic of cattle ownership and recent trends, five of the people who were asked about the fence (29
respondents) mentioned cattle grazing as an affected activity while acknowledging that in reality it had declined. One respondent blamed it on an increase in thefts associated with the new paved road, while one of the leaders related it to a cycle of disease decimating the herd and poverty forcing household to sell their cattle. Interestingly, other neighbouring groups have higher levels of cattle ownership and two respondents said that during drought cattle from other tribal authorities would request access to the wetland. The leadership claimed that outsiders were to find another solution and that there were other pans in the area for community members.

So far the negotiations are in process. The Director of SEED said that the negotiations have not started yet and that a full workshop will be designed to allow individuals to bring up issues of concern and interest. This is essential because at the first meeting women were underrepresented. Only men spoke and one of the respondents argued that they are not involved in collecting papyrus plants. However, some important trends emerged from the interviews. And show the importance for the Wetland Park Authority to gain the trust of the community, strengthen its ties with different stakeholders from the community and attend to their expectations by setting reasonable goals. Likewise, it is also necessary for the Wetland Park Authority to trust the community and actively recognize and uphold the experience and knowledge local people have about the land and its resources. The Wetland Park Authority needs to address these views before a legitimate and fair process occurs on the ground.

7. SOCIAL CAPITAL AND THE CREATION OF COMMUNAL VEGETABLE GARDENS

The previous chapter described the nomination process of the World Heritage Site and the mandates of the Wetland Park Authority and of the Ezemvelo KZN Wildlife. It illustrated different perspectives on the fence and some of the trade-offs in negotiating its boundaries. The present chapter analyzes three small communal garden groups in Mnqobokazi as an example of how social capital can be an asset in finding possibilities for conservation and development at the community level. It describes the ‘history’ and organization of the communal gardens through the comparison of different narratives. The chapter then evaluates whether the Wetland Park Authority can build or facilitate the emergence of social capital within garden groups and through them forward conservation and
development goals to the wider community. Given the historical background and present management organization in the area, the initiative must come from the authorities. However, garden groups represent a possible start-off point for a two-way communication of ideas and visions and for building trust across the two management structures.

7.1. The communal vegetable garden initiative in Mnqobokazi

The Wetland Park Authority has funded communal vegetable gardens in communities bordering the protected area since 2003 as part of their governmental mandate to alleviate poverty. The funding came from the Department of Environmental Affairs and Tourism to assist people with existing communal gardens and to create new ones, “primarily to address food security and possibly to develop and supply for the tourism market” (Fakude, pers. comm.). The aim was to reach poorer families, mainly women with an additional source of food for subsistence. These included vegetables such as tomatoes, onions, green peppers and cabbage that could be used for household consumption and could be sold at the market. In total, there are communal gardens in four different tribal authorities bordering the Greater St Lucia Wetland Park. In Mnqobokazi, three different gardens have been supported by the Wetland Park Authority, but only two remain. The first garden (G1) was sponsored in 2000 by the Department of Welfare. In 2003 the Wetland Park Authority helped in repairing the pump for irrigation. Upon request from the councilor, the Wetland Park Authority fully sponsored a second and third gardens in two other wards within Mnqobokazi. G2 was established at the beginning of 2003, G3 in mid-2004. Table 3 summarizes the extension and physical characteristics of the soil in the three gardens, while table 4 summarizes the characteristics of the group and their group members.

Table 3: Physical description of the gardens

<table>
<thead>
<tr>
<th></th>
<th>Garden 1 (G1)</th>
<th>Garden 2 (G2)</th>
<th>Garden 3 (G3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2000 – 2003</td>
<td>2003</td>
<td>2004</td>
</tr>
<tr>
<td>Location</td>
<td>Njiya</td>
<td>KwaGiba</td>
<td>Ngeqe</td>
</tr>
<tr>
<td>Extension</td>
<td>5 ha</td>
<td>2 ha</td>
<td>1 ha</td>
</tr>
<tr>
<td>Soil properties</td>
<td>Clayey</td>
<td>Sandy to clay</td>
<td>Mostly sandy</td>
</tr>
<tr>
<td>Successful harvests</td>
<td>n/a</td>
<td>2 out of 3 (drought)</td>
<td>0 out of 1 (pests)</td>
</tr>
</tbody>
</table>

Table 4: Membership characteristics

<table>
<thead>
<tr>
<th></th>
<th>Garden 1 (G1)</th>
<th>Garden 2 (G2)</th>
<th>Garden 3 (G3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total garden members</td>
<td>32</td>
<td>37</td>
<td>22</td>
</tr>
<tr>
<td>Ratio men to women</td>
<td>3%</td>
<td>19%</td>
<td>9%</td>
</tr>
<tr>
<td>Members related to leadership family</td>
<td>n/a</td>
<td>16%</td>
<td>36%</td>
</tr>
<tr>
<td>Average age</td>
<td>n/a</td>
<td>44,8</td>
<td>42</td>
</tr>
<tr>
<td>Members who left</td>
<td>Everybody</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
G1 is in Njiya, the northern ward of Mnqobokazi. It is located just south of the Mpempe canal and separated from the canal by a dirt road. It covers an area of five hectares and the soil is clayey. One of the women that worked in the garden referred to it as "a soil that is difficult to crack" (XXXV). There were 32 people in the group headed by a chairman. In G2 and G3 it was possible to have a list of all the members with name and age. The names showed the family relationships among participants and their link to members from the leadership. However, it was not possible to get a list of all the members for G1, so the average ages and possible relations with the leadership are unknown. The garden has not been used since 2003 for reasons that will be discussed in section 7.2. The fence and the tank are still in the place but the field is abandoned (pers. obs.).

G2 is set in KwaGiba, the most populated ward. It is located downstream from G1 on a ledge that borders the Mpempe canal. A fence encloses two hectares of land, while six tanks are used to store water (Picture 2). During the survey of G2, one of the members showed me three different types of soils, running perpendicular to the canal (I). The first part is considered to be sandy and advantageous during flood events. The second and most abundant part is considered to be between sandy and clay. A smaller area comprising about 10% of the garden is considered to be clayey. According to a wetland ecologist familiar with the area, preliminary tests of the soils indicate they are mostly sandy (Ellery, pers. comm.). The results show that the water holding properties of the soil are positive for the area, while fertility is bound to be lost in a few harvests requiring inputs of chemical fertilizers in the future.

G2 is divided into 37 individually owned plots that are 100 m long, 5.5m wide and perpendicular to the canal. The list of the members shows that 19% of the members are males. Moreover, at least 16% of the members are related to the family of the local leader - even though they all belong to different households. Some of the members of this group had previously tried to initiate a garden group when funding was available from the Ministry of Transport, but they never received support (I). Three members have resigned from the group membership and one of them was interviewed. He did not see the utility of working in a garden where fertility of the soils is poor (XI). This issue will be discussed in section 7.2.1.
G3 is located in the south-east ward of Mnqobokazi, close to a small pan. G3 is one hectare and the tanks and pipes had not been installed at the time of fieldwork. To substitute for the irrigation system, women carried the water in watering cans and at the beginning of the season kept the seedlings in a small nursery. The soil in the plot is generally sandy, slightly more mixed with clay close to the water. To enhance its fertility, in the nursery soil form the garden is mixed with cattle dung. According to the wetland ecologist, the soil is less fertile than in G2 (Ellery, pers. comm.). Moreover, approximately 30-35% of the garden adjacent to the canal is sloped, rendering it difficult for tractors to plow it (XXIV). There are twenty-two members in the group. Unlike G2, G3 is not divided into individual plots and members share the work load in the garden as well as its produce communally. Among the members, approximately 36% are related to one of the local leaders who initiated the project in his ward. Three members have never participated in the work, but the respondents from the garden said that did not know the reasons for their lack of participation.

Table 5 shows the economic situation of the women interviewed. While the sample is not random, it reflects data from the Census (2001) and as such it can be considered to be representative of the women from the community. Moreover, they are representative of the socio-economic conditions of garden group members. Women in the garden groups were all dependent on weaving mats and baskets for sale. Most of the women relied on subsistence agriculture while two women did not have fields in Mothokothe. One of them was waiting for a piece of land to be allocated to her (VIII). Compared to all the women interviewed, the women in the garden groups had no access to formal employment and were more dependent more on agriculture and personal fields. Moreover, there was also a high rate of unemployment among their husbands. They for the most part own a taxi, work in schools as guards or cleaners and engage in migrant work. At least a third of the women
mentioned that their husbands were “doing nothing”. Despite ties to the leadership, it seems that the garden group members were more marginalized economically.

