The Place of Community Values within Community-Based Conservation:

the case of Driftsands Nature Reserve, Cape Town

by

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I declare that ‘The Place of Community Values in Community-Based Conservation: the case study of Driftsands Nature Reserve, Cape Town’ is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Signature

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ABSTRACT

The most contemporary approach to biodiversity conservation within South Africa is that of community-based initiatives, which seek to combine biodiversity conservation with socio-economic development. As a challenge to the Western, science laden approaches to conservation there is an increasing need for community initiatives to reflect the values of local communities.

Values of local communities and the management body, CapeNature, with regards to Driftsands Nature Reserve, Cape Town, were captured and analytically coded through the qualitative methods of interviewing and participant observation in order to develop a grounded theory and model.

A discussion of the expressed values suggests that community-based conservation initiatives are doing little to include community values even though there is a large degree of agreement between these and corporate values. As such, it is questioned whether community-based conservation can be practised within an organisation which, due to procedures and protocols, is top-down in its approach.

Biodiversity; Community; Conservation; CapeNature; Development; Management; Socio-economic; Top-down; Values

Abbreviations

ABCD	Asset Based Community Development
CADA	Computer Aided Data Analysis
CADQA	Computer Aided Qualitative Data Analysis
CBD	United Nations Conference on Biological Diversity
CBNRM	Community Based Natural Resource Management
DEA	Department of Environmental Affairs
DEAT	Department of Environmental Affairs and Tourism
DTPW	Department of Transport and Public Works
ICDP	Integrated Community Development Programme
NGO	Non Government Organisation
OED	Oxford English Dictionary
PA	Protected Area
P&PP	People and Parks Programme
SANBI	South Africa National Biodiversity Institute
SSK	Sociology of Scientific Knowledge
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UWC	University of the Western Cape
WWF	World Wide Fund for Nature

Glossary of Key Terms

Approach

Within a conceptual concept the term 'approach' is used as a noun and refers to a method(s) and/or technique(s) used to address a problem or circumstance. The OED defines this as: *"...a way of dealing with a situation or problem..."* For example, the approach to conservation would be a method or technique used to address the concept of conservation in practice.

Asset-Based Community Development (ABCD)

ABCD is strength-based approach to community development that places focus on the assets of a community, rather than their need or lack, and in which communities are encouraged to use these assets to enrich their own lives. ABCD is characterised by its main principles:

> *"Change must come from the community; development must build upon the capacities and assets which exist within the community; change should be relationship driven, and change should be orientated towards sustainable community growth."* (Ennis & West 2010:405)

Biodiversity

Most adequately defined by the United Nations Convention on Biodiversity (CBD), which was opened for signing during the United Nations Conference on Environment and Development (the Rio "Earth Summit") in 1992, and put into force on the 29th of December 1993 (Whatmore 2009). The Convention defines biodiversity as:

> *"...the variability among living organisms and the ecological complexities of which they are part; this includes diversity within species, between species and of ecosystems (Article 2)..."* (as cited in Whatmore 2009)

The Convention links biodiversity to conservation in its objectives stating that:

> *"...the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources (Article 1)..."* (ibid)

'Bottom-up'

Both a conservation and development approach that seeks to work through hierarchies of society, and its governance, from the bottom (community level) upwards towards local government and beyond. This approach characteristically acknowledges and integrates local people and their indigenous knowledge, practices, skills and needs into development programmes. Defined by the OED as:

> *"**A.** adj. **2.** spec. **a.** Business and Polit. Designating, involving, or relating to an organization or culture which people lower down a hierarchy have a relatively large amount of influence, control or responsibility..."* (OED 1989)

Co-management

> *"An approach to the management of natural resources that is based on the sharing of authority, responsibility, and benefits on a cooperative basis, either informally or legally, between different stakeholders, such as local government and local communities."* (Park 2007)

Within the P&PP there is no clear definition of co-management and thus implementation of the principle 'on the ground' is problematic for all stakeholders involved. As Park's definition acknowledges, there are multiple aspects and inclusions to a co-management approach. PP&P distinctly acknowledge the legalities of co-management and access and benefit sharing as its two clear components (DEAT 2006). The Beaufort West P&P Conference suggested that the co-management of PAs between communities and management organisations has not yet developed collaborative conservation management plans due to the lack of legal agreements that exist between these stakeholders.

Community

Within conservation literature the term community is often used to refer to *"A group of plant and animal populations that live together in a given area, are adapted to local environmental conditions, and interact with each other."* (Park 2007)

In the context of community-conservation, however, the term applies exclusively to the arrangements of human populations. A standard definition of community in this sense would be as such:

> *"A group of people who share common culture, values and/or interests, based on social identity and/or territory, and who have some means of recognizing, and (inter)acting upon, these commonalities."* (DGM 2009)

The OED entry for the term community, when printed, would cover no fewer than twenty-six pages, and has been recently updated in the September 2010 Draft Revisions. The definition, for the purpose of this research, is summarised as: a body of people viewed collectively – but the ways in which these groups are classified range from their rights and/or ranks in society; place of residence; common cultural, ethnicity or religion; to the sharing of interests and occupations.

Within the study community has been used to refer to the corporate community of CapeNature, which encompasses its employees, and the more broadly stated Driftsands community. The Driftsands community refers communities living within the reserve boundaries, those with an interest in the reserve and within its geographical context, together they can be said to belong to a wider community which holds Driftsands Nature Reserve as its common interest.

Community-based conservation

> *"A bottom-up (grassroots based) approach to conservation, usually within the context of ecosystem management that is based on two broad concepts – that people who participate in decision making will be more inclined to implement agreed outcomes, and that people are quite capable of deciding for themselves what the most appropriate solutions should be, provided they are given sufficient information and support."* (Park 2007)

This approach to conservation is termed by Hulme & Murphree (1999) as a paradigm shift from colonial 'fortress' conservation towards an increasingly integrated approach which places the community in conservation, and in doing so places value on the communities knowledge and experience rather than solely acknowledging the 'expert' knowledge of Western science.

Community Based Natural Resource Management (CBNRM)

Developed from the integrated community development programmes (ICDP's) of the 1970s the CBNRM model had become dominant by the turn of the twenty-first century. It developed the inclusion of community values in conservation, and the access and benefit

requirements of communities into a model which seeks to devolve responsibilities to lower administrative levels within communities thus improving the local control of natural resources. Park (2007) defines CBNRM as:

> *"An approach to the management of natural resources that is based on engagement with local communities, as a means of focusing attention on natural resource problems or opportunities that require action at community level or that involve the management of shared resources..."*

Conservation

A term that describes a body of social thought and practices that is concerned with the maintaining of a natural environment, resource or ecosystem for both future use and human benefit (Adams 2009). The OED defines conservation as:

> *"**1. a.** The act of conserving; preservation from destructive influences, natural decay, or waste; preservation in being, life, health, perfection, etc.*
>
> ***b.** Preservation of existing conditions, institutions, rights, peace, order, etc...*
>
> ***e.** spec. The preservation of the environment, esp. Of natural resources..."*
>
> (OED 1989)

It is widely suggested, in conservation literature, that conservation differs from preservation as the practice of conservation recognises that ecosystems and habitats are not static entities. Thus, rather than preserving an environment in one precise state, conservation places its emphasis on the positive management of an environment to prevent its destruction (Park 2007).

As will be discussed within a review of the literature, the concept of conservation, and the term itself, is loaded with historical implications. However, within the study the term conservation, unless otherwise discussed, should be taken to refer to the maintaining of an environment in a state in which socio-economic development can occur within the protection, maintenance or development of biodiversity (dependent on the context) in a sustainable manner.

Corporate Values

A corporate value, within the context of the study, refers to a value which is held the CapeNature staff population of interest. The term corporate has been used to differentiate

the values from those of the Driftsands community population of interest, and reflects the holder's corporate identity as an employee of CapeNature.

Deconstruction

The OED gives two definition of the term deconstruction, the second of which refers to the philosophical and literary theory definition, which is also the interpretation of the term in this context:

> *"A strategy of critical analysis associated with the French philosopher Jacques Derrida (1930-2004), directed towards exposing unquestioned metaphysical and assumptions and internal contradictions in philosophical and literary language."* (OED 2010)

However, the first definition of the term refers to the undoing of a constructed thing, which does not fully align to Derrida's definition of their own term in which they rather seek to destabilise rather than undo the construction of binary oppositions. As Klages (2012) summaries:

> *"The fundamental method of deconstruction is to locate a binary opposition, find something that belongs to both sides of the slash, and to begin to look for a logic or force that originally held the binary opposition in place."* (ibid)

Historically (previously) disadvantaged

A historically disadvantaged individual is a (South African) citizen:

> *"...(1) who, due to the apartheid policy had been in place, had no franchise in national elections prior to the introduction of the Constitution of the Republic of South Africa, 1983 (Act No 110 of 1983) or the Constitution of the Republic of South Africa, 1993, (Act No 2000 of 1993) ("the interim constitution"); and/or*
>
> *(2) who is a female; and/or*
>
> *(3) who has a disability..."* (Department of Transport and Public Works (DTPW) 2002:6)

Indigenous

When referring to indigenous organisms, indigenous implies that they are naturally occurring in a particular place (Park 2007). Indigenous peoples are often more widely referred to as aborigines, natives or tribal peoples. The Oxford Students Dictionary (2007) defines the term as:

> *"...(adjective) (said about plants, animals, or inhabitants) growing or originating in a particular country, native...[from the Latin word **indigena** meaning 'born in a country']."* (Allen & Delahunty 2007:522)

In this research scenario, which uses the ambiguous term community (which is not necessarily defined spatially), the term indigenous is used in reference to indigenous knowledge which can be mobilised with a specific community, rather than a community defined by their heritage within a specific location.

Indigenous Knowledge

Also known as 'traditional knowledge', Parks (2007) simply defines it as: *"The body of knowledge and beliefs that is handed down from generation to generation, within communities."* Sharp (2009) goes beyond this simple definition to describe indigenous knowledge as opposed to universalized, Western scientific knowledge, which considered indigenous experiences as traditionalist and backwards until recently. Indigenous knowledge is now seen as an alternative to increasingly discredited scientific knowledge, especially within community-based conservation initiatives.

In the past few decades literature has developed from focusing on the differences between indigenous and scientific knowledge, to discussing the hybrids that exist in everyday interactions. For some academics the use of indigenous knowledge as a single concept is problematic as it ignores the power relations that are inherent in any community (ibid).

Integrated Community Development Project (or Programme) (ICDP)

> *"An approach to environmental management that is based on linking nature conservation in protected areas (such as National Parks) with local social and economic development, with a view to making biodiversity conservation more effective, increasing local community participation in conservation and development, and increasing economic development for the rural poor."* (Park 2007)

Mapping

Within this context the term mapping refers to the value mapping as used by Cast et al (2008). This type of mapping does not necessarily possess the three key elements of image based maps as discussed by Monmonier (2009), that of scale, projection and symbolisation. Value mapping, can be classified under the broader title of cognitive or mental mapping, which is often done from memory or through sketch mapping, and as such the rigidity of Monmonier's key elements can be negated (Ley 2009).

Cognitive mapping has can be defined as the retrieval of personal knowledges and mental constructs of places. Mental mapping can be further sub defined as:

> *"...a movement in environmental perception, which in turn has elided into an interest in the representation and social construction of places in a variety of discipline using less positivist methods and emphasising social rather than psychological factors."* (ibid)

People and Parks Programme (P&PP)

The People and Parks Programme (P&PP), with the tag line of *"Conservation for the people, with the people."* is a governmental programme of South Africa, which falls under the mandate of the Department of Environmental Affairs and Tourism (DEAT) (2011). Within its summary of its projects and programmes the department summarises the P&PP aim as:

> *"The overall aim of the People and Parks Programme is to address issues at the interface between conservation and communities in particular the realisation of tangible benefits by communities who were previously displaces to pave way for the establishment of protect areas."* (Department of Environmental Affairs and Tourism: 2012)

People-centred or People-orientated

An approach to biodiversity conservation which places people at the centre of its objectives, valuing the tangible benefits that people bring to nature, and nature can bring to people.

> *"Primarily it is about recognising that people's needs and basic human rights are valid and about placing them at the centre of nature conservation. It is about building bridges between people and nature so that both benefit."* (Cape Flats Nature 2006)

Relativism

> *"Any theory or doctrine asserting that knowledge, truth, morality, etc., are relative to situations, rather than being absolute."* (OED 2010)

Matless (2009) expands upon the OED definition within the context of human geography and defines the theory as one which sees knowledge as relative its social and cultural context, and provides geographical and historical with a essence of power within the contextuality. Furthermore, Matless (2009) suggests *"...that because knowledge is dependent upon context, truth will itself be relative."*

Sociology of Scientific Knowledge (SSK)

The classical tradition of sociological inquiry is associated with the works of Marx and Weber, and is concerned with:

> *"...the construction of beliefs, knowledge and cultural forms; investigations of the 'existential' determination of thought, belief and cultural forms; the social production, circulation, reproduction and appropriation of knowledge."* (Sandywell 2011)

Contemporary sociology of scientific knowledge (SSK), as seen within the writings of Latour, does not exclude the natural sciences and its methodologies as classical sociology did, but rather shows no exception to *"...the social location and existential embeddedness of knowledge practices."* (ibid)

Sustainable (sustainability)

The term sustainable as an adjective appears in the 1989 (2nd edition) of the OED and is defined as: *"**2.** Capable of being upheld or defended; maintainable. **3.** Capable of being maintained at a certain level or rate."* In the 'Additions Series' of 1993 the OED Online included the term 'sustainability' as an adverb, and most recently specified additions of the adjective 'sustainable' have been included in the 'Draft Editions, December 2001'. These drafts include, alongside sustainable tourism and sustainable city, the ecologically specific usage of sustainability:

> *"**Ecol.** Of, relating to, or designating forms of human economic activity and culture that do not lead to environmental degradation, esp. Avoiding the long-term depletion of natural resources."*

And the economical and ecological usages of the noun sustainable development:

> *"...**(a). Econ.** Economic development of natural resources which can be sustained in the long term...**(b). Ecol.** Utilization and development of natural resources in ways which are compatible with the maintenance of these resources, and with the conservation of the environment, for future generations."* (OED 2001 (Draft Additions))

Sustainable Development

The most widely cited definition of the term sustainable development is drawn from the Brundtland Report *Our Common Future* (1987) published by the World Commission on Environment and Development:

> *"...development which meets the needs of the present without compromising the ability of future generations to meet their own needs."* (as cited in Drexhage & Murphy 2010)

Implementation of sustainable development calls for the convergence of the, so-called, three pillars of sustainability: economic; social; and environmental (Prudman 2009). The emphasis placed on each of these pillars both in academic analysis and practice has been criticised, especially with regards to the term sustainability being linked to conservation and environmental efforts, but the term development being linked solely to economic growth (Adams 2009; Drexhage & Murphy 2010; Prudman 2009).

'Top-down'

Within the entry "top" in the OED (1989) the commonly used expression top-down is found, and defined as a process that: *"...proceeds from the top downwards; authoritarian, hierarchical...".* It is the opposite approach to that of 'bottom-up' and is most widely practiced within the paradigm of 'fortress' conservation models, it places preference of the knowledge of science and the interests of the most powerful members of society.

Values

Within academic environmental literature, it is taken as a given that the environment holds some value, this value is most commonly described as being either intrinsic or instrumental. Intrinsic value suggests that the environment holds a value for being itself, with no reference

to human influence; instrumental value, also termed 'use' value, describes the environmental as having a particular value as a use to the human population and is thus an entirely anthropogenic concept. Following Cast et al's (2008) example, and using their definition of value (for the purpose of this research) taken from Heberlein (1981) and is based in part on Rokeach (1978):

> *"Values...tend to be single, stable beliefs, which are used as a standard to evaluate action and attitudes. Values have two notable characteristics which differentiate them from most attitudes. First, they transcend objects...Second, values are central to a person's belief system. Values are the basis for evaluating beliefs, and other linkages among beliefs."* (Heberlein 1981 cited in Cast et al 2008:11)

World view

In defining the notion of a world view, it is important to return to its German origin in the term *weltanschauung*, which is literally translated as world intuition (Naugle 2002; Sandywell 2011). Using the definition from the English academic discourse, given that it varies due to a variety of translations from German into other European languages, *weltanschauung* is defined as: *"A particular philosophy or view of life; a concept of the world held by an individual or a group."* (OED 2010)

Expanding upon the Anglo translation, world view, Sandywell (2011) refers to a world view as the mental or spiritual understanding of a civilization or culture through belief systems and ideological concerns. It is these core belief systems that are often codified into grand narratives.

Chapter One –

A South African perspective - introducing "values" into community-based biodiversity conservation

1.1. Introduction

The most contemporary approach to nature, or biodiversity, conservation is termed community(-based) conservation, developed as a challenge to the Western and science based approaches to conservation that sought to exclude society from nature following the dualism between these two concepts (Hulme & Murphree 1999).

In the continuing evolution of the community-based conservation paradigm researchers have sought to include the values of the communities involved, as well as attempting to build and sustain poverty alleviation through initiatives such as asset-based community development (ABCD) (Lynam et al 2000; Mathie & Cunningham 2003).