Table 5: Economic situation of women interviewed. It includes percentages for women that belong to the gardens and their husbands, as well as for the total number of women interviewed.

<table>
<thead>
<tr>
<th>Occupation*</th>
<th>Women in Gardens (16)</th>
<th>Husbands (16)</th>
<th>Total women interviewed (24)</th>
<th>Husbands (24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaving</td>
<td>16</td>
<td>0</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>Fields</td>
<td>13</td>
<td>3</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>Pension</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>No employment**</td>
<td>16</td>
<td>5</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>Formal employment***</td>
<td>0</td>
<td>7</td>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>

*A note of caution: this table represents results from interviews with women. As a result livelihood strategies are described in greater detail and a picture of multiple livelihoods, which may occur at different times during the year, emerges. When asked about their partners, women acknowledged the activity that brought in money. I think that responses such as ‘doing nothing’ reflect lack of employed work opportunities.

** ‘No employment’ for ‘husbands’ includes women who are not married and women who state that their husbands “are doing nothing”.

*** Formal employment includes government jobs, jobs at school, taxi drivers and migrant work (mostly in Durban).

7.2. Development of the gardens

As mentioned above, G1 was not operating at the time of fieldwork. According to the chairperson, he had organized this garden in 1984 on his share of communal land. It was one hectare in extent and 15 people had joined. The garden group sought for sponsorship in 2000 from the Department of Welfare for extending it to five hectares, building a fences and establishing an irrigation system. At that point 32 members became part of the group (XXXIV). In G1, the work was communal instead of plots being assigned individually. According to the women interviewed who had worked in the garden in the year 2000, the work seemed promising because there was no entrance fee and the gains were supposed to be divided equally. The rules were set by the chairperson who monitored the work of the women, since all the members were women working under the supervision of the chairperson (XXXVI). The disparity in gender relations made it impossible for a dialogue to emerge and one of the ex- members complained that if she was to be part of another garden, it was to be chaired by a woman.
The chairperson recounts the last harvest to have been in 2001. He attributed failure to the fact that members from the initial group had retired due to age, new members were not interested in working together and funds were used carelessly. However, interviews with other members of the community and of the Wetland Park Authority showed that the profits from the harvest were not divided in equal shares because the chairperson was taking advantage of owning the land and using his tractor to claim more for himself (XXXII). For lack of dialogue options, the only way to deal with the conflict situation was to leave the group, as was slowly done by all of the women within a short period of time (XXXV, XXXVI).

In 2003 the Wetland Park Authority received funds to sponsor communal vegetable gardens in the tribal authorities bordering the GSLWP. Upon hearing about this opportunity from gardens in other communities, the councilor of Mqobokazi requested sponsorship for a new garden group to be established in KwaGiba. In 2003, the Wetland Park Authority held a meeting in the community to announce that funding was available to any group of people that would work together. The chairperson of G1 approached the Wetland Park Authority for sponsorship in an attempt to rebuild the group. While the Wetland Park Authority helped in repairing the pump, it also pulled out from the project as soon as the exploitative situation became clear. The Wetland Park Authority learnt to avoid similar situations in the future by asking on newly created groups for the chairperson to be a woman and for the majority of the group members to be women (XXII, Fakude, pers. comm.). G3 was due to the initiative of a member of the Tribal Authority council in 2004. A communal garden had been established in 1998-1999 in Ngeqe but it had failed because of drought. The leader wished to attempt regrouping the members and locate the garden in a different area.

When the initiative was announced at a community meeting by the representative of the Wetland Park Authority and the councilor, people raised their hands to join. Entrance was granted upon the payment of an entrance fee and left open until all available places had been taken, three months in the case of G2 (XXXII). Once the group was formed, its members elected a chairperson – to be a woman-, a secretary and a treasurer and decided on the organization of the work. To initiate the gardens, the Wetland Park Authority provided support in terms of infrastructure, finances and logistics. The infrastructure comprised fencing, poles, gates, water tanks and pipes.
Financial assistance included seeds and insecticide. Moreover, as part of the government's poverty alleviation projects, a minimal salary for the amount of the time spent in building the infrastructure was provided. The funds necessary to buy the inputs were deposited in a bank account named after the gardens and managed by the committee. An agricultural extensionist was also hired in 2004 for a limited amount of time to provide assistance with cultivation of irrigated crops and choice of crops based on the season. She also became the communication link between the Wetland Park Authority and the two garden groups.

7.2.1. The location of the gardens

In the context of variable but generally poor soil fertility in the region, the location of a vegetable garden largely determines whether the initiative will be successful in ensuring food security. All three gardens are – or were in the case of the first one – located close to the Mpempe canal. The canal, described in chapter 5, has been eroding since the seventies because of external intervention and now delivers close to 80% of the Mkuze’s river discharge. The rational of being close to the water but on high terrain makes sense to many of the garden members who have experience with extreme effects of drought and flooding. The advantage is that during drought the canal rarely dries, while during flooding the water does not reach the crops. However, crop harvest were severed by drought in 2004, showing that being close to the water is not enough on its own (I). This could possibly be the result of lack of infrastructure (ie. pipes) or maintenance. In the case of flooding, access to the

Picture 6: Plants in the nursery of G3. In the foreground there are cabbages, onions and green peppers.

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gardens might be difficult due to flooding in the surrounding areas between the gardens and the homesteads (pers. obs.). The chairperson of G1 chose a plot that had been allocated to him by the Tribal Authority council before the establishment of the garden. One respondent said that his decision was based on the fertility of the soil and on closeness to the water, stating that “the chairperson chose it because it can’t be flooded. The harvest is good.” (XXXV). Another respondent from G1 said that nobody had chosen it because it belonged to the chairperson (XXXIII).

A group of women proposed a location for G2 which had been used before: “We had already cultivated in this area before so we all decided that was good. It was producing food. (…) Here onions are not as big (as in Mothokothe) but it’s still producing” (XXII). The area was accepted by the councilor in charge and by the Tribal Authority council. Two of the respondents said that the soils were good (XXII, XV) and that the location was chosen because it was close to the water (XIII). One of the members from the leadership said that “together with members of the garden (G2) we tried to find a place close to the water but they are not professionals...and you can see that from the results” (X). He was not impressed by the location nor by outputs from the garden.

With regards to G2, there were discussions on whether to locate it in the Mothokothe floodplain or within the ward, closer to people’s homes. Answers to this question were varied but overall it seems that space in Mothokothe was more limited (Andrén, 2001) and it would have been difficult for the garden to be extended in the future (XXXII). The ex-councilor argued that “there was not enough land in Mothokothe. It was all owned and used. We had many meetings and discussions about that and in that area the members wouldn’t have been able to expand it” (XXXII). The Development facilitator also said that “the women chose the area and asked the tribal authority to allocate it. They looked for an area close to the water (…). We could have done it in Mothokothe if they wanted that. In that area small-scale farming is doing well”. However, some members thought that the garden was put on the south side of the canal to keep people far from the wetland (XXII), because the floodplain was inaccessible during flood events.

When G3 was proposed, its members proposed a few options which were accepted by the Inkosi. Two soil scientists from the Wetland Park Authority together with the agricultural extensionist determined the best location based on water table level, fertility (right mix of
sand and clay), slope as well as in a place easily reachable by the farmers (II). One respondent said that the community decided on the place based on closeness to water – the previous garden had failed because of drought – while another one stated that “there were some people who came here, they might have been from the Authority. They said the soil was good” (XXV). According to the ex- councilor, the present location was not the one that had been chosen, a situation that was explained by one of the members to depend on problems with other members of the community claiming the land. The current garden is located on high ground but it is surrounded by pans which affect ease of access and increases the danger of encountering crocodiles along the way. Moreover, there are now fields around the garden, a fact that was explained to be dependent on cattle grazing: “there were fields but due to grazing, they decided to go to Mothokothe” (XXVI).

Contradictory perspectives underlie the fact that soils do not seem to be optimal for cultivation in both of the current gardens (G2 and G3) when compared to the productivity of the Mothokothe floodplain. This is more evident in G2 because of the longer experimentation period. Since its inception, three members have left from G2 with the excuse of being too busy with their own fields. However, the real reason seems to be in the poverty of soils. When compared to outputs from the fields in Mothokothe, harvests from the garden are not as good. A successful farmer said the garden in its current location did not seem worth the time: “I would never go back because the soils will never be successful. But I still have the love to be in a communal garden” (XI).

While an 8% drop-out is not large, it seems that other people in G2 are losing motivation. The relative of one of the respondents was still participating but with much less interest than before: “my sister will cultivate there at the end of the month. She will continue because she agreed to be part of the group and it’s difficult to drop them (the garden group) on the way (XXVII).
In her case, she mentioned problems with the lack of engine and the difficulty of carrying the water from the canal. With regards to G3, there have been no harvests yet to show the quality of the produce and the level of satisfaction of the members of the garden. Last year the group decided to start planting vegetable upon receiving sponsorship. However, it was late in the season and the harvest was lost to an insect outbreak (XXIV).

7.2.2. Views on the aims of the gardens

In the case study area, the Wetland Park Authority is interested in bringing development and in fostering conservation issues. In order to build trust and create a collaborative arena for discussion, it is in the interest of the Wetland Park Authority to develop initiatives that promote local livelihoods (such as gardens, craft groups, markets for tourism access) but also to make people form the community aware of these activities. In the case of the gardens, an indication of the level at which the Wetland Authority is trying to create linkages and the type of linkages is provided by knowledge on where the funding for the gardens is coming from and the reasons for sponsoring such activities. In G1, only the chairperson knew who was funding them. In G2 only half of the members knew who was funding them (four out of eight respondents) or recognized the involvement of one of the development facilitators from the Wetland Park Authority. In G3 only three people knew the Wetland Authority was funding them, two thought it was a government initiative and the others did not know who was funding them and why (out of eight respondents).

Generally members from G2 regard the garden as an activity given by a higher authority (whether they know it is the Wetland Park Authority or not) to supplement their livelihoods. However, the fact that the garden was seldom mentioned as a “livelihood strategy” when asked about their activities “for a living” reveals that so far it has failed in contributing significantly to family income. Only one member from G2 considered the garden to be a trade-off for the proposed fence. In G3 half of the members did not know why they were getting funding, two people mentioned help from the government because of their lack of training and unemployment while an older woman perceived it as a way “to keep us busy” (XXIV). Given that G3 is recent, there have not been many contacts between the Wetland Park Authority and the members of the garden, a fact that was confirmed by the Director of SEED. None from G3 linked the creation of the gardens to the proposed fence. However, the view that the gardens were given as a way to pay back the community for the loss of communal land in the wetland was shared by at least two members of the
leadership who have either fields or cattle grazing on the floodplain. Box 1 shows what people thought were the reasons for getting funding were varied.

Box 1: Answers to the question: why and from whom are you getting funds for the garden?

<table>
<thead>
<tr>
<th>Members of G1</th>
<th>Members of G2</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I was in charge of asking for help to different departments to find funds”</td>
<td>“The Wetland Park Authority wants to see if we can work as a group. - Is it</td>
</tr>
<tr>
<td>(XXXIV).</td>
<td>working? - Yes” (I)</td>
</tr>
<tr>
<td>“I don’t know who funded us” (XXXV).</td>
<td>“I think it’s because we are not trained for any jobs so they want us to</td>
</tr>
<tr>
<td>“I don’t know who funded us, I heard that if you want to have a garden, then</td>
<td>survive” (XIII).</td>
</tr>
<tr>
<td>you must apply for funding from the government” (XXXVI)</td>
<td>“I don’t know why they are funding us. Maybe they thought to feed us” (ironic</td>
</tr>
<tr>
<td></td>
<td>comment, VII)</td>
</tr>
<tr>
<td></td>
<td>“The Authority told us that they want us to earn a living and get money for</td>
</tr>
<tr>
<td></td>
<td>seeds just to support ourselves” (IX).</td>
</tr>
<tr>
<td>At the meeting the Wetland Park Authority said that “we must have gardens</td>
<td>“I’m not sure, I think they want us to let them fence their area and take land</td>
</tr>
<tr>
<td>because there’s drought and that we need to have fields nearby” (XI)</td>
<td>on that side” (XXII).</td>
</tr>
<tr>
<td></td>
<td>“I don’t know who came up with the idea, but at a meeting with the Tribal</td>
</tr>
<tr>
<td></td>
<td>Authority they said that if we came together we’d get help from the WA” (VII)</td>
</tr>
<tr>
<td>Members of G3</td>
<td></td>
</tr>
<tr>
<td>“We heard that there was assistance from the Wetland Park Authority for funding</td>
<td></td>
</tr>
<tr>
<td>so we went and talked to the councilor”(…) “I think they are giving us money</td>
<td>“The Wetland Park Authority funded these plots to be demonstrators. They want</td>
</tr>
<tr>
<td>because we are not trained for any jobs so this is a way to survive” (III).</td>
<td>to see how people can work and produce, that’s why they hired an extensionist</td>
</tr>
<tr>
<td>“The Wetland Park Authority funded us (…) I don’t know why” (IV).</td>
<td>to assist them with what to cultivate and how. If they can produce more, then</td>
</tr>
<tr>
<td>“To keep us busy in the community, to have something to do” (XXIV).</td>
<td>they will help with expanding the gardens”</td>
</tr>
<tr>
<td>“The government wants to help us so we can earn some money on our own”</td>
<td></td>
</tr>
<tr>
<td>(XXVIII).</td>
<td>“I don’t know who funded us, maybe Umkhanyakude” (the District Municipality)</td>
</tr>
<tr>
<td></td>
<td>(XXVI).</td>
</tr>
<tr>
<td>Ex-councilor</td>
<td></td>
</tr>
<tr>
<td>“The Wetland Park Authority funded these plots to be demonstrators. They want</td>
<td></td>
</tr>
<tr>
<td>to see how people can work and produce, that’s why they hired an extensionist</td>
<td></td>
</tr>
<tr>
<td>to assist them with what to cultivate and how. If they can produce more, then</td>
<td></td>
</tr>
<tr>
<td>they will help with expanding the gardens”</td>
<td></td>
</tr>
<tr>
<td>Induna of a ward that does not have a garden</td>
<td></td>
</tr>
<tr>
<td>“Maybe they are trying to develop this area because their objective is to take</td>
<td></td>
</tr>
<tr>
<td>this land”. Not the Mnqobokazi area, over there, on the other side of the river,</td>
<td></td>
</tr>
<tr>
<td>where the swamps are” (XX).</td>
<td></td>
</tr>
<tr>
<td>Induna of a ward where there is a garden</td>
<td></td>
</tr>
<tr>
<td>“It is a fact that the WA wants to advertise this area as having communal</td>
<td></td>
</tr>
<tr>
<td>gardens. But if you go there, they are not successful. The WA is just proud of</td>
<td></td>
</tr>
<tr>
<td>this garden and I think that they’ll take my fields because they say that they</td>
<td></td>
</tr>
<tr>
<td>gave us their gardens” (X).</td>
<td></td>
</tr>
</tbody>
</table>
7.2.3. Organizational structure

The previous sections provided a general description of how the garden initiative came about, the causes that led to the failure of the first garden as well as perspectives on the aims of the garden. To foster social capital, it is important to have an organization that can deal with problems while retaining trust and is able to show that collective action pays off. The communal vegetable gardens represent an interesting example of an institutional arrangement system which comprises a small number of people within a community. Yet, challenges to their long-term sustainability rest on principles similar to the ones that emerge from studies of common-pool resources and social capital. Table 6 includes the design principles that Becker and Ostrom (1995) found in the cases of long and enduring institutions that managed common-pool resources and summarizes the arrangements that each garden group agreed upon as well as the ones that were superimposed by the Wetland Park Authority. The present section focuses on the organizational structure of the two communal garden groups that are still remaining and briefly summarizes the arrangements of G1 to allow for a comparison on factors that lead to success or failure, although it may be too early to call for either of them -. It also describes the challenges and hopes of the members belonging to the two remaining gardens.

Table 6: Summary of the design principles that emerge from the organization of the garden groups (adapted from Becker and Ostrom, 1995)

<table>
<thead>
<tr>
<th></th>
<th>Garden 1 (G1)</th>
<th>Garden 2 (G2)</th>
<th>Garden 3 (G3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Association</strong></td>
<td>free will</td>
<td>free will</td>
<td>free will</td>
</tr>
<tr>
<td><strong>Entrance fee</strong></td>
<td>no</td>
<td>yes</td>
<td>yes (50Rd)</td>
</tr>
<tr>
<td><strong>Division in individual plots</strong></td>
<td>no</td>
<td>yes</td>
<td>no*</td>
</tr>
<tr>
<td><strong>Costs</strong></td>
<td>labour</td>
<td>labour and yearly fee (50Rd)</td>
<td>labour and entrance fee**</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td>none</td>
<td>individual harvest</td>
<td>collective harvest</td>
</tr>
<tr>
<td>**Collective choice arrangements *****</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Monitoring</strong>**</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Sanctions §</strong></td>
<td>yes, labour</td>
<td>no</td>
<td>yes (10Rd)</td>
</tr>
<tr>
<td><strong>Conflict resolution mechanisms</strong></td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Right to organize recognized from government</strong></td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Agricultural extensionist support</strong></td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Land ownership</strong></td>
<td>communal</td>
<td>communal</td>
<td>communal</td>
</tr>
</tbody>
</table>
*Some of the members in G3 were part of a garden in 1998-1999 that was divided into plots. The members perceived a communal garden to bring more benefits.