However, many conservation areas are controlled and managed by organisations, which due to their use of procedures and protocols, exercise management through top-down approaches. Within this research, through the expression of both community and corporate values in specific relation to Driftsands Nature Reserve, the integration of community-based conservation and top-down management practices is questioned.

1.2. Statement of the problem

The academic, and subsequent practical, approach to biodiversity conservation is currently that of community-based initiatives, which meet the goals of both sustainable development within communities (as a way of alleviating poverty) and the continuation of biodiversity conservation. King (2010:24) goes as far as to suggest that:

> *"The effectiveness of conservation in the twenty-first century will require a renewed engagement with research that demonstrates its political dimensions in order to ensure that the protection of biodiversity occurs in conjunction with meeting the social, cultural, and economic needs of people directly impacted* [upon] *by conservation planning."*

To successfully combine the objectives of biodiversity conservation and socio-economic development requires an understanding of the value laden decisions that exist within communities and corporate management groups, and how these decisions manifest themselves in on-ground initiatives and programmes. In comparing the differences and similarities, between corporate values and community values in relation to the same nature reserve, it is suggested that tangible values can be identified and resources put in place to ensure that community values can be integrated fully into corporate planning.

1.3. Background and need

The words of past South African President Nelson Mandela highlight the renewed focus of biodiversity conservation in the modern South Africa. Born from the gaining of democracy in 1994, the contemporary governmental approach to biodiversity conservation is to link the process with the sustainable development of both its economy and its people.

> *"We would like to see South African National Parks promote and build viable partnerships with communities living adjacent to protected areas. The dual objective of such a partnership must be to achieve improved economic conditions for neighbouring communities and to encourage among them a culture of conservation."* (Abstract from Nelson Mandela's speech (1998) commemorating the centenary of Kruger National Park, as cited in Algotsson (2006:80))

As an institution that holds statutory responsibility for biodiversity conservation, CapeNature's ambition is to apply this approach in the Western Cape Province. To do this CapeNature aims to achieve its mission and vision: to integrate both biodiversity conservation and local economic development through the creation a 'conservation economy' (CapeNature 2007a):

> *"Our own definition of a conservation economy is an economy in which key principles and practices of biodiversity conservation have been fully integrated into all forms and levels of economic activity."* (CapeNature 2007b)

The development of a 'conservation economy' can be described as an approach to community-based conservation, which goes beyond the scientific arguments of more traditional conservation methods and begins to integrate community values and perceptions, not only community participation, in all levels of biodiversity conservation and management. The move that CapeNature, as an institution, have made from 'fortress' models of

conservation towards a community-based approach reflects the paradigm change in the academic conservation research and its associated literature, which has now been seen to place value on community perceptions as well as scientific assessment.

Historically, conservation practices and processes have derived from the colonialisation of African countries by their Western European counterparts (Western 2003). Although these Western practices have been praised for the development of protected areas and conservation legislation, the processes involved are now described as flawed, on the basis that they excluded indigenous African people from the formulation and decision making of conservation efforts, and from being able to benefit from these processes both economically and culturally.

CapeNature is no longer working within a colonial conservation paradigm that practices a 'fortress' conservation model, but its work is more closely aligned with the new paradigm of community-based conservation efforts which are now being implemented globally as the preferred approach to biodiversity conservation. As Hulme & Murphree (1999) discuss, since the early 1990s the concepts, policies and practices of conservation in Africa have shifted towards an approach which is community-based. This paradigm shift is underpinned by ideas that include: a greater interest in local-level and community-based natural resource management; the treatment of conservation as one of many forms of natural resource management; and a belief in the contribution that markets can make in the achieving of conservation goals, the culmination of these ideas have been termed 'new conservation' (Brown 2003; Hulme & Murphree 1999).

Smith (2008) refers to the changing paradigm as a move from a 'top-down' to a 'bottom-up' approach to conservation, the latter being an approach which allows conservation practices to *"...characteristically both appreciate and incorporate local people and their local knowledge, skills, needs and experiences..."* (ibid:353). This change in approach Smith (2008) acknowledges as resulting from the Bruntland Report of 1987 (written as part of the World Commission on Environmental Development) and the Agenda 21 policy from 1992 (which formed part of the UN Conference on Environmental Development) as both reports highlighted the importance of cementing the concept of involving local people and communities in the environmental management of their surroundings and places of residence as a way of ensuring sustainable conservation outcomes.

Sitting alongside the ideas underpinning 'new conservation' as above mentioned, Smith (2008) talks of popular beliefs that this participatory 'bottom-up' approach to conservation was born from, these include: a belief that locals are able to take care of their own problems and facilities; that local knowledge can be valuable, appreciated and sought-after within

conservation practices; and that local communities can become considered as experts of conservation within their environments.

It could be suggested that the implementation of the new paradigm of community-based conservation in South Africa is a more complex task than in other post-colonial countries because of the forced removals of people during the Apartheid era. In attempting to address the socio-economic inequalities that still remain from Apartheid actions the government is undertaking an extensive national program that aims to integrate many of the historically-disadvantaged communities into the processes of biodiversity conservation.

The National People and Parks Programme (P&PP) was born from the Durban World Park's Congress, with the first People and Parks forum being held in the autumn of 2004 in Swandi, Mpumalanga Province. The programme, as developed under the Department of Environmental Affairs (DEA), previously known as the Department of Environmental Affairs and Tourism (DEAT), works to promote and protect natural resources, and to highlight and implement the rights of local communities that have been (and are currently) adversely affected by conservation processes, and integrate all citizens into the decision-making process of conservation management (DEA sine anno(a)).

Insight of the immense challenge the promotion of socio-economic development and conservation mandates, the P&PP has put in place a framework of mechanisms that support the co-management of protected areas, these are not only applicable to areas in which land claims have been sought, but also in areas where historically disadvantaged communities live adjacent to protected areas and who hold values with regards to protected areas for natural, economic and social purposes. The Second People and Parks Conference, held in Beaufort West, Western Cape, in 2006 highlighted the importance of co-management within conservation and the realities that are experienced by communities:

> *"Currently, the communities are not experiencing the reality of co-management on the ground if there is any it is not empowering the communities. Many communities have problems gaining access to reserves and are not informed about developments within nature reserves. They still feel alienated and unable to influence park management decisions. This is attributed to lack of management plans and transparency, such as information on concessions, within the parks."* (Department of Environmental Affairs and Tourism 2006:26)

The challenge that a community-based conservation paradigm poses to institutions such as CapeNature is how to go beyond current processes of co-management and integrate communities into both new and existing biodiversity conservation management in such a way that goes beyond mere participation and consultancy which can be often described as

tokenism (Smith 2008). Contemporary research to address the issue of tokenism, and thus created a truly integrated approach to community-based conservation, attempts to discover, map and compare community values of a conservation area with the values held by the 'corporate' management bodies:

> *"Whilst biophysical, and increasingly economic, values are often used to define high priority hotspots in planning for conservation and environmental management, community values are rarely considered."* (Raymond et al 2009:1301)

The recognition of community's values, it can be suggested, can be highly beneficial to a corporate management institution such as CapeNature as conservation objectives and programmes can be tailored to address the specific value systems:

> *"When targets and policy programs are calibrated to alight with participants' values, voluntary participation can be less expensive and more effective. This information needs to be elicited from these cohorts and used in a systematic and defensible way to help guide target-setting, define policy and prioritise spending on natural resource management programs and actions."* (Cast et al 2008:5)

1.4. Purpose of the study

The CapeNature managed nature reserve, Driftsands, is an area of 900ha (although this is in debate due to the de-proclaiming of areas that have been used for human settlement) that constitutes one of the only provisional nature reserves, within the country, that is located in an urban environment, only 20km outside of the city of Cape Town, Western Cape (City of Cape Town and the Botanical Society of South Africa 2007; Open Africa 2011).

Figure 1.1 shows the designated nature reserves within the City of Cape Town's constituency, Driftsands Nature Reserve can be seen within the area referred to as 'South Central' on the map – more colloquially referred to as the Cape Flats. Figure 1.2 provides a more detailed illustration of the Driftsands Nature Reserve and it immediate surroundings (as prepared by CapeNature).

Figure 1.1: Cape Town Nature Reserves (City of Cape Town 2010)

Driftsands Nature Reserve (Figure 1.2) is represented within the green boundary, on the West and South sides the reserve is bounded with national roads – from South West to North East is the R300 (Mitchells Plain to Bellville) and from West to South East the N2 (Cape Town to Somerset West). The Medical Research Complex has been highlighted as this area is protected with high level boundaries and fencing, these fences provide the only physical boundaries to the reserve. The three communities that are situated within the reserve boundary are detailed (Isikhumbule is also known as Driftsands), the surrounding communities are Khayelitsha to the South, Delft to the West and Mfuleni to the East. The trails are those permanent trails as built by CapeNature, there are many informal trails used to access and cross the reserve by community members.

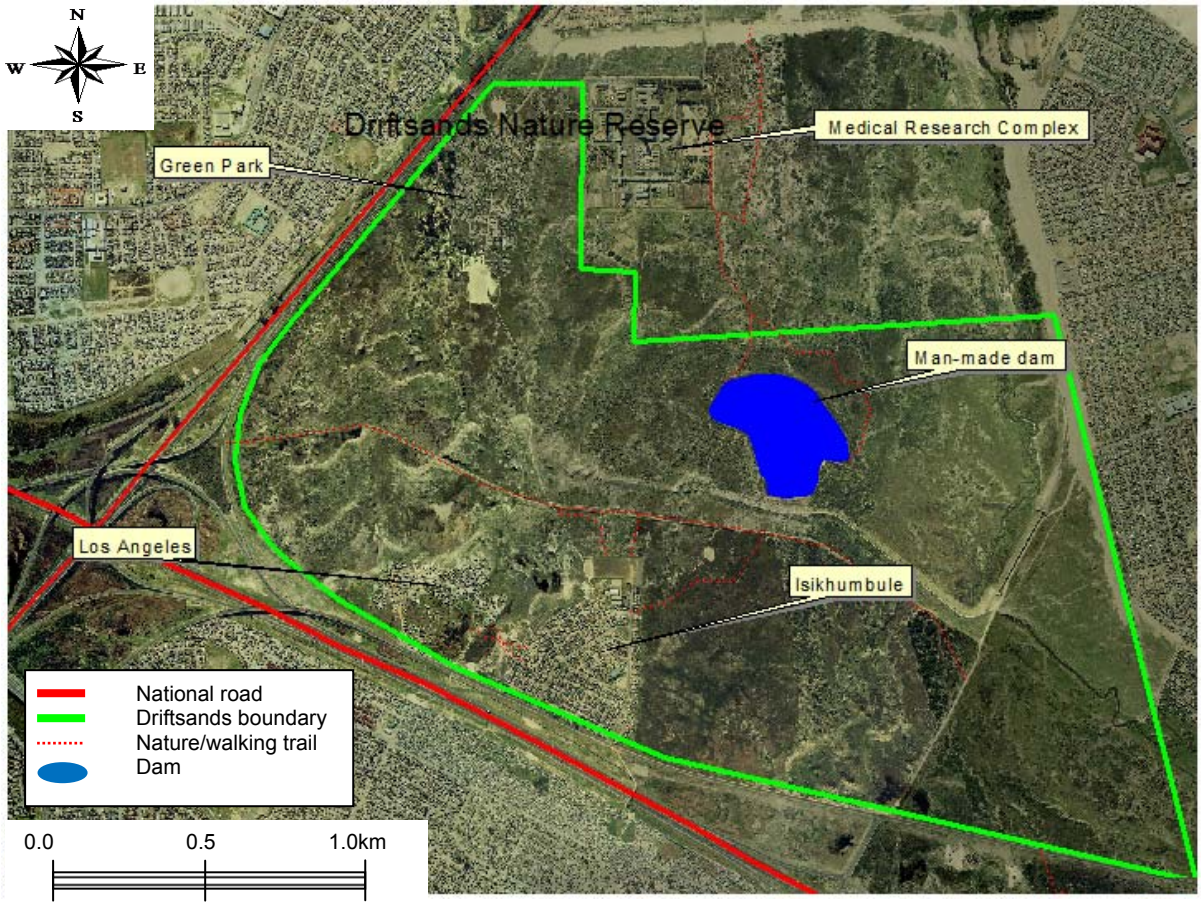

Figure 1.2: Driftsands Nature Reserve

It had previously been suggested, within CapeNature, that due to the increasingly low biodiversity value of Driftsands that the area should be entirely de-proclaimed and returned to the city council. This decision was subsequently reversed and CapeNature are now beginning a period of decision-making about the reserve's future, especially in relation to its surrounding communities (personal correspondence).

The Driftsands Nature Reserve lies within the Cape Floral Kingdom, which is of international biodiversity importance, and is the only floral kingdom which falls entirely inside one country (South Africa National Biodiversity Institute (SANBI) 2006). The reserve contains examples of the lowland fynbos ecosystem and Strandveld, only 11 percent of the original lowland habitat remains, and of this only 3 percent is formally protected (Open Africa 2011).

> *"In an inventory of critical habitats, the Botanical Society of South Africa identified Driftsands as one of the top sites out of 117 core conservation areas of the Cape Metro, containing as it does pockets of rare and endangered vegetation."* (ibid)

CapeNature, as a corporate management institution, faces an immense challenge in attempting to restore the lowland fynbos ecosystem that is under extreme pressures from rapid urbanisation, illegal dumping, frequent fires, over-grazing, sand mining and the invasion of alien species (City of Cape Town and Botanical Society of South Africa 2007). The majority of these threats are a result of the socio-economic challenges that face both the formal and informal suburbs of Khayelitsha, Blue Downs, Mfuleni and Delft, all of which neighbour the nature reserve (ibid; Open Africa 2011).

The 2011 national census, as compiled by Strategic Development Information and GIS supplied by Statistics South Africa, placed the above mentioned neighbouring communities of Driftsands Nature Reserve within the following wards: 016 (including Driftsands and Mfuleni); 019 (including Blue Downs and Driftsands); 020 (including Delft and Delft south); 106 (including Delft and Delft south);108 (including Mfuleni); and on the southern boundary over the N2 highway 018 (Khayelitsha) and; 087 (Khayelitsha), (City of Cape Town 2011).

The five wards, as stated above, which are direct neighbours of the reserve to the north of the N2 highway, have a combined population of 210,804, which shows an increase of 60% since the previous census of 2001. Of this combined population 78% live in formal housing, with an average ward unemployment (of the labour force of 16-65 year olds) of 34%. Of the employed population 61% earn R3200 per month, or less.

The two wards which comprise Khayelitsha on the south side of the N2 highway, have experienced a total population decline since the 2001 census of 21%, and they now have a population of 51,957. Of the Khayelitsha population only 37% reside in a formal dwelling, 58% of the labour force are employed, and of these 76% earn R3200 per month, or less.

CapeNature's renewed action plan for Driftsands Nature Reserve seeks to address both biodiversity conservation and the socio-economic challenges that face its surrounding communities:

> *"The objective for Driftsands is simple – to transform a nature reserve in the centre of one of the poorest and most densely populated areas in the Western Cape into a safe, multi-purpose urban reserve and a treasured community resource."* (Open Africa 2011)

1.5. Aims of the research

It is currently expected by both scientific and local communities that multiple values to be incorporated into biodiversity conservation, Raymond et al (2009) acknowledge that the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Conference of 2003 urged the dominant scientific community to recognise a more comprehensive view of the value of nature, values that included the economic and local values that develop from the intrinsic relationship between society and nature, people and place.

The aim of the research is to identify both the positive and negative values that are associated with Driftsands Nature Reserve, from CapeNature's corporate management perspective, as well as those of communities that neighbour the reserve. After the identification of such values, relationships between values can be investigated, can be compared within the corporate and the numerous communities, and the ways in which these values become incorporated into on-ground objectives and initiatives.

1.5.1. Research questions

The definition of value which is the dominant focus of the study's research questions is that taken from Cast et al's (2008) study, as defined within the Glossary of Key Terms (page xix). Within the study a value is defined as a singular belief which a person uses as a base for their actions and attitudes, these values are embedded within belief systems and networks, as will be interpreted throughout the study.

- What values are held by those employees who hold decision-making responsibilities, with regards to Driftsands, within the corporate organisation CapeNature?
- What values are held by the community members surrounding Driftsands Nature Reserve?
- How do the corporate values of CapeNature compare with the community values expressed by Driftsands' neighbours?
- How can these multiple value systems be incorporated into a new management plan and objectives that places a more equal weighting on the values expressed?
- A further aim of the research is to develop a new model for Driftsands Nature Reserve, based on the green box/black box models.

1.6. Ethical considerations

Ethics is considered to be the field of moral philosophy that regulates behaviour, in the context of academic research the regulation is undertaken by the university and awarding body and clearance of this ethical regulation is certified in Annexure A (Sumner 2006). The basic ethical principles of research, constitute: not causing harms or negative effects to participants; the requirement of informed consent from participants; the legal and institutional procedures of data protection and; participant confidentiality (ibid).