** A fee was collected before receiving sponsorship to start the garden. An attempt was made to get the fence with their own means to show the sponsors their work. At present they use funding money without having to pay the fee.

*** Collective choice arrangements refer to the rules-in-use decided by all the members of the group.

**** Monitoring is informal. In G2 and G3 one of the members of the committee was in charge of reminding members when plowing would start and to call upon members that were absent repeatedly. In this sense it differs from the monitoring of the resource base characteristic of collectively managing common-pool resources.

§ Sanctions are imposed on members who fail to comply to the rules of the garden. In G1 members had to work an extra day if they were absent. In G3 monetary sanctions are levied on absentees and in extreme cases they can call for the suspension of a member.

G1 started as a participatory endeavor for members to join freely. However, the committee was embodied in one person who decided on the rules for the garden – these rules were later adopted by the other two garden groups – but who did not participate in the work itself. Also, benefits were marginal given that most of the harvest was sold with little sharing with the participants. G2 and G3 share a similar organizational structure with regards to the organization of the committee, collective choice arrangements and monitoring that contrast G1. In both cases, the committee is composed of a chairperson, a secretary and a treasurer, all of whom are women elected by the group. Both groups have decided on a set of rules and make sure that members are accountable to their work.

There are also differences between the garden groups. G2 is divided into individual plots, whereas G3 is entirely communal, as was G1. In G1 the garden belonged to the chairperson, who was interested in selling the produce to the market as a communal effort. In G2 the division into plots was agreed from the beginning because “some are lazier than others, so we all agreed to divide into plots for each member. If you don’t water your plot, the plants will die” (XIII). However, two members of the group were unhappy with the division into plots and argued that by selling the harvest together, there would be better returns. One of the women said that so far they could only sell their harvest in the village at very low prices (VIII). This view was also shared by the ex-councilor who had arranged for Phinda Reserve to buy the product. Phinda Reserve borders Mnqobokazi and has in the past funded the construction of local schools. However, the ex-councilor believed that in G2 the quality of the product would be different among individuals because of different care to their crops. A highly diversified output would not be appealing to larger buyers who were looking for more standardized products. In G3 members were also interested in
selling to the large market stores or in nearby towns. They perceived a communal effort to pay off in terms of being able to sell collectively in larger towns.

As mentioned above, G2 and G3 have adopted the rules that were established in G1 (XI). These include two or three days of compulsory attendance a week, reporting of absence and annual renewing of membership. Added to the set of rules developed in G1, members are also obliged to follow the advice of the agricultural extensionist. However, in G2 there are no penalties for not reporting an absence and so enforcement of attendance is more limited: “We thought about penalizing the people who don’t want to work by making them pay something but they did not pay” (XIII). At least three people complained about the problem of “laziness”. Lack of attendance could be a sign that interest is waning and that other activities, such as tending the fields or having temporary jobs contributes more significantly to the family income. In G3 members are enforced to pay a fine only when they fail to report absence. Moreover, in G3 there are means to deal with conflict that did not appear in the interviews with members of G2. For example, in G3 conflicts are discussed among members of the group and if the problem persists, the group can enforce eviction. This case has only occurred once. In G2, there are misunderstandings on the organization itself that could potentially disrupt the ability of the group to deal with conflict situations unless members clarify the issues.

In G2, longer experimentation time has already brought to the surface problems related to the organization itself. They were reported by the agricultural extensionist and by three members. Only a person from the committee (of three interviewed) said that the group was working well. While half the members (four) complained about laziness, one was concerned about the fact that members would only be interested in getting the money form the Wetland Park Authority, since funding is divided and can be used to the discretion of the receiver. For example, one of the ex-members claimed that each individual was receiving a share (XI) while a member of the committee said that the money was used collectively to buy and fetch the seeds (VII). This is an important point given that there are claims about the money being misused by individuals. One of the members complained about poor organization and said that she would like to review the rules to know “how money should be kept”, to sanction whoever fails to come and ensure that everybody works as one (XXII). One of the outsiders claimed she was not interested in joining G2 any longer because of poor organization and misuse of the organization money for private interests (XIX).
In terms of contributions in cash, there are different arrangements among G2 and G3 – In G1 this topic was not explored in detail -. Members of G2 are encouraged to donate a small amount after the harvest is sold for the common bank account. The Wetland Park Authority contributes to the bank account in order to cover the costs for seeds and insecticide. However, planting was late this year and several perspectives emerge with regards to the reasons for the delay. On the one hand, the Wetland Park Authority did not have funds to continue paying for the agricultural extensionist and attributed the late start of this year’s planting to the fact that they could not support her. However, two members of G2 pointed to the delay in receiving money from the Wetland Park Authority. The delay was due to the fact that the garden group had changed its name without reporting it to the bank and was thus unable to cash a cheque with the current name. Two others pointed to heavy rains and a soggy soil. The delay could show that G2 is not self-sufficient from a financial point of view, a challenge reported by half of the members. The delay might have also aggravated some of the members who felt that the money was being misused. In my opinion, given the uncertainty of the harvest (two out of three harvests were satisfactory while one was decimated by the drought) there could also be a lack of will to invest money for seeds.

Several members of G2 complained about the infrastructure, such as the lack of a powerful engine to draw water from the canal, limited finances and problems with the size of the gardens. Despite the fact that the Wetland Park Authority had provided a new engine to carry water the year before, two members of the group deemed it to be insufficient. According to one of the committee members, “the problem is that there is not enough money to do what we want, when we want to”, such as buying seedbeds and insecticide (XIII). The members from G2 and the agricultural extensionist ultimately wish the garden to be enlarged in order to be sell to large buyers. The ex-councilor thinks that the Wetland Authority is overseeing how people work and will help them if they do well. The Wetland Park Authority sees this initiative to sell outside of the community as a big accomplishment since the idea came from the community and not from the top. However, despite the efforts to link to Phinda Reserve, members of G2 have not been able to organize themselves to sell the harvest together and to guarantee a homogenous and high-quality product (XXXII). According to a social scientist familiar with the area, the structure for large scale commercialization are not there yet (Scott, pers. comm..).
Unlike G2, the group of G3 is able to collect money, interested in selling together and willing to use the returns for the enlargement of the plot. There seems to be a more entrepreneurial attitude and more interest in collective action. Two members think that enlarging should be a priority and six of them (of eight respondents) wish to sell to big stores. Interestingly, one of the leaders of G3 recognized the active role of members in taking advantage of this garden to enlarge it when she said that “now we are partly subsidized but the plan is to sell and then work from there. The government will not always give subsidy” (III). Another member recognized that “the Wetland Authority said that they won’t extend it because it’s an example. Once you produce more and get money, you as a group can extend it” (XVIII).

Moreover, fewer problems are reported and six out of eight respondents are happy with the organization, possibly because of the fact that the garden is new. There also seems to be a greater incentive for investing collectively. For example, members from G3 seems to be more flexible in terms of investing money when it is needed and are more committed to the project. “Before we had this garden, everybody donated money for the garden. When the sponsor came, we wanted to show them that we were doing something. We even tried to get the fence with our own money to show that we worked. Since building the fence, the sponsor (in this case the respondent did not know who the sponsor was) puts money into the account” (XXVIII). The fact that no problems within the organization have been reported yet, save for physical ones-- also shows the drive and commitment of the group members. The physical constraints are considered to be pests and lack of money for pesticide, an issue that was tackled this year by planting in the nursery early in the season. Only a couple of problems were mentioned by one person, such as the lack of an irrigation systems and the fact that a portion of the garden is steep and difficult to access for tractors.

While the present section has described the development, organization and challenges of the gardens, it has not assessed the reasons behind teaching farming to a community of farmers. The Wetland Park Authority has indeed invested considerably in terms of time, money and knowledge for an activity such as gardening being implemented in a community of farmers. The results show that the idea of food security needs to be better integrated to the needs and especially knowledge of the farmers. Three quarters of the garden members either had fields of their own in Mothokothe and in surrounding areas (16 out of 20 respondents) and the experience of working in the garden seemed not to be
adding too much to what the members already knew. Only one member in G2 and one in G3 regarded the gardens as a learning experience and recognized that amidst them there were both experienced farmers but also learners. However, they acknowledged that the learning acquired from the agricultural extensionist was mostly related to the use of chemicals as well as to the spacing of vegetables. Another farmer claimed to have learnt something but then did not apply it in his fields in Mothokothe because of “lack of time” (XI). Some members from the leadership thought that the gardens were a useful experience for young people before they were allocated a personal field. Contrary to this, a local leader thought that “the experience of working in the garden is not helping them” because the members were still experiencing unsuccessful harvests due to pests and drought despite the large inputs provided by the Wetland Park Authority (X).

Table 7 summarizes the processes that build social capital in the garden groups based on Pretty’s definition (2003). The aim is to show the factors within the groups and between them and the Wetland Authority that might promote the long-term sustainability of the project and increase social capital. The impacts of garden initiative at the community level are analyzed in the next section.

Table 7: Summary of factors that potentially strengthen as well as limit relationships within groups and between the groups and the Wetland Park Authority (positive factors are in bold, limiting factors in italics). Table continues in the next page.

<table>
<thead>
<tr>
<th>Social capital</th>
<th>G1</th>
<th>G2</th>
<th>G3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust - building</td>
<td>Unfair retribution and unequal gender relations</td>
<td>Perceived benefits of working together, common vision. Mismanagement of collective money. Complaints about laziness.</td>
<td>Perceived benefits of working together, common vision. Personal investment of money when necessary, family ties</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>No examples</td>
<td>Labour exchange</td>
<td>Labour exchange</td>
</tr>
<tr>
<td>Rules-in-use</td>
<td>Effective but rules imposed were not chosen collectively</td>
<td>Sanctions and conflict resolution mechanisms not effective</td>
<td>Effective enforcement rules. Benefit sharing might be vulnerable to disputes unless a way to sell together is found.</td>
</tr>
<tr>
<td>Network with other gardens</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Network with the Wetland Park Authority*</td>
<td>Only briefly. The Wetland Park Authority tried to</td>
<td>Empowerment of women. Financial dependence, lack of</td>
<td>Empowerment of women, less financially</td>
</tr>
</tbody>
</table>
avoid being implicated in power and gender relations within the community

leadership in reporting of problems when they arise, lack of continuity in providing for extensionist support**, unawareness of sources of funding

dependent. Lack of contact: ties are mediated by the agricultural extensionist while her role is temporary due to limitations in budget, unawareness of sources of funding

Network with other members of community or outsiders

Funding from Department of Welfare in 2000.

Potential deal to sell produce to Phinda Reserve

Idea to sell to Phinda Reserve or in a nearby town.

Physical limiting factors

None

Financial inputs for soils. Drought failure

Financial inputs for soils. Pest failure

* The relationship between G1 and the Wetland Park Authority was brief and lasted until the Wetland Park Authority became aware of the social dynamics. This is considered to be positive because it shows that the Wetland Park Authority was paying attention to the dynamics on the ground while at the same time realizing its limitations in intervening in that particular context. However, it learnt to avoid gender discrimination issues by ensuring women leadership in the two remaining gardens.

**A weakness in the relationship between G2, G3 and the Wetland Park Authority rests on the inability to provide for continuous support. From the interviews, it emerged that the extensionist support was especially important for the garden members as a communication line with the Wetland Park Authority.

7.3. The impact of the communal vegetable gardens at the community levels

The communal gardens represent a small initiative whose impact is fairly circumscribed in terms of number of people involved and possible changes in livelihoods. In the words of one of the members from G2, the garden “is only money to buy food”, implying that it has not changed livelihoods significantly (XVIII). Most of the women and men interviewed observe how their sons and daughters are unemployed and “doing nothing”. So how can this initiative be different? The impact of the gardens at the community level might be of much greater importance, not measured solely as their physical success in terms of harvests, but rather as their ability to act as a bridge between the community and the Wetland Park Authority. This section attempts to answer the third research question by exploring how the relationship between the Wetland Park Authority and the community may evolve as a result of the gardens and whether the gardens have facilitated awareness about conservation and development efforts at the wider community level.

The gardens have increased local awareness of the activities of the Wetland Park Authority in the community. Members and some non-members of the garden groups perceived this initiative as one worth participating in because of the perceived socio-economic benefits
(social benefits include the enjoyment of working together). Four of the eight respondents who were ordinary people and who were not part of the garden groups would have liked to join a group. Two of the respondents lived very close to G2. One of them did not have the money for the joining fee (XXIX), while the other only heard about the initiative when there were no more places available (XXX). More recently, as spaces have become available, she has not forwarded her request again because of perceived organizational problems in the group, an issue that was discussed earlier. A third respondent was currently helping a garden member while saving for the joining fee and waiting for a place to be freed. Despite the fact that several respondents would like to be part of a garden group, they did not ask the local leaders about admission. As a result, the local leaders thought that nobody else was interested in being part of it and that places that were freed could accommodate additional demand.

At the same time, there are also several reasons why people did not get involved. One of the respondents said she had her own fields (XII), another one said she was not interested in joining because the crops were decided by the agricultural extensionist and she would have liked to cultivate other staples that were more productive, such as sweet potatoes (XVII). Some of the community members who knew about the gardens said they wished to have a garden in their own ward because the two gardens were too far to reach on foot (XVI, XIX). One Induna wished to have a garden in his ward so that he could teach the members how to be good farmers (XX). The ex-councilor also wished to promote this project in the other wards but the Wetland Park Authority deemed the soils to be too sandy and poor in nutrients. In one of the wards, a project to raise chicken was proposed. However, this idea was raised only at the end of my interviews when it was too late to understand what it entailed and why only one person – at the leadership level – had spoken about it.

Interestingly, several management agencies are trying to enhance more positive links between conservation and development and through gardens several members of the community have become aware of this new economic possibility. However, the garden initiative does not associate directly with conservation goals. So, why implement gardens? On the one hand, the Wetland Park Authority is interested in development and gardens are part of the poverty alleviation strategy devised by the government to increase food security (Scott, pers. comm.). Gardens are also only one of the many projects being carried out by
the Wetland Park Authority. The Local Area Planning process would include training to small businesses as well as supporting initiatives that would accrue to the tourism market (Fakude, pers. comm.). In Mnqobokazi, craft groups are being supported to use resources such as fibrous plants in a sustainable way and attain larger revenues through upgraded baskets and mats (Piliso, pers. comm.). At another level, the gardens are located in communal land and may represent (or be seen as) an attempt to increase livelihood strategies further from the protected area. One of the men at the leadership level thought that the Wetland Park Authority was taking pride in the success of the gardens to use it as an excuse to take more land in the protected area: “the people at the Authority are just proud of this garden and I think they will take my fields with the excuse that they gave us the gardens” (X).

Thus, the results show that several people in the community – the leadership in particular – are aware of the communal gardens. Gardens are seen as an alternative to unemployment albeit not as a concrete pathway to development and many ordinary people regard the lack of jobs a huge issue. However, from the interviews it did not seem like gardens had facilitated awareness about conservation at the wider community scale. Only four respondents talked about the benefits of conservation without linking them to the gardens or to job creation: two were part of the leadership, one was a hunter and one was a member of G2. One Induna said that it was good to fence animals because “then our generation will know everything about nature” (XX). The hunter said that one day he wished to become a park guard to protect plants, but not animals because “protecting animals is not my job. Animals belong to God” (XIV).

In general garden and community members spoke little about conservation, relating it to possibilities for jobs that tourists would bring or to the challenges of fencing the protected area. A member of G3 said “I don’t know anything about the park and why they are there. (...) – Have you heard about the World Heritage Site? – I heard about it on the radio, that the park will go from St. Lucia to Mozambique, but I don’t feel anything for it (IV). A member from G2 had heard over the radio that “many tourists love to be in this park because they want to see nature (laughing) maybe in a few years we’ll see development in this area (...) and it will be easier to sell the products of the garden to the tourists (VII). Another member said that “conservation of nature is fine, but we’ll be depressed (poorer) (V). She was referring to the fencing of the park and the challenges that would derive from
it for women who harvest fibrous plants within its boundaries

While the Wetland Park Authority is trying to approach each of these initiatives with a ‘learning-by-doing’ type of attitude, it seems that more needs to be done in terms of building a constructive dialogue with garden members, ordinary members of the community as well as with the leadership. While most respondents were interested in opportunities for job creation, be it through tourism, small-scale commercial agriculture and trade, conservation issues were in the background. The building of trust, through increased interactions and a two-way dialogue with the Wetland Park Authority, relations of reciprocity and the development of formal and informal networks can be important assets in finding legitimate possibilities for conservation and development. In this sense, the gardens – and the craft groups for example – could represent a good outlet for views to be exchanged in an informal way and for group members and possibly the community to become more aware of the potential benefits that derive from conservation and of their rights to a livelihood that the Wetland Park Authority is mandated to provide for their development.