Marshall & Rossman (2011) extend these basic principles to include, not only the procedural ethical research issues, but also the ethical issues of the everyday, they discuss these within three principles of research ethics. Firstly, Marshall & Rossman comment that research ethics is a practice grounded in the moral principles of respect for other people, and is most often the focus for institutional policies and procedures (Sumner 2006), this principle is concerned with ensuring that participants are not utilised within research merely as a means to an end, and that at all times their privacy, anonymity, and right to participate (and withdraw) are freely consented to. This principle was addressed within this research with the use of informed consent forms, see Annexure A:

> *"Through the informed consent form, the researcher assures review boards that participants are fully informed about the purpose of the study, that their participation is voluntary, that they understand the extent of their commitment to the study, that their identities will be protected, and that there are minimal risks associated with participating."* (Marshall & Rossman 2011:47-48)

Although these signed informed consent forms will be available to academic and review boards, because they are signed by the participants caution will be exercised by the researcher in order to ensure that at no point participant's identities will be revealed.

The second principle of ethical research is that of protection of participants from harm within the research process (Marshall & Rossman 2011). The third principle holds particular concern within the arena of social science research, which Marshall & Rossman (2011) refer to as justice; this principle is discussed in terms of distributive justice, the consideration of who does and does not benefit from the research; and social injustices, where special attention is paid within the research to the re-dressing of past social injustices. May (2010) suggests that the development and application of research ethics is important to protect the general public, participants and the academic community, amongst others, from unjust research, and the illegitimate use of research findings. It is within this third principle that researchers should be seen to make ethical decisions based upon critical reflection on the

perceptions of themselves and participants, or to consider the justifications of their actions compared to others:

> *"Ethical decisions are not being defined in terms of what is advantageous to the researcher or the project upon which they are working. They are concerned with what is right or just, in the interests of not only the project, its sponsors or workers, but also others who are the participants in the research."* (May 2010:59)

The relationship between social science and ethical research is complex due to the high levels of qualitative data collection and analysis; the emphasis placed upon researcher involvement and; the research topics of choice, with particular reference to projects which are concerned with past social injustices (May 2010). This relationship has been dominated by two approaches to ethics in social research, deontology and consequentialism; this piece of research follows the deontological approach to ethical procedures due to the academic institutional requirements rather than the particular concerns of the specific research topic.

The deontological approach is most commonly associated with the work of Immanuel Kant (1724-1804), and suggests that ethical judgements are to follow a set of procedures and principles which guide the conduct of the researcher (Marshall & Rossman 2011) discussion of research ethics, as well as the academic institutional requirements. Within this approach *"Research ethics takes on a universal form and is intended to be followed regardless of the place and circumstances in which the researcher finds themselves."* (May 2010:60)

Consequentialism as an approach is critical of the universality of deontology, and most particularly the methods in which these sets of rigid principles can exclude particular groups from participating in research, for example the need for parental consent for participants aged eighteen or under which poses a barrier to the responses of young people being heard (May 2010). As such *"...consequentialism is not so concerned with following a set of invalid rules, but with the situation in which researchers may find themselves and with the consequences of their acts."* (ibid:61)

The approach of consequentialism relies upon the researcher being aware and critical of the ways in which their own values become integrated with research, in ethical considerations, the research aims and design, and within the final analysis and reporting of the data. However, values are problematic within the research process, and thus it is suggested that a set of ethical principles, as in deontology, should be followed to ensure ethical consistency.

1.7. Methodology

With a focus on the values held, with regards to Driftsands Nature Reserve by community members and corporate staff, the research methodology is qualitative in nature. The use of a qualitative research methodology reflects the challenge that the social sciences presents to quantitative physical science, which has been influential within the changing paradigms of nature conservation and the introduction of community-based conservation.

Marshall and Rossman (2011) define a qualitative methodology as one which elicits multiple knowledges, and subjective understandings and meanings, as such a qualitative methodology is able to examine the reasons local knowledge (or values) and corporate policies (or values) are in opposition through the extraction of real goals and ambitions.

As will be discussed in section 2.4, Marxist theories and in particular Marx's process of dialectical thinking can be used to challenge the dualism of society/nature, and is most influential in the examining of the relationships between conservation, nature and capital. The Marxian perspective on dialectical thinking, as discussed within Harvey's (1996) eleven principles, allows a researcher to examine the processes between dualisms such as society/nature, and that link concepts such as nature, conservation and capital. Within the research the process that will be examined is that of value systems, and the influence they have upon the afore mentioned concepts.

However, dialectical thinking is a process rather than a methodology, and as such can only inform the research method. As Harvey (1996) suggests, conducting research and its subsequent analysis following the processes of dialectical thinking may result in analysis that is unreliable and invalid. In an attempt to ensure greater validity and rigour within the research methodology and analysis a research methodology based within the grounded theory of Glaser and Strauss (1967) will be adopted. This methodology has been chosen as it begins with an open-minded approach; relies on the researcher becoming immersed in the data; allows theories to be generated that are truly grounded in the data and; as such legitimates qualitative research (Punch 2005). It is within the immersion of the data that the thinking processes of Marxist dialectics will be used, to allow the researcher to examine the relationships between nature, conservation and capital as expressed through community and corporate values.

Research will be conducted within a case study setting, of the Driftsands Nature Reserve in Cape Town (see Figures 1.1 and 1.2). Using a singular case study as a research strategy compliments a grounded theory methodology as it allows for the development of a deeper contextual understanding of the research through recognising the complexity of the research area (Punch 2005). Driftsands Nature Reserve was chosen as the case study area as it is

the only reserve managed by CapeNature that has settled communities living within its boundaries, thus providing the opportunity for community and corporate (CapeNature) values to be present.

As afore mentioned the research design and methodology has been drawn from a grounded theory research model, with Marxist dialectical thinking being employed within data analysis, and particularly in the development of a grounded theory. A summary of the research design and methodology has been included in the form of a flow chart (see Annexure A) the flow chart includes two feed-back loops to help ensure validity and reach to reach the objective of grounded theory sampling theory. As Sarantakos (2005) explains a grounded theory research methodology is unique in the sampling procedure it employs to search for theoretical saturation of knowledge rather than following conventional (or quantitative) statistical practices, as such within the design and methodology the sampling methods used are both theoretical and snowball sampling.

The method of theoretical sampling will initiate the sampling process with participants being actively selected by the researcher from the populations of interest – members of the surrounding communities to Driftsands Nature Reserve, and corporate employees of CapeNature who have an active interest, and thus values, in the case study area. The process of theoretical sampling will be informed by the researcher's participant observation, which also allows for reflexivity in the research thus increasing reliability and validity through a greater understanding of the complexities of qualitative research, and a greater degree of immersion in the research process.

Following the example of previous studies into the diversity and influence of values towards conservation areas, such as Cast et al (2008) and Raymond et al (2009), this research used the qualitative method of semi-structure interviews, both individual and group, to establish the existing values within the populations of interest. Snowball sampling is the method through which participants in the research suggest other participants, this process is used as it allows the researcher to access areas of the sample population that may have not initially been included, or that required access through gatekeepers.

As the model of grounded theory prescripts, the process of coding the data, as a method of analysis, is conducted concurrently with the data collection. This allows for the continuation of theoretical sampling until the required level of theoretical saturation has been reached, this denotes the period in time when the data collection can be stopped (Punch 2005). The level of theoretical saturation is reviewed within the end process of coding, in which a theory is developed, through the researcher both reviewing internal consistency in data analysis, but also comparing the newly developed theory to other existing research and theories.

In line with the research aims and the meeting of the research questions the newly generated grounded theory will outline and compare the values held by the community and corporate populations of interest with regards to Driftsands Nature Reserve, and using Marxist dialectical thinking examine the way in which the diversity of values can be addressed within the reserve management plan.

1.8. Conclusion

Through the research, and generation of a grounded theory and Driftsands model, the dualistic relationship between the complex concepts of society and nature will be discussed with specific reference to constructivist and co-constructivist theories, and the influence that these different theories and constructions have had upon the concept, and resulting practice of nature conservation.

It is suggested that the creation of the concept of nature conservation, and the manifestations of this definition in practice, is highly influenced by the historically dominant scientific and quantitative research methodologies – and as such, the concept of conservation was also challenged by the qualitative revolution and the increasing influence of the social sciences. The contemporary form of conservation, most commonly referred to as community(-based) conservation can be seen as a product of the qualitative challenge upon science-based conservation methods drawn from the society/nature dualism.

In the development and evolution of community-based conservation researchers and management organisation's new practices have sought to address the criticisms of community-based conservation, and as such values held about conservation, or a particular area of interest, have been introduced to contemporary thinking about conservation.

Drawing upon a Marxist perspective on the relationships between nature, conservation and capitalism this research uses community and corporate values of Driftsands Nature Reserve to examine these complex relationships through dialectics using a grounded theory processes. In the development of a new theory it is questioned whether conservation practices initiated by a management body, with economic control and a pre-requisite to meet scientific conservation objectives, can be described as conducting community-based conservation practices.

Chapter Two –

A journey from concepts and dualisms, towards contemporary conservation and capitalism

2.1. Introduction

Since the introduction of geography into the realm of academia the subject has been characterised by its study of human-nature relationships. Halford Mackinder, the first university geographer, in 1887 defined the discipline as bridging the gap between the natural and social sciences. This still holds true to the discipline today, with a growing body of geographers studying the development of the concept of nature and the resulting conservation practices, informed by such concepts - from the scientific based physical 'fortress' conservation models towards an integrated community-conservation paradigm (Castree 2003). The most contemporary approach to the concept of nature, as will be discussed, no longer accepts the 'taken-for-granted' binary relationship between society and nature, but rather sees the two as inseparable with one constructing the other. These constructions and co-constructions rely on processes such as knowledge generation and the influence of power relations and, within this context, the process of value association.

The concept of binary oppositions can be traced through de Saussure's study of linguistic systems (Scanlan 2001), through to the structural anthropologist Lévi-Strauss (Klages 2012), and has been used by Derrida in their attempts to deconstruct the binary relationship (Klages 2012; Scanlan 2001). Dubbed the father of modern linguistics, de Saussure took a semiotic approach to representation, and saw the construction of culture through language (Hall 1997). De Saussure's base principle was that language consisted as a system of signs, which consisted of the form (signifier) and the concept (signified) between which was no inevitable link and no fixed meaning (ibid).

The binary opposition was born from de Saussure's signifier and signified, and the idea that it is between the two that meaning is generated. In a common example, the red traffic light is not a sign to stop, without being referred to green being the sign to go, it is not the redness of the light that provides its meaning, rather it is the binary opposition to the green. The relationship between the signified and the signifier is not natural, de Saussure saw the relationship as one which was a result of social convention, which is therefore specific to each society, and its geographical and historical context (Hall 1997).

In their definition of binary opposition Klages (2012) acknowledges that many binary oppositions are learnt in early childhood so they become the building blocks upon which the world is constructed, and the basis upon which sophisticated concepts are founded, *"The*

binary opposition becomes the basic 'unit' of our thought, both as individuals and as a culture." (ibid) Drawing on de Saussure's concepts of binary opposition through the signifier and the signified, and the binary oppositions of phenomes, from the Prague school of cultural linguistics (Erickson & Murphy 2008), Lévi-Strauss was the first to transfer Saussurean linguistics to the social sciences (Kurzwell 1996). Given Lévi-Strauss's anthropological background, the most important binary opposition was that of nature and culture, and was highly influenced by their focus on primitive cultures and the mental constructs that create social meaning, symbolic categories and social control (Ellen 2010). The binary opposition of the concepts of nature and culture, as with all signifier and signified relationships, is not fixed. Therefore, as Hall (1996:32) discusses:

> *"Words shift their meanings. The concepts (signifieds) to which they refer also change, historically, and every shift alters the conceptual map of the culture, leading to different cultures, at different historical moments, to classify and think of the world differently."*

It can further be interpreted that the change in the meaning of just one of the terms, nature or culture, alters the meaning of the opposite term as one is given meaning through the other. Lévi-Strauss further discussed the concept of binary oppositions in relation to their central position within symbolic schemes in which they are used as the guiding principle of social organisation (Ellen 2010).

The relationship between the concept of nature and the paradigms that govern the practice of nature conservation has developed from an approach which seeks to preserve nature as a pristine environment separate from human influence, dominated by the dualism of the Enlightenment, to an approach which places emphasis upon community involvement. This contemporary approach is drawn from concepts of nature, such as constructivism and co-construction, and suggests that conservation cannot meet its objectives without the participation of stakeholders. Thus indigenous knowledge systems, as alternative ways of knowing, have become part of the contemporary conservation literature, practice and policy.

Sustainable development, as a paradigm which seeks to marry the aims and goals of economic development and conservation, has introduced the processes associated with a capital market, and thus Marxism, to the arena biodiversity conservation. Consequently, it can be suggested that, in order to drive conservation forward to a truly inclusionary practice of community-conservation, the processes of a capitalist society must be taken into consideration.

Socio-economic development and conservation can be described as values which can be attributed to an area such as Driftsands Nature Reserve. Through the dialectical analysis of

values held by both community stakeholders and the corporate management body (CapeNature) this research seeks to develop contextual understanding of how the process of values, which creates and sustains such things as nature, can be integrated into better practices of conservation which can achieve the multiple goals of sustainable development.

2.2. The concept of nature

Early advocates of geography defined the discipline as one that sought to bridge the divide between society and nature, this objective remains prevalent in contemporary geographical debates. For example, within Castree's work (2001) where historical ideas are built upon to explore the contemporary social/nature dualism (or lack of it), and the aim is to develop an understanding of the complex relationship between society and nature, and nature and society.

> *"Society is nature (a subset of ecological relations) and nature is social (ecological relations and processes are almost universally affected by social relations and processes). Like the human body, the environment is a hybrid. It is both natural and social, object and subject (the result and end cause of processes), and material and discursive (hard reality and the subject matter of language, text and symbols of all kinds)."* (Huckle & Martin 2001:2)

Raymond Williams has described nature as perhaps the most complex word in the English language (Demeritt 2002, Johnston et al 2000, Macnaughten & Urry 1998). In attempting to define the term Williams comments that a true definition can only be reached when discussing the term in relation to the speaker's purpose, as such the resulting definition can only be described as a situated knowledge. Thus, given the multiple uses of the term nature, Williams remarks that any attempt to describe all uses of the term would merely be a chronological description of the advances of sociological thought, academic perspectives and consequently the development of human values attached to nature (Johnston et al 2000), Macnaughten & Urry 1998) Following Williams' lead it could be suggested that any description of nature is a reflection of the value that the author or speaker places upon that space or place.

There have been numerous ways academics have sought to classify the different types of nature that have been referred to within historical text and that have influenced human impacts upon nature (Castree 2001, Hinchcliffe 2007, Macnaughten & Urry 1998). However a commonality exists throughout all approaches – firstly, that nature is seen as pristine,

separate from and threatened by society; secondly, that nature and society integrate in such a way that nature is produced by society; and thirdly, that nature and society become co-dependent and separation of the two is made impossible. Each of these stages is an evolution of the society/nature dichotomy beginning with historical establishment of the dualism; the social constructivist approach; and finally the contemporary discussion of co-constructions and hybridity.

2.2.1. Historical perspectives of nature

Macnaughten & Urry (1998) offer a summary of the key relationships between society and nature led to the establishment and continuation of the society/nature dualism. They begin with the ideas of medieval Europe, in which nature was seen as God's creations reflecting both the good and bad times of food and resource provision. Religion was thus seen to create nature, and because of this it weighs society's duty to preserve the creation. Within the sixteenth and seventeenth centuries the development of science, as both a discipline for study and a mechanism for social coercion, saw the movement of nature from a religious spirit to a working machine. God became viewed as a separate entity from nature.

During the period of Enlightenment in Europe the dualism of society/nature was established. Within such a dualism nature was formulated as a passive object for man's exploitation, controllable and controlled throughout the industrial and agricultural revolutions of the West, the value of nature was instrumental and entirely of anthropogenic origin. The emergence of the natural sciences as a respected discipline, during the eighteenth century, allowed the impacts of such revolutions to be seen as unnatural, and thus nature, to some degree, was able to recapture its spiritual innocence as a creation from God.

During the nineteenth century the image of innocence was described as a 'romantic' image which valued the aesthetics of nature, during the twentieth century the provision of National Parks (as places of aesthetic or cultural importance, as well as areas for nature conservation) divided nature and society on a spatial basis, with society at its centre and nature at the margins. This 'romantic' image of nature can be described as nature holding an intrinsic value, that is that nature becomes valued because it is what it is, without any reference to human influence.

Rousseau has often been hailed as the founder of Romanticism, based on their rhapsodies about nature and love. However, this is coupled with the contradiction that man is evil and mean. Cooper (1999) explains Rousseau's difference through the relationship between man and nature, they interpret that Rousseau sees man as good when he was in nature, as such,

in a modern society man has become estranged from nature and has therefore corrupted nature alongside all other things that man now touches and degrades.

Rousseau's romantic idea about the concept of nature can be seen in the movement of the dualism between society and nature, as culture has moved further away from nature, within a harshly defined dichotomy, there has been a call from the social sciences, through the qualitative revolution, to bring the two concepts more closely together, and even deconstruct the dualism. Rousseau however, true to their romantic image, does not see a totally pessimistic view of man's destructive relationship with nature, rather they suggests that they have found the solution to the problem,

> *"After all, man may have fallen, but nature is not – indeed, it is wholly good. If we could discover a way to be guided by nature, we just might find a road out of our present misery. Surely whatever hope we have, if any, lies in nature."* (Cooper 1999:x)

The dichotomy between society and nature can not only been described through the historical interactions between the two as described above, but also through the ways in which the dualism has been studied by academics. Irwin (2001) suggests that a dualism also exists between the territories of the natural (physical) and social sciences, with each party excluding the other, Irwin continues to acknowledge six assumptions which have lead to the create and continuation of this dualism:

- The use of the term 'natural environment' embodies an assumption that the study of the concept is beyond the realms, and competence of the social sciences. There is also a suggestion that natural sciences are adequately studying the concept, so there is little need to involve other academics.
- Continuing from the above point, the natural environment has been generally considered as a concept that exists without human agency or intervention that, unlike the built environment, nature is uncontrollable.
- There still remains a sociological assumption that places nature and society as distinct categories, even when contemporary culture is blurring these boundaries. Irwin (2001) uses the example of National Parks which are presented as being entirely natural, but are also unavoidably social in their creation.
- Conceptual issues of class, power and inequality still remain dominant in the teaching of sociology, with little recognition of the environment crisis which can be seen as resulting from and impacting upon these concepts.

- Irwin (2001) also suggests that there may be some form of cynicism surrounding environmental crisis, and that research and teaching about the subject is seen as 'cashing in' on a campaign of environmental awareness.
- Finally, it is suggested that blurring the lines between the social/nature dualism may undermine any efforts already made towards environmental activism and policy change, the argument would question – how can we protect or conserve a nature that is no longer distinguishable from society?

The attempted integration of society and nature, in both academic literature and its manifestations in everyday life, is not an entirely new concept. Since the early 1990s academics have been attempting to find ways to systematically challenge the dichotomy. Together the body of work has suggested that it is no longer possible, nor viable, to separate the social from the natural or the scientific from the sociological (Beck 1992, Dickens 1992; Haraway 1991; Latour 1992). The dissolving of the dualism will be discussed from the starting-point of social constructivism, and criticisms of the approach and continue to the debate surrounding the co-construction of hybrid nature(s).

2.2.2. Realism and social constructivism

The most contemporary development, with regards to the society/nature dualism, has been attempting, through various approaches, to dissolve the category building dichotomy and attempt to combine the social and natural so as to better understand modern interactions between the two. The notion of relativism is of significance within the particular discussion of the production (construction) of knowledges and concepts, as relativism understands the construction of concepts to be relative to the standards of the society and culture in which they arise (Demeritt 2001; Matless 2009).

Relativism, in this context, can be described as having two distinct philosophical belief systems, the ontological and the epistemological (Demeritt 2001). Ontologically, the relativist claim is that *"...the actual conditions of reality are determined by and relative to the ideas and wishes of the observer."* (ibid:27) The second claim of relativism is epistemological, in that it emphasises the social rather than the individual variability of values, ideas and beliefs, and in doing so it places greater power to the historical and geographical context of the construct (Matless 2009). This can be extrapolated to suggest that because knowledge creation is dependent on context, the truth itself will be relative. Demeritt (2009) confers with Matless (2009) epistemological ideas by commenting, in suggesting that truths and knowledges about the world are only valid relative to the groups

or individuals which express them. Therefore the way in which we know the world varies through history and culture, and as such it is not absolute.

Both ontological and epistemological relativism can been seen within a variety of social constructivist thought due to the significance it places on society, culture, time and place. However, before discussing the contemporary perspective of social constructivism, it is important to acknowledge the broader arena of constructivism from which it was born.

Building on the wider constructivist tradition, a social constructivist perspective of society/nature avoids dealing with the two concepts within a dualism, and thus transcends a realist verses constructivist debate. This sociology debate, over the dichotomy, can be crudely summarised as between the realist concern of whether nature should be seen as an objective reality and as external to social life, or a constructivist concern where nature is constructed through social relationships and forms of understanding (Irwin 2001:16).

> *"'Constructivism' (or 'constructionism' as it is sometimes termed) in this context indicates a sociological approach that is broadly agnostic concerning truth claims about the environment, but instead considers how (and what) we claim to 'know' about the natural world and how we invest meaning in the settings in which the natural world becomes defined and analysed represents an important focus for sociological attention."*

Despite the above passage's suggestion that realism and constructivism stand on opposing sides of a perspectives debate, Irwin (2001) himself acknowledges that this is not the most beneficial way of discussion the range of philosophical approaches that have led to the contemporary discussions of social constructivism and subsequent co-constructions of nature. Rather, within the context of this review and research, Dickens' (1992) work will provide a critical realist perspective of the society/nature dichotomy, Castree (2001) and Demeritt (2002) demonstrate a dominant approach of social constructivism. All three of these chosen contributors show themes of Marxist thinking which will be further discussed in relation to the conceptualisation of nature and the conservation of such a construct.

Dickens' (1992) critical realist approach draws on the dialectical analysis frameworks of Engels and Marx, the combination of these approaches allows Dickens to argue that 'taken-for-granted' structures, such as nature, both underlie and allow for the manifestation of everyday life. The critical realist approach differs from realism as it places emphasis on the idea that nature cannot speak directly to society, *"Instead, natural processes must be identified, defined and measured by human beings. In that way and at least to some extent – the natural is mediated through society."* (Irwin 2001:18)

Despite Dickens (1992) acknowledging his approach as critical realism, Irwin (2001) suggests that because Dickens suggests that nature does not have a voice on its own, and that the relationship between society and nature can only be explored through people's communication of nature's processes and powers, as such a degree of the social constructivist form can be applied to Dickens' perspective.

2.2.3. Social constructivism

Despite being drawn from the broader constructivist perspective, Gerber (1997) credits the work of Berger, a student of Alfred Schutz during the 1960s, with the development of social constructivist approach. Alongside a colleague, Luckmann, he investigated the ways in which subjective meanings became objective realities. The social constructionist perspective, as Greider & Garkovich (1994:1), describe is: *"...to define "landscape"* [nature] *as the symbolic environment created by a human act of conferring meaning on nature and the* [physical] *environment."* This approach drew highly on Pierre Boudieu's concept of habitus, acquired through socialization, where the symbolic outcome of socialization is dependent on the capital held by the actors involved.

The social constructivist approach is now widely deployed within the realm(s) of human geography (Demeritt 2001) with geographers coming to insist that nature is a social construction and therefore cannot pre-exist its construction. This is evident in the work of critical geographers, such as David Harvey, whose influence on social constructivist thought has lead Castree (2001:10) to describe the approach as: *"...at the point where it can be described as* [a] *distinct and influential approach to understanding nature and the environment."* A social construction of nature represents the value systems that the individuals or communities themselves hold, the spaces of nature that these individuals or communities interact with become magnifications of values that are held about that space.

2.2.3.1. Social constructivism and Castree

Within the social constructivist perspective critical geographers, such as Castree (2001), have attempted to describe the ways in which nature becomes socially constructed. Also drawing influence from within a Marxist perspective Castree (2001) identifies three ways, in which nature has been and is being socially constructed, with these being: knowing nature; engaging nature; and remaking nature.

Knowing nature is defined by Castree (2001:1) as:

> *"...the claim that knowledge of nature is invariably inflected with the biases of the knower/s...there's no singular, objective knowledge of nature, only particular, socially constituted knowledges, in the plural."*

Within the analysis of knowing nature Castree remarks that the geographical knowledges of nature are purely reflections of the wider, most powerful class interests, an argument that will later be shown as drawing on the Marxist concepts of capitalism, and alienation. Other sub-disciplines of critical geographers, such as feminists, have developed this argument further for example Nesmith & Radcliffe (1997) have claimed that the knowledge of nature is one purely of male construct with patriarchal notions of nature as something to be 'protected' and 'nurtured' giving the environment feminine characteristics. This is a continuum of the dualisms of the Enlightenment, where the same sets of characteristics were applied to either side of a dualism such as male/female and society/nature – where 'male' and 'society' are seen as dominant and powerful over the subdued and subordinate 'female' and 'nature'.

Castree considers the critical approaches of Marxism and feminism as ideologies of nature, which *"...hide the truth and which serve specific social interests."* (Castree 2001:12). In contrast one can talk of discourses of nature, as Modeckli, Anderson, Blaikie and Gregory's chapters in Castree & Braun (2001:12) show, this approach is drawn from the 'poststructuralist' theories of language as proposed by Derrida and Foucault:

> *"Here any claims about nature are seen to draw upon a wide repertoire of other social images and norms – whether of a gender, racial, colonial, national, or other type. Moreover, they argue that it's simply not possible to step outside these complex discourses in order to find out 'what's really going on' in relation to nature."*

A discourse approach sees all claims about nature as discursively mediated through the differing language and knowledges that allow multiple groups and individuals to make sense of the same nature(s). In comparison to an ideological approach, discourses do not reveal or hide truths of nature, but rather create their own truths which are then subject to the social and political power struggles that allow particular discourses to appear truthful and through time become so widely accepted that they are eventually accepted as natural.

Within this 'knowing' nature approach, whether discussing an ideology or discourse of nature, critical geographers agree that knowledges of nature are most frequently expressed through social power relations and that people act according to these knowledges, creating material effects. The process of 'deconstructing' these knowledges allows us to then show that the constructs are social products situated in particular contexts and serving particular purposes (both specific and ecological).

Engaging nature is the second social construct of nature that Castree (2001) discusses, which acknowledges that although knowledges of nature are socially constructed they cannot be reduced to knowledge alone; there is always an element of physical interaction with nature. It can be suggested that this second category allows Castree's (2001) discussions to go further than the radical attempts of social constructivism to develop an approach that would go beyond the society/nature dualism, as radical social constructivists spoke of nature although it had no voice of its own and was only able to be interpreted through society (Irwin 2001).

Stedman (2003) also offered the same criticism of social constructivism, where it is argued that the social constructivist movement neglects the importance of the contribution made by the physical environment. It is within this criticism that many critical geographers place their argument that nature and society can never be disentangled; Erik Swyngedow as cited in Castree (2001) termed this 'socionature'. This approach does not mean that all the physical elements of the environment that we see, such as trees, rivers or animals, become no longer part of reality but that there are limits to the influence that society can have upon them, dependent on the cultural, economic and technical relations and capacities of the given society.

For example, the same piece of nature, Castree (2001) uses the example of section of the Amazon rainforest, can be seen to have different attributes, and implications, depending upon which society is looking at it and how they intend on utilising it. This argument, that seemingly places some emphasis on nature possessing its own characteristics but still places the control and interpretation of these characteristics in the hands of society, has been put forward in four ways by critical geographers.

Firstly, within the field of hazards research: *"...where it's now argued that hazards can only be defined relative to the vulnerability of different groups in society."* (Castree 2001:13) The second, and closely related, argument concerns the concept of famine; where it is argued that natural hazards such as drought in do not themselves cause famine but only trigger them, it is the lack of economic wealth that causes the famine with populations being unable to purchase food supplies within their own country (see Yapa 1996).

The third discussion is again around the knowledges of nature and their power geometries, but with a focus on 'Third world political ecology' and the processes by which 'First world' and Western countries have created and maintained the 'Third world' status of post-colonial countries (Bryant 2001; Watts 1983), also see Irwin's (2001) chapter on the bias involved within the paradigm of sustainable development. The final and most recent idea is associated with environmental justice and injustice in the developed world, such as the

concern surrounding the exposure of the least 'powerful' communities to waste incinerators and toxic waste (Bullard 1990).

Hannigan (1995) uses the social constructivist approach and suggests that environmental problems, as described above, should no longer be considered as environmental, but rather, within this perspective, be termed social problems. Hannigan is not negating the reality of environmental problems such as biodiversity loss, but is arguing that these problems have been created by societies, and have become considered problematic through domains of power. This process of social construction of environmental problems is often referred to as 'claim-making' (Hannigan 1995; Irwin 2001) highlights six circumstances which, together, generate these 'claims':

- The use of scientific knowledge to both give authority to the claims and to validate them through scientific research
- The existence of 'popularisers' (to use Hannigan's (1995) term to refer to campaign groups such as the World Wide Fund for Nature (WWF)) who are able to bridge the knowledge gap between environmentalism and scientific research
- Media attention to promote the problem to the general public, and to ensure new interest the media is required to frame the problem as novel and important
- Further media attention, and through the use of scientific research, the problem must be dramatised through both symbolic and visual terminology
- The introduction of economic incentives are used to encourage positive action towards the 'solving' of the problem
- And finally the emergence of an institutional sponsor.

Remaking nature, is the term Castree (2001) uses to define the third and final approach to the social construction of nature. Again the work of critical geographers within this scope is highly influential, the argument made is that societies, especially those categorised as Western, are both intentionally and unintentionally reconstituting physical nature. As with the other constructions of nature already discussed, this remaking of nature can be seen from three different critical perspectives, the first being that of a Marxist perspective that has produced nature in the interests of profitability especially through modern agricultural practices. The second perspective looks at the role of science and technology in remaking nature, where scientists intentionally alter nature for scientific gain creating what Demeritt (1998 cited in Castree 2001) terms 'artefactual natures'. The final, and main perspective, is the material manufacture of nature using advanced technological industries, which have now

become out of society's control, such as through phenomena such as acid rain, climate change and global warming.

2.2.3.2.Social constructivism and Demeritt

In comparison to Castree's (2001) three methods of the social constructions of nature, Demeritt (2002) speaks of four perspectives of constructivist approaches which refer more closely to the principles that have been adopted to research the social constructions of nature than Castree's discussion. However, the inclusion of Demeritt's approach should not be misinterpreted as a critique to Castree, but should rather be seen as an alternative way of challenging the society/nature dualism through social constructivism.

Firstly, Demeritt (2002) discusses phenomenological constructivism which can be seen as differing from Castree's knowing nature as an approach in which phenomenological constructivists seek only to describe their surrounding world, without judging or changing it. However this approach can be highly critiqued, as Irwin (2001) argues, in that the world cannot be seen through objective eyes as each individual will hold some relationship to nature (attempting this approach is often referred to as the 'God trick').

Demeritt's second perspective of constructivist thought echoes the phenomenological approach in not judging the world (however impossible this may be), but does so by adopting the 'symmetry' principle through the Sociology of Scientific Knowledge (SSK). This 'symmetry' principle seeks to analyse and critique those principles regarded as both true and false, in this way the researcher must refrain from judging the truths of the knowledge which is seen to be socially constructed (see Irwin's (2001) chapter for further discussion on SSK).

The third perspective that Demeritt speaks of is that of discursive construction which, following the trends of post-structuralism, places emphasis on the role of language within social construction and is directly influenced by the work of Foucault and his power/knowledge relations. But unlike those who adopt the SSK approach, discursive construction seek to describe, diagnose and change the effects of social constructions, this is due to their engagement with the political critique.

The fourth and final approach is developed from Bruno Latour's Actor Network Theory (ANT); Demeritt describes this as a radical metaphysics of relative existence, in this context it is used to determine realities dependent on both human and non-human entities.

As with any concepts or theories, there are numerous critiques of the social construction of nature, which has developed the approach into one that has become widely accepted and is now evolving to include theories that go beyond the society/nature dualism (which was the

aim of social constructivism to begin with). The first returns to the critiques offered against Castree's (2001) perspective of engaging nature, again using Stedman (2003:671) as an example, where it is argued that:

> *"Although sense of place definitions normally include the physical environment, much research has emphasized the social construction of sense of place and neglect the potentially important contributions of the physical environment to place meanings and attachment."*

Stedman's critique is based on the relationships of society, nature and culture, and suggests that a local community's culture is defined and influenced by their surrounding physical environments, the culture in turn influences place meaning and the community's social construction of nature. Within this context Stedman questions why is so much (predominantly all) emphasis placed on the social influence of the 'constructed landscapes' approach? This critique is echoed and exemplified by Johnston et al (2000) who highlight two significant critiques of constructivist thought:

- The social construction theory is highly anthropocentric, and over emphasises the power of human societies (hyper-constructivism) and undervalue the power (material capacity) of the physical environment and that;
- Constructivist thought ignores the aesthetic, moral and/or spiritual value of nature.

Demeritt (2001 & 2002) acknowledges two 'points of contention' with the social construction theory, these he refers to as epistemological and ontological. Demeritt's epistemological contention is concerned with the implications that the acceptance of nature as solely a social construct will have. How will we be using the new knowledge that will be created with the new theory of social construction? How can such a socially constructed nature be protected through international or national policy? The concern with ontological contingence is with the ethical claims that constructivism makes, especially the claim that **all** nature is social constructed. Demeritt questions that if and **all** nature is constructed, then how are natural hazards defined?