8. DISCUSSION

Chapter 6 described the nomination process for the Greater St Lucia Wetland Park World Heritage site, the stakeholders involved, their mandate and the issues associated to the proposed fence. Chapter 7 focused on the analysis of three communal vegetable gardens to highlight the factors that are important for the emergence of social capital as an asset in finding possibilities for conservation and development. In this chapter, the results of the analysis contribute to the discussion on the kinds of outside interventions that create social capital within and between groups and the extent to which they need to add onto local incentives. The second part of the discussion highlights the challenges in setting up projects that are legitimate to local people and conducive to achieving conservation and development. Taking into account historical legacy, divergence in worldviews as well as the presence of multi-interested communities and organizational mandates determines the extent to which these interventions will aid in conservation – as well as in development – issues at a wider community level.
8.1. The role of social capital

Social capital seems to be an important asset because it allows interest groups and communities to collaborate for development issues (Emmett, 2003) as well as in the management of natural resources (Pretty, 2003). However, creating social capital in itself with the aid of outside intervention is challenging and perhaps not desirable from a policy perspective. Outside inputs on their own are seldom a good way to create social capital and enhance collaborative efforts to conservation and development. At the same time, outside interventions and incentives may provide an additional livelihood strategy when groups are able to organize and reap the benefits of collaboration. The issue at heart is therefore not on the provision of outside input as such – local initiatives are important and often require support from outside the community - but rather on the kinds of outside intervention, on the types of delivery and on how they are nested within community needs and incentives. The kinds of incentives given can allow groups to succeed or hinder their success, as was the case in G1, where a long term relationships was disrupted by funding which was given by the Department of Welfare without concern for the local social system.

The results indicate that in Mnqobokazi social capital varied among the three garden groups. Trust-building and the presence of rules and mechanisms for enforcement were important determinants to the emergence of social capital within the groups. G1 failed because the trust that member vested on the chairperson was completely lost after gains were unequally divided. G2 and G3 had different levels of trust among members and members of G2 trusted each other less than G3. In G2 there were several complaints about the repetitive absence of some members and mistrust on the way finances were being handled by the committee. Some of these issues were known to outsiders and could decrease the overall trust in the project from other members of the community as well. In G3, there were no complaints about members being absent or about mismanagement of the money and the benefits of working together were seen to outweigh individual efforts not only monetarily but also socially.

With regards to the relationship with the Wetland Park Authority, dependence on outside incentives and indirect and intermittent communication represented two major challenges to building trust. For example, garden group members from G2 heavily relied on external monetary inputs for seeds and insecticide, as was the case when the preparation of G2 was delayed because the cheque could not be deposited on time. One of the leaders commented
that the lack of initiative on behalf of the members to start planting before the cheque arrived showed that the group members were not really committed and only worked as long as payments came through. He stated that by giving money to buy the inputs rather than the inputs alone, garden members felt employed and not empowered to consider the garden as theirs. Dependence on outside incentives was less visible in G3, where members had tried to fund some of their own material to start a nursery. Problems related to the nature of incentives have been identified by Gugerty and Kremer (2001) in the case of sponsored women farmer’s groups in Kenya. Despite large investments in terms of training and agricultural inputs, groups that were sponsored with regards to harvests and revenue fared as well as groups that were not sponsored. In this case, more educated members of the community and more men started to enter into the groups that were sponsored, actually nullifying attempts to empower women.

Another factor that may be constraining trust-building was the lack of dialogue both horizontally – between gardens - and vertically- with the Wetland Park Authority. The outcome in terms of enhancing the relationship with the Wetland Park Authority was slim in all three garden groups. Barrow and Murphee (2001) identify dialogue and interpersonal communication as well as mutual reciprocities to guide collaborative and legitimate approaches to management in Africa. The fact that garden members knew the agricultural extensionist and the person who set up the infrastructure but often did not know the sponsors shows lack of interaction with the Wetland Park Authority.

While the Wetland Park Authority is demanding communities to trust them and their idea of development, the Wetland Park Authority also has to trust local people and do not see them as necessarily overexploiting natural resources. Key resources for this include longer time scales than the ones usually granted by donor agencies as well as staff on the ground who can listen to people, identify common interests and start ad hoc projects to accommodate different interests. In this case, by not listening to the members of the garden groups and creating communication channels with ordinary people, the organization was forgoing the possibility of building bridges for collaboration in larger issues such as the fence and the development of local tourism initiatives. In the Caribbean, a project aiming at developing common ground for collaboration in a coastal protected area allowed for multiple perspectives to be heard and for groups to come together around issues of common interest and concern (Brown et al., 2001). By allowing different perspectives to
emerge, the knowledge of marginalized groups such as small-scale fishermen was legitimated and groups that would not have talked to each other before found that they shared a common vision and were working for similar outcomes.

Norms and rules are an important basis for the creation of trust because they reinforce patterns of collaboration and reduce the need for time spent monitoring and enforcement (Pretty, 2003). The ability to create and change rules is one of the design principles for long and enduring institutional arrangements for common-pool resources (Becker and Ostrom, 1995). In G1, the rules-in-use were developed and enforced by the chairperson with unsuccessful results. The failure of G1 reveals some of the factors that are important for the sustainability of similar projects, in this case gender equality, a fair retribution, the ability to change the rules by the members of the group and the ability to resolve situations of conflict on equal terms (Becker and Ostrom, 1995). To avoid this, the Wetland Park Authority ensured that women would be in charge of the committees and that they would decide on their own rules. Like G1, G3 also had means of monitoring, sanctioning and solving conflicts that were essential for the development of the communal garden. Unlike G1, members had chosen their own rules to follow. In G2 members had chosen their own rules but there were more rumours about organizational issues.

Part of building social capital rests on structural factors such as building of networks (Grootaert and van Bastelar, 2001). Networks allow pushing forward and realizing certain ideas, such as selling the produce to a large store. Hulme and Murhpree (2001b) see a lot of potential in the forging of community-business partnerships, a linkage that has been relatively underestimated in community-based approaches. According to the authors, partnerships between community and business can be greatly aided by “developing community capacity to negotiate better deals with the private sector (as well as by fostering) a more socially responsible private sector” (ibid). Within the members of the garden groups, a common vision for a larger and commercially viable development represented an important drive for working cooperatively in the project. This vision is important because it may lead to the development of new networks at the ground level, with contacts to the nearby Phinda private reserve as one example. However, the structures for commercialization – quality of the product, storage and transportation – are not in place yet and the investment required to develop the initiative is currently beyond the capabilities of the groups and of the Wetland Authority itself. The Wetland Park Authority might not
be able to finance the up scaling for market outlets, but it could play a part in coordinating this initiative.

In this case, bridging among gardens might be useful for concerted action and development of projects. However, one of the results of the interviews conducted is that women and men generally only knew about the existence of the “other” garden in the community (and sometimes about the other ones in the region through the work of the agricultural extensionist). Groups seldom communicated their problems to members of other gardens and relied on the agricultural extensionist to help them because she linked them to the Wetland Park Authority. The members also failed to communicate directly to the councilor and to the tribal committee the problems faced.

Lack of communication and leadership could be due to the low priority of the gardens when compared to other activities, such as weaving and tending the fields as well as to the fact that it was possible for the members of the gardens to capture the incentives from the Wetland Park Authority without putting more effort than required.

According to Brown (2003), poor households tend to diversify their livelihoods strategy to be able to capture opportunities and secure different sources of income at different points in time. The implications in conservation issues are that households will not shift to other activities – ecotourism activities instead of hunting for example - but in the absence of severe restrictions, will maintain a pool of options open. This study shows that the incentives for members to be part of the groups were not only monetary but dependent on soil fertility, crop yields and availability of other job opportunities. The lack of optimal soils fertility rates in the gardens coupled with uncertain crop yields during extreme drought and flooding events means that the garden can only play an additive role to household livelihood strategies. For the members it makes sense to take care of the gardens as long as they receive the inputs for its tending and as long as it does not hinder the work in the fields, where yields are more certain and provide for secure staple foods such as sweet potatoes and corn - as opposed to tomatoes and peppers-. While the relation between the garden groups and the Wetland Park Authority developed around issues of creating infrastructure, training and funding for inputs, the results show that when incentives stop, the project might stop working as well.
8.2. Social capital and the challenges of achieving conservation and development

As the study in Mnqobokazi has shown, setting up projects that are legitimate, sustainable and beneficial to conservation and development is complex and challenging in the context of historical marginalization, divergent worldviews, multi-interested communities and different levels of organizational structures. Emmett (2000) argues that there is a way to overcome historical legacies and that low levels of social capital do not always hinder the way to development. In his view, all communities are endowed with assets and resources that shift the perspective from need-based approaches to asset-based approaches where poor people have a more positive image, are empowered, encouraged, have their knowledge and experience recognized as well as their dependence on outside assistance greatly reduced. Poor people can be seen as producers rather than consumers of services. Social capital can provide a framework for moving beyond the narrow boundaries of communities defined by geography to include other levels of governance that allow for synergistic relationships to develop among different stakeholders.