This denaturalization of hazards makes two assumptions, that hazards do not exist without humans, and what makes an event a disaster is not due to its physical magnitude but its influence on human societies. Within the contemporary (Western) culture the magnitude of a hazard is defined by the economic impact of the event, this then implies that a natural hazard that occurs within a developed country with an extensive infrastructure is more of a natural disaster than one which occurs - for example - in a small tribal 'third world' village, - as the economic 'cost' of the disaster will be greater. This places a value on culture that is

dependent on the Western assumption that: the greater the economic cost the greater the importance, but ethically this places the dominant Western culture and values upon 'other' communities that may not hold the same values – not holding the same cultural values should not make a community less important.

Demeritt's 'points of contention' and Castree's (2001) knowing; engaging; and remaking nature thus highlight the possibility of using social constructivism to develop an understanding of the influence that different constructions of nature have on their physical manifestations. Demeritt (2002) highlights the high levels of debate surrounding the 'social construction of nature' at the 2001 Association of American Geographers Conference in New York, summarising the debates:

> *"Nature and the environment are central to the self-image of geography and yet they are increasingly contested terms within the academy and beyond. Recent work in critical human geography has challenged the apparent self-evidence and ontological fixity of nature as to highlight the role of power relations in socially constructing and thus also potentially alleviating environmental problems and resources."* (ibid:768)

2.2.3.3.Social constructivism: knowledge, scale and power

In any attempt to combine the concepts of society, nature and knowledge there will be significant and conflicting discussions about the roles of scale and power. Within contemporary approaches to the social construction of nature, constructions are most often described at the level of a society or culture and often reflect dominant powers, see the above discussion regarding the denaturalization if hazards and Irwin's (2001) chapter on sustainable development. There has, however, been little research that places emphasis on a community's, or even an individual's construction of nature. The use of dominant knowledges and powers within social constructions of nature and place implies that the less-dominant or powerful are excluded from the resulting construction, for example in colonial descriptions of the 'new world' which exclude the indigenous populations. Cresswell (2004) uses the term 'out of place' to describe the way in which these less powerful groups experience place, especially natural places, from which they experience exclusion, this process has been closely linked by Marxist (though alienation), feminist and post-structuralist geographers to notions of exclusion:

> *"When they have engaged with place it has been in a critical mode – pointing out how places are socially constructed and how these constructions are founded on acts of exclusion'"* (ibid:26)

To reduce the scale from a community level Cresswell's (2004) discussion continues to include social identity as part of this exclusion process; they state that place does not have a neutral or natural meaning. Meanings of place are created by people with power, and to define to others what is 'there' and what are the appropriate usages for the place, the idea of power brings to the fore issues of age; gender; ethnicity; education; class; lifestyle; sexuality; and age.

Knudsen et al (2007) use the ideas of Foucault to also introduce the 'individual' to the process of social construction of place (specifically nature); however this process is seen to be part of a larger discursive process of power and knowledge creation. Acknowledging that once an individual meaning has been expressed it is subject to power discourses resulting in there being cultural collectives of the social construct of nature, *"Thus, the meaning of landscape, like all meaning, is created, recreated and contested as social process."* (ibid*:*229)

Rose (1997), a feminist geographer, summarises well the issues surrounding the power relation and personal influence on the creation of specific knowledges, in the context of this work, the knowledge of what constitutes nature. They discuss the need for all knowledges to be situated, that our social identity is highly influential on the knowledge we create and the power which our knowledge will hold against other knowledges:

> *"...knowledge is produced in specific circumstances and that those circumstances shape it in some way...facets of the self-institutional privilege, for example, as well as aspects of social identity – are articulated as 'positions' in a multidimensional geography of power relations...'position' indicates the kind of power that enabled a certain kind of knowledge. Knowledge thus positioned or situated, can no longer claim universality."* (ibid:305-308)

The discussion of power relations and situated knowledges has grown from the so called 'cultural turn' of the 1980s which developed the understanding of the society/nature dualism through the deconstruction of the two concepts.

The process of deconstruction begins Derrida's essay, 'Structure, Sign and Play in the Discourse of the Human Sciences' (1966), as cited in Barnett (2009) and Klages (2012), in which they discover a scandal in Lévi-Strauss' nature/culture binary opposition. Klages (2012) states that within this binary opposition Derrida found the taboo of incest, which is

prohibiting within each and every human culture and is therefore universal and natural. However, the taboo varies between cultures, and as such is specific and cultural, and in this Derrida had discovered the scandal, the taboo of incest belongs to both side of the binary opposition it is both cultural and natural.

Derrida's discovery of the scandal within the nature/culture binary opposition challenges the structural stability of the dualism in this one binary opposition but in all other which have an impassable boundary between them, most frequently denoted by the / (slash) (Barnett 2009; Klages 2012). In the discipline of geography the epistemological reading of deconstruction is most widely used to support arguments about the contingency of knowledge claims and the constructed-ness of phenomena, such as nature and culture (Barnett 2009).

As the literature has shown the social constructivism (in its numerous guises) has come to be a dominant approach within geography, but one which has neglected consideration of how the resulting constructions manifest at the level of the community or individual. Marsden et al (2003) goes some way in discussing this scale of study in relation to the co-production of communities and their surrounding forest natures, they conclude that neither nature nor society can be seen as independent variables: *"Both nature (the forest) and people are actively engaging in broader socio-political conditions which help to shape the particular types of socio-natural relations in this time-space context."* (ibid:253)

These individual construction(s) are thus reflected in multiple ways dependent on both the construction(s) and the physical constraints of the surrounding environment, by looking at one specific physical environment this research aims to look at how individuals' social identities may influence their perception(s) and appreciation(s) of the same environment. With the recognition that society and nature are considered as co-enacting (Hinchcliffe 2007), individuals within communities and cultures have been forced to take responsibility for how the knowing; engaging; and remaking of nature occurs, in whose interests these new natures are constructed, and with what consequences (Mackenzie 2008; Milton 1996). Within the global concerns surrounding climate change, and the associated mantra 'think global, act local', it will be increasingly important to be able to place theoretical concepts to space and time specific locations, to ensure that sustainability, biodiversity and conservation objectives are achieved at the local scale: *"The argument that cultural theory can contribute to an understanding of environmental issues depends on the idea that culture plays a role in human-environment relations."* (Milton 1996:6)

2.2.4. Co-constructions

The above section has attempted to describe the diversity of academic opinion that exists surrounding the society/nature dichotomy and the ways in which, through social constructivism, it has sought to be deconstructed. The main critiques of social constructivism are drawn from a realist perspective; however Demeritt (1996) has argued that both realism and constructivism can be seen as agreeing on one significant point: that representations of nature must be explained through either nature itself (realism) or through the society through which the representations are generated and maintained (constructivism) but never through the mixing of the two transcendences. Irwin (2001) suggests that both realist and constructivist writers have sought not only to theorize the relationship between nature and society, in a great variety of ways of which only a few have been discussed, but also (somewhat unknowingly) they have all outdated the society/nature dualism as the concept of knowledge has been introduced to the relationship.

Rather than focusing on one side of the dualism and introducing the other to it, society to nature or nature to society, it has been recognised that there is a need to approach the relationship in a new way in which society and nature are given equal weight – the notion of co-construction. Within this perspective society and nature can be seen, not as separate entities, but as actively generated co-constructions: *"Co-construction as employed here captures the dual process of the social and the natural being varyingly constructed within environmentally related practices and particular contexts."* (ibid:173)

Although drawn largely from the perspective of social constructivism, co-construction goes beyond the perspective by removing the society/nature dualism, and allows debate not only about the changing concept of nature, but also the shifting definition of the social (Irwin 2001:174).

> *"It can plausibly be argued...that the social and the natural can no longer be defined apart from one another. Instead, environmental and social problem draw upon the same nature-culture nexus and, as such, are co-constructed within environmental and sociological discussion."*

Hinchcliffe (2007) terms the approach of co-construction as enacted nature, in which nature and society are seen to constitute one another, they are thus not independent but neither are they reducible to one another. Hinchcliffe (2007) describes the consideration of society and nature together in a co-construction as a 'zero-sum game' in which there is no longer a need to think of a set amount of nature being eroded as society expands, rather the more transformation that takes place in one may increase the levels of transformation taking place

in the other. This compliments Irwin's (2001) comment that co-construction allows the discussion of both a changing nature and society.

Latour (1992) describes the co-construction of nature as developing hybrids, to which the traditional Enlightenment dualistic categories of society and nature cannot be defined; rather hybrids interlink the diversity of these previously static categories. The hybrids form networks consisting of both human and non-human entities and are interlinked in such a way that it becomes impossible to define where one begins and the other ends. Irwin (2001) attempts to define the term hybrid by posing a set of questions that suggests to the reader that the continuing attempt of contemporary theories to maintain the distinct categories of society and nature are

> *"...falling apart under the weight of their own contradictions...Was the Chernobyl disaster caused by human or technological failure? Is GM* [genetically modified] *food a social or environmental problem? Is the destruction of the rainforests a social or natural disaster?"* (ibid:174)

2.2.5. Value systems

The discussion of power relations and situated knowledges has grown from the so called 'cultural turn' of the 1980s which developed the understanding of the society/nature dualism through the deconstruction of the two concepts. As the literature has shown the social constructivism (in its numerous guises) has come to be a dominant approach within geography, but one which has so far paid little attention to the value systems that are of great influence within these social constructions, whether they be individual or community based. These values are not only dependent upon the socio-economic context of the communities, but also the space of nature that these values can be reflected upon, thus values of nature and community values are co-produced. Marsden et al (2003) goes some way in discussing this scale of study in relation to the co-production of communities and their surrounding forest natures, they conclude that neither nature nor society can be seen as independent variables:

> *"Both nature (the forest) and people are actively engaging in broader socio-political conditions which help to shape the particular types of socio-natural relations in this time-space context."* (ibid:253)

These value systems are thus reflected in multiple ways dependent on both the construction(s) of individuals, communities and corporate institutions and the physical constraints of the surrounding environment, by looking at one specific physical environment

this research aims to look at how the values of communities of individuals whose places of residences neighbours compare with the corporate management values the same environment. With the recognition that society and nature are considered as co-enacting (Hinchcliffe 2007), individuals within communities and cultures have been forced to take responsibility for how the knowing; engaging; and remaking of nature occurs, in whose interests these new natures are constructed, and with what consequences (Mackenzie 2008; Milton 1996).

Brown et al's (2004) comparative study on the local and scientific values of biological diversity within the Prince William Sound in Alaska (USA) examined the potential use of local values within conservation planning and management. The resulting research paper (see reference Brown et al 2004) offers no strict definition of value, preferring to offer a brief description of local values how they are produced and transferred within their particular societies:

> *"Local values evolve through continued encounters with a landscape and its resources. This knowledge is acquired in a familiar place and may be passed down through generations. Local values are place-specific and embedded in social and cultural practices related to the natural world...When applied to native populations, local values and knowledge are often call indigenous knowledge or traditional ecological knowledge."* (ibid:163)

Within the context of Brown et al's (2004) description of local values, it can be argued that values can offer a contemporary method of examining the relationships between society, nature and knowledge (within Brown et al's paper comparisons were made between the dominant scientific knowledge within conservation planning and local knowledge and values).

From Harvey's Marxist perspective Harvey (1996) understands value to be expressed in nature as an alternative to money, grown from the bourgeois life of resistance; values have also been expressed through religion, community and nation. However, Harvey (1996) acknowledges that there is a certain advantage of interpreting values as residing in nature, rather than the above mentioned other sources:

> *"The advantage of seeing values as residing in nature is that it provides an immediate sense of ontological security and permanence. The natural world provides a rich, variegated, and permanent candidate for induction into the hall of universal permanent values to inform human action and to give meaning to otherwise ephemeral and fragmented lives."* (ibid:157)

As previously discussed Marxism views first nature as being transformed into a stage of second nature, with societies being transformed as well as the natures, Harvey (1996) develops this argument to include social values suggesting that capitalism has come close to destroying sets of intrinsic values towards nature. Although Harvey also comments that these may be recoverable, there is no explanation of what social conditions would be required for this recovery of such values.

The work of Leopold (1968) also refers to values existing within nature, most specifically to the conservation of such a resource, and in the context of this research provides a useful definition of values:

> *"It is inconceivable to me that an ethical relation to land can exist without love, respect and admiration for the land, and a high regard for its value. By value, I of course mean something far broader than mere economic value; I mean value in the philosophical sense so that a thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."* (ibid:223-4)

2.3. The concept of conservation

The concept of conservation is arguably as difficult to define as the concept of nature which is it seeks to conserve. Influenced by scientific research and principles, and most recently the qualitative revolution and the social sciences, the concept of conservation has evolved from reinforcing the dualism of society/nature as separate entities, to challenging the dualism through community-based conservation initiatives.

2.3.1. Historical perspectives

It is most generally understood that the establishment of the first National Park in the world, Yellowstone National Park in the USA, in 1872 saw the beginning of a movement that aimed to merge conservation and economic development (King 2010; Klein et al 2007). Brockington et al (2008) explain that the establishment of Yellowstone as a National Park holds its origins in the visions of the American artist George Catlin who first used the term 'national park' to refer to areas of the American West as he saw them during the 1830s. Subsequent use of Catlin's vision and terminology was applied to the designation of areas such as Yellowstone and has been seen within American culture to reflect America's

growing greatness, through its evolution the vision and term, national park, became integral in US policy and has been applied every increasingly within the enlightened Western world (ibid; King 2010). Thus, the designation of national parks and other formalised protected areas became the beginning of a global conservation approach, most frequently dispersed by the spread of colonialism. King (2010) goes as far as to suggest that the establishment of national parks around the world was due to the influence of colonial powers and the rise of sustainable development, which, together, justified the separation of society and nature through economic benefit.

In reality, however, the allocation of national parks and other protected areas reinforced the divide between humans and nature through physical boundaries, with the forced displacement of indigenous communities who had previously been dependent on territories for their survival (King 2010; Klein et al 2007). Returning to the visions of Catlin, Brockington et al (2007) are increasingly critical of this version of the origins of national parks and go as far as to refer to the story as a myth, which is surrounded by Western power and thus holds its position even within academic literature. Three main areas of criticism are highlighted, and can now been seen not only to be critical of the myth of Yellowstone National Park, but also of the use of the 'fortress' conservation approach more generally (Brockington et al 2007):

- The people that Catlin initially encouraged, and imagined within his vision of national parks were subsequently removed from the designated areas and had been rendered invisible until recently;
- The history of protected areas began before the establishment of Yellowstone, and even before Catlin's vision. Other examples acknowledge that the Bogal Khan Mountain was declared a national park in Mongolia in 1778 (almost a century before Yellowstone's designation) and histories of other protected area designations in Mongolia can be traced back to 1294;
- Following the above issue, the dominant history of national parks and other protected areas reflects only that of powerful societies, and even these histories are limited to living memories and written records, there is an absence of any 'third world' or locally based histories of conservation methods.

The myth of Yellowstone National Park being the origin for the global movement and designations serves not only to misinform the history of the approach, but is also seen as the first building block in what Brockington et al (2007) term as mainstream conservation, which is seen not to reflect the dominant practical approaches to conservation, but rather a

domination of the ideology in conservation interventions which have become institutionalised over the last three centuries.

During the 1960s, the establishments of national parks, following the myth and mainstream conservation practices of the Yellowstone model, was most liberal in sub-Saharan Africa with a movement of designation inspired by members of the British aristocracies involvement with such initiatives as the 'Society for Preservation of the Wild Fauna of the Empire'. This 'environmental' group lobbied for the establishment of national parks and other forms of protected areas in the name of conservation, although it was widely accepted that the true purpose was for the preservation of hunting species and restrict the use of the designated areas to the elite colonial populations (Western 2003).

Brockington et al (2007) use this example to uncover another myth of national park establishment within the designation and naming of the first national park in South Africa, the Kruger National Park designated in 1926. It is suggested, within common literature, that the park was named after Paul Kruger, the then president of the Transvaal Republic (now the Republic of South Africa) as he was a strong supporter of conservation efforts. However Brockington et al (2007) reject this notion as a myth to hide the undemocratic power of colonial rule. They continue to highlight that this practice of myth and designation continued beyond the establishment of the Kruger National Park, despite the decreasing power of colonial rule (however in South Africa the power of colonialism was replaced by that of apartheid). However, it is also acknowledged that although the powers which designated the national park has disappeared, the emphasis on conversation has been maintained.

King (2010:15) also critiques the Yellowstone model of protected area designation, specifically with regards to the social implications of the power inequalities involved:

> *"The grand Yellowstone experiment, therefore, involved particular ideas of what constituted 'nature' and what types of landscapes should be protected...Although national parks are often seen as nature operating outside of the sphere of human activity, in fact their establishment and ongoing management remains highly political..."*

The exclusionary processes of fortress conservation, practiced through the designation of national parks and other protected areas, reinforced the dualism between society and nature. Although within the context of designation for conservation in Sub-Saharan Africa, rather than the exploitation of nature through the industrial and agricultural revolutions which can be described as European concerns, the separation of humans and nature was justified for the protection of resources. For Western (2003), the natural resources within national parks (including the intrinsic resource of nature itself) was being protected from the

indigenous populations, whose growth, development and uneducated practices were destroying their surrounding nature.