In Africa, during more than a century of authoritarian rule in parks and reserves, the establishment of legitimate collaboration and participatory processes between government, park managers and interest groups within communities has been hampered by lack of trust and a fundamental divergence in worldviews (Adams et al., 2003). Conservationists may continue to view locals as “poachers” and distrust their willingness to cooperate. On the other hand, local people may view conservationists as progressively eroding their livelihood strategies and be suspicious of new initiatives, even when these initiatives are presented as beneficial to local development. This occurs because the “assumptions, knowledge, and understandings that underlie the definition of resource problems are frequently uncertain and contested” (ibid:1915). However, according to Brechin et al. (2002), win-win solutions can be achieved through transparent communication and negotiations that take into account multiple perspectives and interests.

Dahlberg (2005) argues that in the Greater St Lucia Wetland Park different groups of people – conservationists, farmers, hunters, harvesters - perceive the landscape and values the protected area and its resources in different ways (Dahlberg, 2005). For example, to the Wetland Park Authority, the Greater St Lucia Wetland Park World Heritage Site represents an anchor project for fostering tourism and promoting both conservation and economic development. The Wetland Park Authority relies on the fact that a World Heritage Site
stocked with famous wild animals such as elephants and lions will attract tourists and bring economic development to the region. It also believes tourism to be the only possible alternative for the development of the region. Some people put high expectations on the creation of jobs from tourism development while others recognize the lack of fit between the number of people affected by the fence and the number of people employed in both garden and tourism initiatives. Both members of the gardens and farmers with fields in Mothokothe, some of them also part of the leadership, see them as a meagre compensation from the future effects of putting a fence along the Mkuze wetlands. To the local people, the World Heritage Site represents a venue for occasional employment and a market for locally produced crafts in the best case scenario. In the worst case scenario, it represents an additional level of protection and constraint, marginalization and abuse of power. Further, while the tourism industry values the locally produced crafts and advertises them to tourists, it also portrays an image of the wetlands as ‘a wilderness untouched by man’ (Dahlberg, 2005).

The conditions for facilitating collaboration through dialogue and the formation of common values rather than negotiation between fixed preferences can be fostered in the case of Mnqobokazi. Dahlberg (2005:11) points out that while “the different interest groups compete over access to and control of the wetland environment, and thus over the resources found there, (...) they are also dependent on each other”. For this reason, while the process of negotiation is rarely “open and straightforward” as well as dependent on the variety of these conflicting interests (Dahlberg, 2005:1), the interdependence of all the actors calls for a legitimate, accountable and flexible process to achieving conservation and development. In the Greater St Lucia Wetland Park, "local people may come to embrace external conservation values if they view the local environment in a larger spatial and temporal perspective, and are put in a position where their knowledge and experience is regarded as an asset in management decisions" (ibid.:10). The process that will in the end decide the existence and place of the fence will greatly affect future relations between the tribal authority of Mnqobokazi and the Wetland Park Authority.

As discussed in chapter 2, communities are rarely homogenous and present a multitude of interests which challenge even further the negotiation of fair and legitimate agreements, a situation that is (Agrawal and Gibson, 1999). While conservationists tend to rely on the social complexity of communities to assert their inability to protect biodiversity, people-
oriented scholars and practitioners view complexity as inadequately addressed by the conservation agencies (Brechin et al., 2002). In the case of Mnqobokazi, the use of narratives allowed the unravelling of several perspectives with regards to the impact of the proposed fence, the communal gardens and the ways in which the Wetland Park Authority was trying to deal with them. The different perspectives challenged the assumption that trade-offs are always possible when based on economic incentives.

The gardens are presented and implemented as means to ensure food security. They represent a small project when compared to the population of Mnqobokazi but an important example of the approach taken by the Wetland Park Authority with regards to forwarding development, which relies on granting of incentives and poverty alleviation strategies. Are gardens the best way to foster collaboration on conservation? The results show that it is not clear how gardens can forward ideas of conservation when communication lines are fractured and dependent on links with the leadership rather than integrated in the needs and concerns of ordinary people. By being a new and dynamic organization, the Wetland Park Authority is attempting to build legitimate agreements with other organizations and local communities to compensate for a previous history of exclusion and conflict and to take account of different interests and needs. Several authors identify institutional change to be a positive aspect in areas with “complex and contested histories and an institutional inertia that precludes change and flexibility” (Brown, 2003:486). New organizational structures that try to improve policy coordination can attempt to offset the “alienation of rural people and the destruction of local responsibility for the environment” that was brought forward by transforming communal land into state-owned land and by disempowering local communities (Barrow et al, 2001). Bergin (2001) sees the organizational change in the Tanzanian conservation agency to have fostered relationships of reciprocity between the conservation agency and communities neighboring protected areas to have greatly aided in overcoming years of antipathy and in renegotiating win-win solutions.

The new Integrated Management Plan coordinates the activities of the different stakeholders and formalizes the consultation process with the communities on the activities that can be implemented in their communal land. The Integrated Management Plan, however, does not aim at devolving power to the people – too much is at stake with the World Heritage Site. Moreover, the strategy of the Wetland Park Authority with regards to the proposed fence symbolizes control and reinforces past forms of top-down management.
since the decision to build the fence has already been taken at the management level. Can negotiations based on compromises over details such as boundary and the number of access gates to install change people’s attitudes and forward a conservation ethic? I am not convinced this is the way to go.

How can fruitful discussions and negotiations occur in a climate where an organization is hopefully improving relationships but when communities are obliged to accept an imposition on their livelihoods such as the fence? The fact that the park will bring development is a narrative in place that almost forces the reaching of an agreement and leaves very little space for the development of alternative future scenarios by the local people. In a case from Tanzania, Bergin (2001) states that one of the lessons learnt from the conservation agency in charge, is that “by starting small, expectations were small”. In Mnqobokazi, there is a risk that if expectations are not met, trust in the Wetland Park Authority and in the promised benefits of their approach might be lost. The lack of fit between the time scale of expectations and the time scale of delivery might lead the community to see initiatives such as the communal gardens, tourism venues and craft groups as yet another example of untrustworthiness in the government.

People attach different values than non-locals to the land, to conservation, to their knowledge and to what quality of life means. People from Mnqobokazi need and want jobs but they should be empowered to decide how to reach this goal. Quality of life and ‘economic development’ do not always go together. The aim for the Wetland Park Authority should be to retain flexibility in management, so that the focus is on the process and goals can be negotiated as new understanding and trust relations emerge. Improving people’s livelihoods should be a two-way process not on working within predefined frameworks and time spans.

9. CONCLUSIONS

The relationship between the Wetland Park Authority and the surrounding communities is complex and changing. Rather than focusing on the merits of interventions per se, social capital analysis draws attentions to non-economic factors such as trust, norms and networks that greatly affect the long-term development of the gardens and their success in promoting dialogue with the Wetland Park Authority in conservation and development. In this thesis,
the results point out that poverty alleviation strategies need to be sensitive to local social, economic and physical conditions for efforts to succeed. Interventions must be relevant to people’s livelihood strategies if awareness about their positive results is to reach out to other members of the community. Given the physical limitations in soil fertility, both groups might be capturing incentives as long as they are there, a result that is common among poor households who depend on complex and livelihood strategies. The results also show that the Wetland Park Authority has not been very effective at promoting its cause for development and conservation by adopting the garden groups as a communication path to the community. Dependence on outside funding and lack of communication may hinder the development of relationships for sharing of knowledge and vision between the gardens and the Wetland Park Authority. However, a legitimate process of collaboration for conservation and development can be achieved if proper attention is given to social and historical legacies. The discussion shows that there are means for the Wetland Park Authority to evaluate the methods used for reaching conservation and development and adopting a learning-by-doing type of approach that is attentive to the views and needs of the local people. Communities can be empowered to decide on the speed and type of development they wish to achieve given that constructive dialogue is used to unravel the interdependence of the different stakeholders and the right of local livelihoods to negotiate their spaces of development and conservation.