During the 1960s the 'fortress' model of conservation that excluded indigenous communities and their ability to access resources within protected areas became widely criticised for its social insensitivity, its unjust policies and practices, and its inability to meet the demands of biodiversity conservation. The model became seen in the developing world as a symbol of colonial oppression and bureaucratic administration (Klein et al 2007). Empirical scientific research was also emerging during the 1960s that suggested the twentieth century model of 'fortress' conservation was not suitable in the preservation of intact biodiverse natures (Western 2003). The removal of communities from their indigenous lands, rights and livelihood production systems was exaggerated by the fact that those places with the highest rates of biodiversity, and need for protection, are within areas where populations show the highest levels of socio-economic poverty (King 2010).

Smith (2008) discusses the discriminatory and exclusionary processes of fortress conservation, not through the powerful practices of colonialism, but rather through the top-down approach to scientific knowledge creation. As previously discussed the use of science, both creates and validates the knowledges which inform conservation practices, Smith (2008:353) suggests that the critique of top-down approaches to conservation has been largely because of the emphasis and importance it places upon science as a source of 'expert' knowledge, furthermore *"This lends the approach a potentially exclusive and paternalistic nature, which can be alienating to local people and their internal resource management schemes."*

This 'top-down' approach has been the persistent ideology and philosophy in environmental management since the Enlightenment, with science and rationalism reigning as the authoritative basis for knowledge and 'truth' creation. In this context the knowledge of local people is considered subjective and irrational (Smith 2008).

Challenges to the top-down approaches of fortress conservation in Southern Africa emerged in the 1960s and 1970s, termed conservation biology, which began to include human influence within ecosystems (Western 2003:14).

> *"This radical step marked a sharp shift from the prevailing scientific practice of treating the natural and human realms as separate domains. Human ecology and behaviour were now seen as the keystone processes governing the productivity and diversity of ecosystems."*

The development of 'bottom-up' approaches, as an alternative to the heavily criticised 'top-down' approaches to conservation placed a focus not on the scientific knowledge of experts, but rather appreciated and incorporated the local people, their knowledges, skills and experiences (Smith 2005). The inclusion of communities into conservation practices represented a paradigm shift in biodiversity conservation, away from the exclusivity of protectionism towards people-centred community based conservation (Brown 2003). This new paradigm of community conservation is widely practised in Southern Africa both alongside and as an alternative to fortress conservation; Hulme & Murphree (1999) have termed the paradigm 'new conservation'.

2.3.2. People-centred approaches

Within the discipline of geography, which can discuss both the physical and human aspects of biodiversity conservation, the post-modern literature allows for the discussion of this paradigm shift from 'fortress' to community conservation (Klein et al 2007). It allows for the discussion of hegemonic discourses, which dominate thinking within a field such as biodiversity conservation, that is translated into institutional arrangements and policies. A hegemonic discourse to conservation can also be described as a dominant standpoint within the discipline of exercise and study, however, a people-centred approach to conservation can also be termed a world-view of the concept, particularly concerning the belief systems which inform the wider grand narratives.

The notion of a world-view is taken from the German term *Weltanschauung*, which was at its height of popularity in academic discourse at the turn of the twentieth century (Naugle 2002; Sandywell 2011). It is taken from the German words *welt* meaning world, and *anshauung* meaning intuition (Sandywell 2011), through its adoption into other European languages the definition varied in emphasis from Kant's Germanic definition which saw *Weltanschauung* as *"...an intellectual conception of the universe from the perspective of a human knower."* (Nagle 2002:59) In the adoption to the Romance language, of Italian, the term has been used to refer to a vision or conception of the world. In French definitions vary from a conception of the universe or life to a practical attitude regarding the world. There is little English/Anglo regard for the term, although it has been used to refer to any general views of the universe and man's relationship to it, and as such it has been usually applied to a philosophy affecting practical attitudes and beliefs of its adherents (ibid).

In epistemological terms a world-view constitutes an all inclusive perspective for the interpretation of experience, thought, action and values, which Sandywell (2011) refers to as a culture's imaginary landscape composed of unconscious ontological, cosmological and

ideological beliefs. They go further to suggest that this world-view, dominant standpoint, operates as unquestioned, background knowledge which informs the activity of everyday life.

The OED (2010) offers definitions for both the term world-view and *Weltanschauung*, in the later it refers to a concept of the world held by individuals or a group, as such within the context of people-centred conservation the notion of world-view could be discussed within many levels of the discourse.

Thus within a language of the natural/physical sciences 'fortress' conservation was the hegemonic discourse until circa 1970s, based on views that local people threatened the biodiversity through habitat degradation and unsustainable resource use (Algotsson 2006). The 1980s saw the replacement of modernism and its grand theories with a concern for the local, within this context a concern for local adaptation, indigenous knowledge and bottom-up planning. The rhetoric of sustainable development has also built upon post-modern theories of community conservation, generating a new interest in market mechanisms (Klein et al 2007) and the ability of protected areas to produce benefits economically through tourism and investment, further emphasising that local economic development can occur in conjunction with biodiversity conservation (King 2010).

Hulme & Murphree (1999) define three strands of argument that have guided both the development and implementation of 'new conservation' which has taken many guises under the broader paradigm of community-based conservation, and been interpreted in numerous ways as the practice of the approach has been incorporated into conceptual frameworks, policies and manifestations of practice. These strands of arguments are: the powers of conservation should be increasingly devolved and thus move from being state-centric to being placed within society itself; that the concept of conservation itself should be re-examined, taking into regard the notion of sustainable development and; the introduction to conservation the neoliberal thinking surrounds economic markets.

The first guiding principle of community-based conservation is concerned with the devolution of power; Hulme & Murphree (1999:278) discuss this within the context of devolution from the post-colonial government to the indigenous societies of Africa. They suggest that the notion of community-based conservation has been drawn from the conceptualisation of the local society as a community, and the rejection of the idea that rural and indigenous populations are degraders of their environment and the acceptance that they, in fact, demonstrated a complex understanding of their natural surroundings.

Brown (2003:90) also highlights the need and problems for integration of traditional knowledges into devolved approaches of community-based conservation, suggesting that:

> *"The first challenge for people centred conservation concerns the ways in which different understandings, meanings and values of biodiversity, the environment and nature are integrated and applied in devising conservation priorities and actions."*

The above quotation not only shows a challenge to the historically dominant forces of fortress conservation, but also a challenge towards to the type of scientific knowledge that has informed and validated such an approach. The integration of traditional knowledges (also referred to as indigenous knowledge) into conservation approaches as a means of creating community-based conservation can be achieved through a concept such as traditional ecological knowledge which uses different (a community's traditional) value system to inform and support conservation (Brown 2003). The integration of traditional knowledge and value systems requires the understanding of how, and which, knowledge systems are currently reflected in management policy, wider social institutions that implement such policy and which actors worldviews are represented.

Successful acknowledgement and understanding of the above, paired with successful understanding and integration of traditional knowledge systems, Brown (2003) argues, will most increasingly successful in supporting both the policy and practice of conservation. Brown (2003:90) however does acknowledge that traditional knowledge should be seen to complement scientific knowledge, and vice versa, and suggests that the creation of 'fusion knowledge' would be most useful in developing locally appropriate systems of resource management: *"It is often at the interface between different ways of knowing and different forms of knowledge that innovations in resource management and practice can be made."*

However, the creation of 'fusion knowledges' and the devolution of power to communities comes with warnings, as Smith (2008) comments: the process of implementing community-based conservation can often become tokenistic. The vast majority of community-based conservation initiatives place greatest emphasis upon community participation, which can be interpreted as the devolution of some power with regards to decision-making, however the governmental (and in many cases non-governmental) rhetoric remains in stark contrast to the practical manifestations (ibid). This discrepancy between rhetoric and practice Smith (2008:359) refers to as tokenism, and suggests that this can be a result of:

> *"...government agencies, officer and representatives and their unwillingness to devolve power to lower levels such as the community...This may be because they do not want their own power base to be reduced, or alternatively because of a persisting top-down narratives about communities and their lack of capacity and competency to sustainably manage their local resources."*

Smith (2008) also comments that an approach may become or be seen as tokenistic not only because of the inadequacies in the devolving of power, but also because cultural and community factors can reduce devolution, as well as the lack of appropriately qualified facilitators.

Hulme & Murphree's (1999) second underlying principle of community-based conservation relates to the concept of conservation itself, which has been seen to shift from conservation as preservation after a challenge from the notion of sustainable development. This changing conceptualisation runs concurrently with the challenging of the society/nature dualism as previously discussed, and thus allows both conservation and sustainable development objectives to be challenged not only at the same time but with the same approaches (ibid, Irwin 2001).

The so called shift in the conceptualisation of conservation from preservation towards sustainable development is the result of numerous interacting factors. Hulme & Murphree (1999) highlight the following influences: new thinking about the role of markets in conservation, especially those drawn from neo-liberal thinking; the widening acceptance that all environments have in some way been affected by human activity and the recognition of a new ecology in which environments are seen as inherently dynamic and; an acceptance that historical perspectives of conservation have been 'environmental imperialism' which prioritised Western conservation goals over the needs of African development.

Both Irwin (2001) and Smith (2008) identify the Brundtland Commission, and subsequent report in 1987, as the point at which community-based conservation became integrated with sustainable development and as such became the globally accepted approach to biodiversity conservation. The main focus of the Brundtland Report was the acceptance that economic growth and conservation practices should no longer be seen as independent variables that were compatible with each other, but they should be viewed as mutually dependent. The widely quoted definition of sustainable development (as referred to in the glossary of key terms page xiv) is drawn from this mutual relationship (Irwin 2001).

Although the concept of sustainable development has become the 'buzz word' driving the ambitions of the twenty-first century in all aspects of everyday life, from conservation to agriculture, energy production to education, Irwin (2001) criticises the term as becoming the post-modern equivalent of a grand-narrative replacing the modernist narratives of progress from the twentieth century. In contrast Irwin (2001) continues to comment that there have been aspects of sustainability 'talk' which have given it great resilience within international critiques, these are discussed within five key points.

Firstly, the sense of togetherness that the global, 'human family', generates as the world attempts to solve its problems together. The Brundtland Report's use of sustainability talk seeks to create inter- and intra- generational equality, suggesting that only full participation can deal with the crisis of poverty and conservation. In line with other criticisms previously discussed with regard to both the notion of nature and its conservation, Irwin (2001) draws attention to the dependence of sustainability talk on science as the best method to identify, gauge and respond to environmental problems – however unlike previous criticisms Irwin sees the use of science as an appropriate way to create social and institutional change as technology creates the possibility of exploring and understanding natural systems in new and improved ways:

> *"A large part of optimism within the Brundtland Report stems explicitly from this faith in our scientific and technological capacities. From a sustainability perspective, such capacitates provide a solid foundation for the necessary social and institutional changes..."* (ibid:45)

Fourthly, Irwin (2001) discusses the change that sustainability talk advocates as a means of resilience. The change sought is one that can resolve environmental problems, without compromising the need for economic growth, the model of change would also seek to marry the global with the local and thus reduce the dualistic tensions between all scales of interaction.

Finally, in a point that is must be read in the context of previous discussions regarding the social construction of nature and environmental problems, Irwin (2001) sees resilience through the idea the sustainability seeks to solve a crisis that is both real and bound in social and institutional arrangements. It can be interpreted that this allows people to see and experience the environmental problems and be able to solve them through their own actions. Returning to Hulme & Murphree's (1999) second principle of community-based conservation, needing to rework the conceptualisation of conservation itself, Irwin's (2001) discussion has demonstrated that it is best done within the notion of sustainable development and sustainability talk, which is not only seen as a response to the environmental crisis, but also is an actively created framework through which this new paradigm of conservation can be discussed.

The use of the notion of sustainable development in this context can also be beneficial to the discussion of Hulme & Murphree's (1999:280) third principle of community-based conservation, which introduces neo-liberal economic thinking (dominant in the late twentieth century thinking) into the process of community-based conservation.

> *"This argues that unfettered markets give individuals greatest freedom in choosing what to produce and consume and the patterns of natural resource use (including conservation) are best determined by market processes."*

This theoretical perspective relies on the dictum 'use it or lose it', suggesting that the only way habitats can be conserved is through exposing them to market forces in which the scarcity of natural resources will be highly valued by consumers and so degrading practices such as agriculture will no longer be attractive to the market (Hulme & Murphree 1999).

However attractive it may be to presume that the 'new conservation', of which Hulme & Murphree (1999) speak, has completely replaced the paradigm of fortress conservation which was highly criticised, the transition is more complex than simple replacement. As Klein et al (2007) remark the shift in emphasis between the fortress and community-based conservation approaches has been sporadic and although the success of community-based approaches have seen them become the hegemonic discourse within conservation there still remains circumstances where criticisms of community approaches have been unsuccessful and fortress conservation models have been reintroduced. However, Hulme & Murphree (1999:281) conclude:

> *"Of one thing there can be no doubt, however: the old orthodoxy of conservation purely as state enforced protection, that evolved in the colonial era and was continued by the elites who took control of independent Africa in the 1950s and 1960s is no longer presented as a viable option by any serious actors. At the very least 'fortress conservation' has to work alongside the new conservation: whether that is as the dominant party or as a junior partner remains to be seen."*

2.3.3. Strength-based conservation

The contemporary approach to conservation, as discussed above is most frequently termed community-based conservation, which is increasingly concerned with the introduction of the sustainable development paradigm, thus modern conservation practices look towards social and economic development as a means of ensuring the continuation of a sustainable environment.

A strength-based approach to conservation, it is suggested, is a teleological approach to the concept of conservation. Describing the concept within this mode of enquiry suggests that the concept would be adopted and practiced as it

> *"...is motivated by the belief that there is an ultimate purpose or design at work within the world, and that all elements and events, whether we are conscious of it or not, are pre-configured to realize that purpose or design."* (Barnes 2009)

To refer to strength-based conservation as a teleological enquiry means that the concept or phenomena of nature takes on the particular characteristics that will enable the goals, or value objectives of the community to be met.

As afore mentioned community-based conservation efforts were seen in Southern Africa during the 1970s and early 1980s (Klein et al 2007), during this period of time that approaches to community development in Southern Africa were also undergoing a paradigm shift. Russell (2009) describes this shift as from a focus on needs-based approaches of the 1950s and 1960s towards an assets-based approach born of the 1970s. The shift in paradigm of community development is similar to the shift towards community-based conservation, as both are born from the criticism of their predecessors which were seen to exclude indigenous and traditional people and their knowledges from the dominant approaches of needs-based development and fortress conservation respectively. McNulty (2005) suggests that the paradigm shift in community development, and it can also be argued the shift in the conservation paradigm, is underlined by the premise that projects and initiatives are more successful when increasing numbers of local people are involved in their formulation and implementation.

2.3.3.1. Asset-based community development

In combining academic interests in both sustainable socio-economic development and the increased integration of traditional peoples, knowledge and participation the most contemporary literature focuses on strength-based approaches, such as asset-based community development projects (ABCD). Developed from the work of Kretzmann & McKnight in the deprived urban communities of 1990s America, the ABCD approach is an alternative to the dominant needs-based approach to community development (Ennis & West 2010). In identifying the characteristics of successful community-based development initiatives, Kretzmann & McKnight were able to identify the consequences, of the mainly unsuccessful, needs-based approaches. They concluded that a needs-based approach to development created a community leadership culture that focused on creating deficiencies and incapability as a means of generating income through aid (Mathie & Cunningham 2003). Russell (2009) suggests that this focus on needs and deficiency had resulted in communities no longer being able to identify value within their own communities or surrounding

environments, and a strongly held belief that only degradation will attract income through aid.

Following the example of Kretzmann & McKnight, many aid agencies, non-government organisations (NGOs) and governments are increasingly practicing an asset-based approach to community development. Although, as Rapp et al (2005) acknowledge, there is no widely accepted definition of what a strength-based approach entails, it is deciphered by its particular characteristics, including:

> *"...a strong goal orientation; a systematic assessment of strengths or assets; harvesting client and environmental strengths for goal attainment; a relationship that is hope-inducing; and the provision of meaningful choices with clients having the authority to choose."* (Ennis & West 2010:404)

At the core of the ABCD approach lie the members of a community, with the over-riding principle that the strength of assets of and within the community creates a more positive change within community development than an exclusive focus on needs and problems (Mathie & Cunningham 2003). The strategies which are included within such an approach are: the mapping of physical, social and economic assets; collection and evaluation of success stories and; the building of relationships and creation of a steering group, together, Mathie & Cunningham (2003) suggest, that these strategies aim to produce a broader strategy of sustainable development that is concerned with macro-level community initiatives and the promotion of policy creation and adaption that suit such initiatives.

It can thus be argued that the ABCD approach and strategies, that Mathie & Cunningham (2003) outline, can be used in the development of community-based conservation initiatives and policy in a similar way to which they are applied to the broader area of community development. The paradigm of sustainable development is at the centre of contemporary studies and practices surrounding both community development and community-based conservation (although the paradigm in itself has been the subject of criticism), and as the ABCD principle aims to achieve sustainable development the approach can be employed to community-based conservation initiatives. The approach of ABCD also shares with community-based conservation the focus of cultural, economic and political empowerment of community members through participation, in ABCD this can be seen through the development of asset rather than needs-based initiatives, and in community-based conservation through the development of management practices that seek to include more widely community participation and indigenous knowledge.

2.3.3.2.Nietzsche and active ethics

Hipwell (2009) suggests that this change in focus, which can be seen in both the community development and community-based conservation paradigms, represents a shift in contemporary philosophy, which is influenced by Nietzsche and Deleuze. Within the argument Hipwell (2009) places the post-modern philosopher Nietzsche's 'philosophy of the future' as the modernist critique that allows for the potential development of paradigms such as ABCD (although it is not yet considered to be a paradigm). Writing in 1954, Nietzsche attempted to diagnose the ills of the Western society, in the same manner in which in 1993 Kretzmann & McKnight diagnosed the ills of the approaches to community development, Nietzsche suggested that the ills of the Western civilization were the result of an inherently negative (reactive) philosophy. Thus in an attempt to put right these ills, Nietzsche focused on an active ethic, the post-structuralist philosopher Deleuze highlighted that the contrast of active and reactive ethics was what characterised Neitzsche's philosophy.

In examining Nietzsche's philosophy further Hipwelll (2009) discusses the epistemological, ontological elements of active ethics, as well as the philosophies definition and use of the concepts of difference and power, each will be briefly summarised in order to establish the foundations of the ABCD paradigm. The epistemological principle of Nietzsche's philosophy can be seen in the contemporary approach of ABCD, as within active ethics a distrust of claims of a vantage point in knowledge from which enables pure objectivity, which is a criticism of Western means of knowledge production as highlighted previously in the case of science and conservation practices. In the same way that Mathie & Cunningham (2003) highlight the strategy of collecting and analysis of community success stories, Nietzsche characterises active ethics through the use of positive memory of histories focusing on knowledge and power:

> *"Rather than attempting to alter the relationships of power by mobilising guilt through blame (as common in advocacy, politics, and litigation), active ethics is pro-active, empowering marginalised communities to assert their rights and develop their assets to establish new (socio-) political dynamics."* (Hipwell 2009:291)

Nietzsche's ontological principle, is described by Hipwell (2009) as a 'will to power' which is seen as the force which drives all individuals or communities, the existence of which ensures that the collective empowerment of communities is the only means by which a community or individual can flourish – this is the underlying principle of ABCD which sees the empowerment and devolution of power to communities as the only way in which development can be made both successful and sustainable (Ennis & West 2010).

The concept of difference is seen by Nietzsche as constituting human existence and suggest that equality is a myth which is used by those in power to dominant the less powerful, no two people or the cultures to which they belong are or can be identical, because of this Nietzsche argues that striving for equality is a pointless battle, and rather humans should strive for their maximum potential (Hipwell 2009). Nietzsche also comments on the concept of power, which is influential in the ABCD approach and the needs-based approaches which it is currently challenging, it is suggested the focus on needs and problems reinforces and often amplifies the differences in power. In contrast the ABCD approach creates power through the identification and mobilization of community assets and thus challenges the negative and disempowering nature of historical development.

The strengths based approach is described as the alternative to the majority of current community-based conservation initiatives as it focuses on the existing assets and capabilities of a community rather than their needs and position of lack (Hipwell 2009). This approach can be well suited to the complexities that underpin socio-economic inequalities in South Africa, which have left communities developing a sense of lack that perpetuates dependency on the state or NGOs for funding, a cycle which creates and allows the continuation of socio-economic inequalities:

> *"An active approach means that development planning must identify the inherent strengths that exist within diverse societies and amidst inequalities. This is not, it must be stressed, to ignore the effects of oppression, disenfranchisement or injustice that persists for minority groups and limit potential in the present. Rather, it is to emphasise that moving beyond such conditions to a position of equality will require among oppressed peoples a celebration of strength rather than a reactive dwelling on the past and attendant reinforcement of feelings of weakness."* (Hipwell 2009:293, original emphasis)

2.3.4. Value systems within conservation

In the examination of the paradigm shift in conservation, from fortress to community-based practices Brown (2003) suggests that a paradigm shift alone is not sufficient to create changes that result in more successful conservation programmes; there must also be a significant shift in priority-setting, decision-making and organisational structure. In line with the wider critique of fortress conservation which leads to the shift in paradigm towards community-based initiatives, Brown (2003:89-90) highlights that similar critiques still remain, however, they can also be applied to the community-based approach:

> *"According to critics even so-called new conservation policy, practice and institutions remain expert-driven, undemocratic and autocratic...The first challenge for people centred conservation concerns the ways in which different understandings, meanings and values of biodiversity, the environment and nature are integrated and applied in devising conservation priorities and actions."*

In linking the concepts of social constructivism, community-based conservation and strategies of ABCD it is suggested that community values can be established, evaluated and integrated into biodiversity management plans that would assist in ensuring their success.

It will be suggested that the integration of community values into community-based conservation practices will allow the approach to move beyond criticisms of tokenism and allow for an increasingly successful and strengthened paradigm of community-based conservation that will also be able to fulfil the goals and aims of sustainable development. However, the term value, in itself can be as difficult to define and use as the concepts of nature, society and conservation as discussed previously. Lynam et al (2007), in a review of tools that allow for the incorporation of community knowledge, preferences and values into the decision making processes of natural resource management, begin with defining the term value in accordance with a community-based conservation context and the Oxford English Dictionary. Values within a biodiversity conservation context can be described from one of four positions, each relating to a usage of the term taken from the Oxford English Dictionary (2010), these are: economic – the amount of money or goods considered to be of equal value to which it can be exchanged for something else; social – desirability, usefulness or importance; ecological – a things ability to serve a purpose or cause an effect and; ethical/philosophical concerns – principles or standards, a judgement of value in life (Lynam et al 2007).

Brown (2005) sees the application of landscape values to conservation as a means of bridging the gap between connections of special place (the geography of place) and the underlying perceptual rationale (the psychology of place). The connection of the geography and psychology of place Brown (2005:19) suggests is the way in which the traditionally ecological operational models of conservation can begin to integrate community values, through the landscape value concept, which holds as its underlying principle that: *"Humans value landscapes and the places therein for different reasons ranging from instrumental values (e.g., places that provide sustenance) to symbolic value (places that represent ideas)."* Brown (2005) defines ten separate landscape values: life support; economic; scientific; recreation; aesthetic; wildlife; biotic diversity; natural history; spiritual and; intrinsic. This was further developed to include subsistence; cultural and; therapeutic values (Brown &

Reed 2000). Although Brown's (2003) list of landscape values will prove beneficial within the methodology of the research, the broader definition of value that will be used within this context is drawn from Cast et al's (2008) study on environmental values within the Murray-Darling basin in Southern Australia.

Knight et al (2006), in their criticism of operational models of conservation, discuss the lack of academic literature that addresses values within biodiversity conservation, suggesting that rather than broadening the horizons of the discipline to include the social sciences academics are pre-occupied with developing increasingly sophisticated scientific analysis to deal with trivial problems. In summary of the processes through which Knight et al (2006) conceptualise conservation activities, systematic assessment, planning and management, systematic assessment is described as a method to achieve the scientific value of nature, and management is the process through which these values are seen to be maintained and enhanced to benefit society.

Although Knight et al criticise the literature of peer-reviewed journals as focusing on a too narrow scientific model of biodiversity conservation, they themselves allude to the need for the values of nature to be scientifically assessed, and this contradictory position identifies the power of knowledge creation within the biodiversity conservation discipline. It can be argued that the mere recognition of the importance of social values, and even the attempt to integrate such values conservation management plans, will not go far enough in solving the concerns of stakeholders if the method by which these values are assessed and integrated continues in the domain of the natural sciences, and thus does not take into account a sociological or social science perspective.

Raymond et al (2009) also comment that whilst biophysical, and increasingly, economic values have been used in the management of conservation, community values remain rarely considered. However, unlike Knight et al (2006), Raymond et al (2009) suggest that the call for the recognition and integration of multiple values into environmental management and conservation is being called for by both the communities of stakeholders and the wider scientific community. Raymond et al (2009) highlight the United Nations Educational, Scientific and Cultural Organisation's (UNESCO) World Heritage Conference in 2003 and the Millennium Ecosystem Assessment in 2005 as both

> "*...urged the global scientific community to recognise a more comprehensive view of the value of nature – both economic and local values which stem from the intrinsic relationship between culture and nature, people and place."* (ibid:1302)

As with Brown's (2003) call for the development of a 'fusion knowledge', of both the scientific and indigenous knowledge, to be used in conservation practices, Brown et al (2004) creates an argument for a pluralistic approach to conservation which includes both scientific and local values. Brown et al (2004) goes beyond a mere criticism of scientific approaches to conservation, and demonstrates a method of establishing the diversity of values that exist within the communities of the Prince William Sound (Alaska, USA) and the spatiality of these values. The values study is then compared with the spatiality of biodiversity hotspots identified by scientific 'experts', Brown et al (2004) conclude that there was moderate agreement between the spatiality of community and scientific values with regards to biodiversity, but the level of coincidence was much higher with the identification of special places that hold value.

Brown et al (2004:162) do not however recommend that the method they used to survey the spatiality of community and scientific values is the most appropriate way in which to create a more pluralistic approach to conservation, but suggest that the application of local values, perceptions and understandings is needed to create a practice of conservation that can only be beneficial to all stakeholders, as there continues to be *"...a growing body of knowledge that indicates that humans interact most strongly with the environments and policies that govern them via their own perceptions..."*

The ABCD approach offers a method through which both community assets can be identified, and the possible ways in which these assets can be utilised in community development and most specifically, within this context, community-based conservation practices. Using a strategy of identification of community assets, and adopts a methodology in which communities are asked to identify their own assets consisting of the physical, cultural, association networks and skills. The identification and prioritisation of particular assets reflects the values of the communities involved, these reflected values are central to an individuals or communities belief system, they are the basis for evaluating and linking beliefs (Cast et al 2008). Because of their relative importance within belief systems, community values can be included as a community asset. For example placing a value on a particular location for cultural purposes, such as a site for initiations, ensures the protection of that area by the community, and thus it becomes a social asset.

The identification, and often mapping, of community values in conservation initiatives can contribute to the broader arena of strength-based approaches to community-based development, where ideas and initiatives are not only participated in by the community, but are drawn from the community themselves, which has been shown to make them more successful (Cast et al 2008).

Mapping is defined by the OED (2010) as the provision of a map, the act of setting out on or as a map. Within the context of the mapping of community values the process is more accurately termed cognitive or mental mapping, defined by Ley (2009) as *"...the retrieval of imagined or mental maps widespread in the popular knowledge of places, mental constructs that were seen as intervening between geographical settings and human actions."* Developed from behavioural geographers such as Kevin Lynch, and his study of urban areas mapped from memory, and Peter Gould and his students, who produced cognitive maps to interpret place preference, particularly in migration and residential patterns (ibid).

Furthermore, the process of value mapping can be better defined as mental mapping due to its focus on values associated with a constructed concept.

> *"Mental maps were part of the broader movement in the environmental perception, which in turn has elided into an interest in the representation and social construction of places in a variety of disciplines using less positivist methods and emphasising the social rather than psychological factors."* (Ley 2009)

In integrating a community values mapping methodology into a biodiversity conservation model that is community-based, developments could be made which go beyond practices that see the consulting of the communities as real participation, and would include local value systems in the decisions made. Within the biodiversity conservation arena it has been proposed that scientific services must introduce active research which would identify local values and priorities for management; considers the multiple scales of processes; emphasises empowerment, equity, trust and learning and; systematically integrates multiple value systems into decision making (Raymond et al 2009).

2.4. Marxism, Nature and Conservation

In a summary of the body of thought referred to as Marxism, drawn from the works of German philosopher Karl Marx (1818-1883), Henderson & Sheppard (2006) describe it as a rich and diverse tradition which has been successfully applied within numerous academic disciplines such as development, urbanisation, politics and governance, the environment and ethics – *"It is interested in what the world is like and who makes it that way; in what knowledge and feelings people have about their situations and how those perceptions arise from those very situations."* (ibid:57) When considering Marxism within this definition it is evident why so geographers such as Castree (2000; 2001; 2003; & 2005) and Harvey (1996)

have applied the tradition in their examinations of the society nature dualism as previously discussed. Although in broad academic literature and debate interest in Marxism began declining from the 1990s onwards, Henderson and Sheppard (2006) suggest that within human geography a decline in debate does not represent a decline in interest but rather the fact that the significant insights of Marx have become internalised within the subject and thus warrant no further debate.

Within the specific context of this research which calls for the integration of both corporate and community values within community-based conservation initiatives and management in a way which meets the demands of both sustainable development and biodiversity conservation, through the adaptation of an ABCD approach to development – an underlying Marxist approach seems highly appropriate. As will be further discussed Karl Marx, and his subsequent writings, saw the relationship between society and nature as central to his development of a materialist account of society (an account at the very core of Marx's philosophy). Marx understood all human activities to be bounded by the biophysical processes of nature from which all resources, and the funding of capitalism, are drawn. In line with the thoughts of constructivists, Marx also saw nature as being reconstructed by society, and their capitalist processes, and quite remarkably also addressed a contemporary of constructivist thought by suggesting that even within the reconstituted second natures, nature retains a sense of power and is able to break-free from the confines of societies bounded constructs, thus always remaining somewhat elusive to the full power of capitalism (Henderson & Sheppard 2006).

It is not only Marx's tackling of the society nature dualism that makes his philosophy attractive to this type of research, but also the method that is employed to gain an understanding of this complex relationship, Marx refers to this as dialectics. Harvey (1996) comments that a dialectical way of thinking allows Marx to go beyond the common sense approaches of merely seeing things that have history in themselves and relations to other things – Marx instead prefers to speak of the notion of processes which too contain histories, but also possible futures, and a relation which links the process to other things (dialectical thinking will be discussed in more detail). In its most simplest of terms dialectical reasoning is a method of thinking that places focus on the relationships between things, their processes and flows, rather than the things themselves and their elements and structures (Henderson & Sheppard 2006). Thus dialectical thinking would no longer speak of society and nature, but would rather, like co-constructivism, comment on the processes that exist between society and nature and how each interacts with the other.

> *"Whereas mainstream science and social science seek to explain the world by reducing it to a series of stable and well-defined entities (quarks, organisms, human agents) connected by stable casual relations, dialectical reasoning traces how these interrelations are constantly changing, altering the entities themselves."* (ibid:59)

2.4.1. Marxism and the society/nature dichotomy

In returning to Irwin's (2001) reading of Dickens' (1992) critical realism position, the case for employing Marxist thinking about the society nature dichotomy is clearly laid out. Dickens' (1992) is characterised and summarises by Irwin (2001) in four main points, firstly that Dickens' use of both realism and dialectical are drawn from Marxist theory and allow Dickens to present the relationship between society and nature as mutually constitutive but with independent potential objectives. Secondly, world concepts are seen as having emerged from society, thus Dickens' suggests that all knowledges are social constructions, but also constituted by an object's specific characteristics and behaviours. Thirdly, Dickens' work advocates the development of a unified science in which theory is combined within a relaxed dichotomy. Finally, the use and development of Marx and Engels dialectical methodology, suggesting that: *"Marx and Engels are arguably the only writers to have developed a science of kind that is now needed for an adequate understanding of environmental issues."* (Dickens 1992:xiv)

Huckle & Martin (2001) also discuss the concept of nature within Marx and Engels dialectical framework, with specific regard to the Marxian concept of historical materialism which sees labour as the main process of mediation and interpretation between society and nature. In summary, it is suggested that materialism is the process through which pristine 'first natures' become 'second natures', (second natures being a product of interactions between the social and the natural). Marx suggests that this transformative process is seen in both the manifestation of a second nature, and within the personal and social development of the societies involved (Dickens 1992). However, Huckle & Martin (2001:32) warn that these transformative processes upon society are dependent upon the social and environmental relations in which they arise, and can lead to alienation from both nature and ones society:

> *"Such relations are about ownership and control, and if they are unequal and undemocratic – as they are under slavery, feudalism and capitalism – then human and non-human nature are exploited in the interests of a minority, and unsustainable forms of development are the result."*

Brockington et al (2008) suggest that returning to the works and ideas of Marx is a necessary process in the discussion of the society nature dualism as it generates a position from which to see the destabilising of the basic relationship between society and nature which was caused by the industrial revolution and the rise of capitalism. The transformation of relationships existed not only between society and nature, but also between the members of society where social relations became mediated by production and exchange of objects. The alienation of society from the products that they create, through the newly industrialised processes, and the alienation from them as they too become a product of capital labour markets resulted, in what Marx termed, commodity fetishism: *"Commodity fetishism refers to this context, in which people purchase and consume commodities without knowing their socio-historical context."* (ibid:186) This process of commodity fetishism can be directly applied to society's alienation from, and exploitation of nature – within the process objects, such as agricultural food items, become interpreted and used without any acknowledgement or understanding of the nature in which they had been grown, thus society becomes alienated from nature, and nature becomes to be seen as a place with no purpose and can thus be exploited through other capitalist methods such as development.