10. LIST OF REFERENCES


essays and a critical debate in the future of scholastic endeavour. Amsterdam: Amsterdam University Press.


**Other sources**


Lubombo Spatial Development Initiative. *Lubombo Spatial Development Initiative.* Information booklet.

Marshall, L. Millions of aliens banished from St. Lucia park. *The Sunday Independent*, 27/03/05 pg. 17.


**11. APPENDICES**

**APPENDIX 1: SUMMARY OF RESPONDENTS**

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<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Date</th>
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<tr>
<td>Porter, R.</td>
<td>Head of Planning, EKZNW, Pietermaritzburg</td>
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</tr>
<tr>
<td>Fakude, G.</td>
<td>Development Facilitation Manager, Wetland Authority, St. Lucia. In charge of Mqobokazi area</td>
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</tr>
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<td>Ndlovo, E.</td>
<td>Conservation Partnerships Manager, EKZNW, Sodwana</td>
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<td>Mabaso, R.</td>
<td>Community Liaison Officer, Wildlands Conservation Trust NGO. St. Lucia</td>
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<td>Piliso, S.</td>
<td>Product Development Coordinator, Wetland Authority, St. Lucia.</td>
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<tr>
<td>Bon, P. and Mkhwanazi, S.</td>
<td>Community Extension Officers, Subsistence Fisheries Group working in Kosi Bay</td>
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<td>Phungula, A.</td>
<td>Manukelana Art and Nursery, St. Lucia</td>
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<td>Magali, S.</td>
<td>Community Conservation Officer, EKZNW, St. Lucia</td>
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<td>Focus group:</td>
<td>Dlamini, F. Development Facilitation Manager, Wetland Authority, St. Lucia. Mbuyisa, S. Community Conservation Officer, EKZNW, St. Lucia Grobleo, C. Conservation Manager, EKZNW, St. Lucia</td>
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## Interviews with members of the community of Mnqobokazi

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APPENDIX 2: OPEN-ENDED INTERVIEW QUESTIONS

INTERVIEW TOPICS FOR PARK OFFICIALS

1. Date of interview  2. Name  3. Position  4. Period of stay in the area

1. Personal activities
1.1 How many years have you been working in the EKZNW? 1.2 Where did you work before? 1.3 What are your duties in the park? 1.4 Have your duties changed with the amalgamation first and then with the nomination to World Heritage Site?

2. Community work
2.1 Do you work with communities? 2.2 With what communities are you involved? 2.3 How much time do you spend in the communities? 2.4 Which ones is it easier working with? Why? 2.5 Do you have significant problems with the other ones? Why? 2.6 How do you deal with situations of conflict? 2.7 Has WH status helped in developing closer relationships with the neighbouring communities? How?

3. Community projects and nature of benefits
3.1 What activities/projects are you carrying out with the communities? 3.2 At what stage are communities involved? (Decision-making, implementation, and/or benefit-sharing schemes). 3.3 What benefits do they derive? 3.4 How are these benefits distributed? 3.5 Do you think that tourism is a sustainable option? (i.e. increasing pressure on nature from sheer numbers of people as well as increased need for harvesting of wetland resources; issues of boom and bust in the industry). 3.5 What is the difference between partnerships and co-management?

4. Fencing
4.1 Is the park going to be fenced? Why? How? 4.2. What part of it? How is the border chosen given that it runs through the Mkuze River? 4.3 Does the dynamic nature of the river or movement of animals pose a problem for the long-term survival of the fence? Is it a flexible solution in the face of disturbance? 4.4 How are the discussions with the communities conducted? 4.5 How are issues of drought being dealt with at the community level?

5. Access to resources
5.1 How do you deal with local people depending on the resources found inside the park for subsistence? 5.2 Will you allow entrance? How? 5.3 Will the alternatives you offer offset the loss of benefits that access entails?

7. World heritage status
7.1 Did you help in the write-up of the nomination proposal? 7.2 How did you contribute? 7.3 What have been the effects of the nomination for the park management? (i.e. Funding for community development and conservation projects, tourism).

8. Management plan
8.1 Have a new management plan been developed? 8.2 What guidelines from the WH Operational Guidelines did you follow? 8.3 What are the main laws upon which you have developed your management plan? 8.4 How is the new management similar to the previous one? How is it different? 8.5 What is the most important level in determining management strategies?

9. Learning
9.1 Are there experiments being conducted to assess sustainable use of resources? 9.2 Is local knowledge being taken into consideration? 9.3 Is it a one-way or two-way learning process? 9.4 Is there monitoring? What type of monitoring? 9.5 What do you think is a win-win solution for the long-term sustainability of the socio-ecological systems?
INTERVIEW TOPICS FOR COMMUNITY MEMBERS

1. Date of interview  
2. Name  
3. Age and place of birth  
4. Years of schooling  
5. Marital status  
6. Number of members in the family  
7. Personal occupation  
8. Occupation of the family members.

1. Household economy
   1.1 How many cattle, goats, and chicken do you have?  
   1.2 Where do the cattle graze?  
   1.3 Do you have any fields for cultivation?  
   1.4 Where are your fields located? Are they difficult to access?  
   1.5 What do you cultivate in the fields?  
   1.6 Is it for your family or also for sale?

2. Access to the resources in the Mkuze Wetlands
   2.1 What resources do you collect (reeds, fish, animal game)?  
   2.2 Do you collect these resources in the wetland?  
   2.3 How often do you go there? During which months do you go there more often?  
   2.4 Where and when do you sell your mats or baskets?  
   2.5 Are there restrictions on the amount you can collect?

3. Garden initiative
   3.1 Do you work in the garden? Are you the only one from your household?  
   3.2 How and when did you get involved in this initiative?  
   3.3 How often do you go to the garden and how far is it from your household?  
   3.4 What are your duties in the garden and what do you cultivate?  
   3.5 Do you have a role/position in the garden organizations?  
   3.6 How do you organize yourselves?  
   3.7 Who had the idea and/or funded the project?  
   3.8 Why did they fund the project? What were their objectives?  
   3.9 Who chose the location? What was the decision based on?  
   3.10 Are you getting any support from the Wetland Authority and/or the tribal authority?  
   3.11 What are your objectives and hopes with the garden?  
   3.12 What are the problems that you have been facing with the production as well as a group?  
   3.13 Did you voice these problems to anybody (i.e. councillor, agricultural extensionist, tribal authority, WA)?  
   3.14 What was the response?  
   3.15 Have you heard of any other garden initiative? Where? Have you exchanged information?  
   3.16 Are you getting any advice on how to run the garden?  
   3.17 What kind of advice? How often does the agricultural extensionist visit the garden?  
   3.18 How is her advice and is it followed?

4. The World Heritage Site
   4.1 Do you know there is a World Heritage Site here?  
   4.2 Do you know why the land is protected?  
   4.3 Do you know who the EKZNW represent and who the Wetland Authority represents?  
   4.4 Have you been at any of the meetings organized by the Wetland Authority and the community?  
   4.5 What happened there?  
   4.6 Do you have any personal experiences with the EKZNW? What kind of experiences?  
   4.7 Do you know anybody from the WA? Do you deal with them personally?  

5. Community initiatives
   5.1 Do you know about any other activities that the WA is funding or helping organize in the community?  
   5.2 What is the purpose?  
   5.3 For how long have they been working?  
   5.4 Are you part of these projects?  
   5.5 Are they being successful?

6. Boundary disputes
   6.1 Have you heard about the park putting a fence along the wetland?  
   6.2 Where do you think the fence will be put?  
   6.3 Have they discussed this issue with you? To whom? When?  
   6.4 Do you think the fence will keep wild animals inside the park? To whom? When?  
   6.5 Will that hinder your collection activities? How?  
   6.6 Will you get a permit for the collection of grasses?  
   6.7 Have you heard of other places where the permit system is required? Where? For what resources?  
   6.8 How is it working?

7. Hopes for the future
   7.1 What do you wish for your children’s future?
APPENDIX 3: MAP OF THE GREATER ST LUCIA WETLAND PARK AND SURROUNDING TRIBAL AUTHORITIES

Greater St. Lucia Wetland Park & Surrounding Tribal Authorities

Mnqobokazi

Greater St. Lucia Wetland Park

Kzn rivers
Gsw park
Tribal authorities
Kzn Boundary

Map by: C Myhill
Organization: GSLWP Authority
Date: 2005/04/12