When specifically discussing the concept of commodity fetishism in relation to nature, a discussion which Marx evoked late into his career, Marx refers to the phenomena of metabolic rift which suggests that society's relationship to nature within capitalism became an extractive and linear process which was measured only in exchange value (Brockington et al 2008). In the paradigm of metabolic rift nature is seen as a 'black box' through which inputs (eg fertilisers) can be converted into outputs (crops), both the inputs and outputs are given economic values, thus when a 'black box' is generating an excess, a profit, the demands on both the 'black box' and its inputs increases resulting in exploitation of both nature and its resources (ibid).

Marx, however, was able to see the criticisms of such a paradigm, termed the contradictions of capitalism, and suggested that these contradictions would result in the dissolving of capitalism and the emergence of socialism. Brockington et al (2008) acknowledge these criticisms and describe the 'black box' paradigm as ignoring two important aspects of the relationship it seeks to define.

Firstly, it does not take into account the social or ecological costs of the system as they do not necessarily equate to an economic value and even when the social and ecological costs can be given an economic value it is often devalued so as to ensure the system remains profitable. Secondly, the paradigm assumes that the resources needed as inputs, and the

‘black box’ of nature itself is infinite, and under the reign of capitalism if there is a need and an economic incentive to discover resources they will be found.

Most recently, a ‘green box’ approach to the metabolic rift has been devised by ecological Marxists, who suggest that social transformation will be seen towards one that is simultaneously green and socialist in reaction to the ecological crisis created by capitalism (Brockington et al 2008). However, the ‘green box’ creates new areas of consumption and production, for example landscape conserved and protected for such a purpose, which can then be subjected to a new approach from capitalism such as eco-tourism.

2.4.2. Marxism and conservation

In developing an argument, as ecological Marxists do, to suggest that nature can be utilised as a commodity without exploitation, and evoke a transformation in social responsibility (Brockington et al 2008) it would be naive to overlook the concept of sustainable development. As a paradigm rooted in the Northern perspective of the environment and development, which could also be described as predominantly capitalist, sustainable development seeks to marry together environmentalism and development in a way which does not devalue either partner (Irwin 2001).

Within a traditional Marxist conceptualisation of nature is seen within a ‘box’ model, where the box comes to symbolise a process of utilisation – the basis of this utilisation is however diverse. The ‘black box’ model utilities, and often exploits, nature as a basis for production to fulfil human needs, where as a ‘green box’ model utilises nature as a method of economic generation through conservation. It can be suggested that a ‘green box’ model appeals more adequately to a post-industrial (and beyond the agricultural revolution) society, such as the majority of Western societies, where there is a reduced need to rely on nature to support the basic needs of society and increased awareness of the global conservation and sustainable development agendas.

In their encompassing discussion of the complex relationship between capitalism and conservation, aptly entitled ‘Nature Unbound: conservation capitalism and the future of protected areas’, Brockington et al (2008) argue that it is the integration of the social sciences into the discipline of nature conservation that has allowed the concepts of conservation and capitalism to be seen in relationship to one another. They suggest that the call from some senior conservationists, and the academic journals in which they publish, for the integration of the social sciences reflects the realisation that for some time conservationists have been asking the wrong questions:

> *"The debate risks getting bogged down in asking whether parks 'work' or not, rather than asking what are the social and ecological gains and losses that result from the changes that parks bring about, who experiences these gains and losses, and in what ways?"* (ibid:x)

Previously it has been discussed that the concept and practice of conservation spread throughout the world through the process of colonialisation, however Brockington et al (2008) claim that the figures of protected area proclamation in global regions from 1960 onwards reflect the influence of capitalism and the emergence of neoliberal politics. To demonstrate this argument the approximate percentage of the regions of Africa, North America and Europe proclaimed as protected areas are cited in Table 2.1 over page.

	1960	1970	1980	1990	2000
Africa	10	15	18	20	23
North America	2	2	4	18	19
Europe	2	3	6	10	12

Table 2.1: Percentage of Regions proclaimed Protected Areas

(Brockington et al 2008)

The figures quoted in Table 2.1 would appear to question the supposed dispersal of the conservation model based on Yellowstone National Park and spread throughout the world through the process of colonisation. It has already been discussed that the Yellowstone model of conservation is considered a myth, and although it is likely that a model of conservation was taken to the colony countries by their Western colonisers, it could be suggested that the prevalence of protected areas in Africa is not due to the interest of colonisers to protect areas from exploitation and preserve the African wilderness and it's flora and fauna. But rather, proclamation of protected areas was to due to the processes of capitalism proclaiming areas for economic gain and exploitation, and to exert power over the labour forces of society.

Brockington et al (2008:1) explain the relationship between colonisation and conservation through the establishment of protected areas, with reference to the time period in which the designation of protected areas reached their peak, which was between 1985 and 1995 when neoliberal economic politics was expanding and deepening into global dominance.

> *"Neoliberalism is based on the ideas of reducing the power, reach and interference of government (expressed in the catchphrase 'small government') and giving industry greater freedom and less red tape."*

In suggesting that the rise in the number of protected area designations was due to the increasingly dominant approach of neoliberal economic politics, Brockington et al (2008) argue that conservation is becoming increasingly linked with private industry and its associated capitalist processes. This new relationship can be seen, not only through the increasing designation of protected areas in countries that practice neoliberal politics, but through the development of international conventions and policies (such as sustainable development and Agenda 21); the creation of community and market-based conservation initiatives (such as ABCD); and an increasing faith of eco-tourism as a sustainable development driver (as in the 'green box' model). *"For us the pattern is clear: conservation is increasingly compatible with capitalism and, rather like capitalism itself, it unevenly distributes fortune and misfortune."* (ibid:175)

As Brockington et al (2008) suggest, the examination of the new relationships that have developed between capitalism and conservation, and the repercussions they are having on numerous sets of people, must begin with the works of Karl Marx and his discussions on industrialisation and liberal economic politics, and as this piece of research will demonstrate the use of Marx's dialectical reasoning.

2.4.3. Dialectics and its implications

Harvey (1996) provides a detailed description of the process of dialectical reasoning by means of the principles which underlie it, rather than a description of steps to be followed as Marx himself commented that *"the only way to understand his method is by following his practice."* (ibid:48) Building upon Hegel's example of logic and method Marx developed the process of dialectics, most prolifically seen in his work entitled *Capital*, which allowed the conceptualisation of the world as Marx saw it, and thus the formulation of his strategies and practices:

> *"The dialectic is a process and not a thing and it is, furthermore, a process in which the Cartesian separations between mind and matter, between thought and action, between consciousness and materiality, between theory and practice have no purchase."* (Harvey 1996:48)

It can be suggested that a Marxian perspective on the concepts and processes of nature, capital and conservation is not the only reason why such an approach has been adopted

within the context of research concerned with value systems and conservation, but also because of the Marxian process of dialectical thinking which is ideally suited to the area of study. As the above quote states, dialectics is a process of thinking that goes beyond the taken-for-granted Cartesian dualisms, such as society/nature, and as will be discussed within Harvey's (1996) eleven principles of dialectics allows a researcher to look at the processes that exist between concepts such as nature, conservation and capital, and within this specific context, examine the processes that value systems contribute to these concepts.

It is within the first principle of dialectics that Harvey (1996:49) discusses both the ontological and epistemological aspects involved in such an approach that *"...emphasizes the understanding of processes, flows, fluxes, and relations over the analysis of elements, things, structures and organised systems."* The ontological principle that is implied by the approach of dialectical thinking is that the elements and things of discussion, such as nature or society, do not and cannot exist outside of, or prior to, the processes, flows and relations they create and that sustain them, again within this context the relations that will be examined are that of value systems.

The epistemological principle, as Harvey (1996) describes it, reverses the traditional method of thinking that examines that attributes of things (such as scientific descriptions of ecosystems within nature) and the relationships between them, but Marx critiques this confining method of 'comparative statics' suggesting that this view will only allow the comparison of relations of a specific time and place. The method of dialectical thinking, suggests that this method should be reversed and that the self-evident world of things should be considered as a world of relations and flows that manifest as things, thus going against the traditions of positivism and imperialism.

The second, third and fourth principles of dialectics that Harvey (1996) outlines are all concerned with 'things', the second constitutes that all this are created from flows, processes and relations within bounded structured systems. As constructivism thinking has adopted, dialectical thinking forces the asking of the question: by what processes is this 'thing' constituted and how is it sustained? Following on from this, the third principle holds that because things are constituted through multiple processes they are never passive products of external forces, thus are always contradictory – nature is produced through many processes and systems and thus can never be a static thing awaiting the influence of an external force, such as one human's influence. Things are also assumed to be heterogeneous at every level, and can be broken down into levels of other things *ad infinitum*, thus:

> *"If all 'things' are heterogeneous by virtue of the complex processes (or relations) which constitute them, then the only way we can understand the qualitative and quantitative attributes of 'things' is by understanding the processes and relations they internalize."* (Harvey 1996:52)

However, only the processes that are relevant to the thing are internalised, creating a seemingly bounded system such as one's culture, economy or ecosystem. This fourth principle of dialectics is highly influential when designing and analysing dialectical thought as: *"Setting boundaries with respect to space, time, scale, and environment then becomes a major strategic consideration in the development of concepts, abstractions and theories."* (ibid:53) This principle is further complicated by the assumption that both space and time are not absolute or external to processes but are rather contained within them – thus all processes actively construct their own space and time. Taking, as an example, the process of value systems, space is created through the system in which they operate, ranging from an individual, to their family, community, culture and so on. Time is created through the passing down of such values through family generations, or through the influence of the thing that is being valued.

The sixth principle that Harvey (1996) describes is that the parts and wholes of things are mutually constitutive, and that there is a feedback loop operating between them, Harvey uses the example that a person can remove something from nature, such as plants to eat, use it and put it back into nature, in the form of excrement, and within this process both the person and nature have been changed. Directly related to this is the seventh principle which acknowledges that things should be viewed as both subject and object, for example humans are both the subject and object of social processes.

As principle three highlights the contradictory nature between the multiple processes that constitute things, principle eight Harvey (1996) terms as the transformative behaviour, or creativity, that the contradiction within the heterogeneity of things and process creates. In describing this creativity, Harvey uses the example of dualisms, in which opposing forces are constituted by contradiction, for example masculine is only recognisable when opposed to feminine, and as the processes transform the opposition the two entities are restructured within their own physical, biological and social worlds. If the principle of dialectics that informs creativity is thought of in this manner, through dualisms, then it can be suggested that dialectical thinking is the most appropriate method through which to examine the relationship between society and nature as one is seen to constitute the other through processes such as value systems.

Harvey (1996) highlights within principle nine, the critical nature of dialectical thinking, which sees change and instability as characteristics of all systems and seeks an explanation for the assumed stability of things and processes. Thus, it is suggested, that research problems addressed by dialectical thinking can only even pose the question how, when, and into what things change, and why do they appear sometimes not to change? But, in order to establish change within systems or of a thing, dialectical thinking has to work with some permanances, such as theories or concepts, which by definition are established bodies of knowledge which stand to be undermined or supported through the continuing process of enquiry (Harvey 1996). It is within these permanances, and principle ten that Harvey (1996) acknowledges the relationship between the researcher and the subject, which has been critical in Marxist amongst other methodologies that have emerged as a critique to the objectivity of positivism, whereby within the practice of research the researcher and the participant both internalise something from the other. Marx himself suggests that it is impossible to understand the world without simultaneously altering it (ibid).

This tenth principle of dialectical thinking, which discusses the relationship between researcher and participant, not only has implications with regards to research design, method and analysis, but also the fundamental characteristic of Marxist dialectical thinking described as the exploration of possible worlds (Harvey 1996). This eleventh principle of dialectical thinking, again is of high relevance to the research in question and the concepts it involves, as it seeks to identify potentialities for change and the construction of new identities and social orders, and thus:

> *"Dialectical enquiry necessarily incorporates, therefore, the building of ethical, moral, and political choices (values) into its own process and sees the constructed knowledges that result as discourses situated in a play of power directed towards some goal or other."* (Harvey 1996:59, original emphasis)

It is within the methodology of Marx's dialectical thinking that the things of society and nature, which are often discussed in a dualism, can be examined through the system and processes which both undermine and support them, in this particular context the process of values will be analysed. It has been suggested that values, often manifested through particular ways of knowing, are highly influential in the concepts of nature, society, knowledge and thus conservation, as values are the belief systems through which all of the concepts are generated. Marx comments that values are not imposed by universal abstractions of the outside, but through living processes embedded in plays of power, thus they attract research, such as this, which seeks to explore the potentiality in both ourselves and the world in which we live (Harvey 1996).

2.5. A South African perspective

Within the introduction to Strydom and King's (2009) edited book entitled 'Environmental Management in South Africa' it is commented that the writing of this latest second edition of the book was prompted by political change occurring in South Africa since the rise of democracy in 1994. However, it is not only the political change that has resulted in the creation of new environmental and conservation policies, but also the innovative and unusual step that South Africa has taken to include the protection and sustainable use of the environment as a constitutional right. The 1996 (and subsequent amendments) Constitution of the Republic of South Africa, states in Chapter Two: Bill of Rights, section 24 concerning the environment that:

> *"Everyone has the right*
>
> *a. to an environment that is not harmful to their health or well-being; and*
>
> *b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that*
>
> *i. prevent pollution and ecological degradation;*
>
> *ii. promote conservation; and*
>
> *iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."*
>
> (South Africa 1996)

The inclusion of conservation, and environmental and natural resource management into the South African Constitution was the catalyst in the creation of a new legislative programme that saw the Environmental Conservation Act of 1989 replaced with the National Environmental Management Act (NEMA) in 1998. *"The result is an entirely new legal and policy regime with profound consequences for the relationship between government and industry, and the environment."* (Strydom & King 2009:iv, original emphasis)

2.5.1. Conservation policy

As highlighted above the birth of democracy in South Africa in 1994 saw the introduction of the Constitution of South Africa in 1996, it also generated the development of the

Reconstruction and Development Programme which aimed to ensure that all processes of the new government were people-driven; this included the conservation of South Africa's international biodiversity (South African National Biodiversity Institute (SANBI) 2006). Another focus of the Reconstruction and Development Programme was to ensure that all development was sustainable, involving all levels of society in the decision process, within the context of this research, in the decision making surrounding the use and beneficiation of natural resources.

The political change in South Africa has been undertaking since 1994, has also resulting in the country being reintroduced as an active member to the global community, and most especially into a global community concerned with sustainable development, environmental management and climate change. This left South Africa playing catch-up, to ensure that its national environmental policy and legislation met the needs of its own people under the new national constitution, and the requirements of a modern South Africa on a global stage. This brief summary of environmental policy in South Africa, and the international conventions to which it is a member state provides a contextual backdrop for the previous discussions concerning the concepts of nature and conservation, and the ways in which they can be linked to Marxist conceptualisations of capitalist processes, as well as to provide a general understanding of some of the policies and legislation that govern the case-study example of Driftsands Nature Reserve to be further discussed.

Although the practice of conservation has been most widely acknowledged as deriving from the Western, and most predominantly American, paradigms of conservation based on the Yellowstone model that were spread throughout the world by the processes of colonialism, South Africa has a much richer history of conservation practices. In the pre-colonial period the indigenous communities of South Africa practiced biodiversity conservation as a means of sustaining their livelihoods, and as hunter-gatherers, maintaining an adequate food resource. It has also been identified that indigenous reasons for conservation went beyond the maintaining of resources and was highly influence by cultural and spiritual beliefs such as: an active encouragement for conservation from traditional healers; a cultural affiliation with certain species and thus a suspicion about their killing; community prohibition from eating or hunting totem animals; and the 'gifting' of areas of cultural value to leaders which were subsequently demarked as areas for specific usage, such as burial and ritual sites (Department of Environmental Affairs (sine anno)b; Department of Environmental Affairs and Tourism 1997; Müller 2009; Strydom & King 2009).

Post-colonialsation, and in response to the reduction in timber resources upon which the Dutch East India company was reliant, the Dutch settlers began places statutes upon lands

and introduced restrictions on tree cutting and hunting (Department of Environmental Affairs and Tourism 1997; Müller 2009). However, following Jan van Reibeeck's regulation of hunting in the Cape in the late 1600s (ibid) the first official protected areas were not proclaimed until 1888 under the Cape Forests Act, these were the forest reserves of Knysna and Tsitsikamma (Department of Environmental Affairs and Tourism 1997). Müller (2009) suggest that with the official protection of forest reserves in 1888, and the subsequent designation of game reserves such as the Hluhluwe in 1985 and the Giant's Castle Drakensberg in 1903, and the 1926 first National Parks Act at Kruger, that South African conservation could now be seen to be following conservation development that had been seen in throughout the colonised world, rather than following the indigenous methods of conservation.

However, after the Union of 1910 and despite the continued designation of protected areas and development of legislation to ensure the conservation of such areas, the approach to conservation was flawed in that it did not take in account now respect the indigenous people (Department of Environmental Affairs and Tourism (DEAT) 1997; Department of Environmental Affairs (DEA) sine anno(b))

> *"Moreover, the establishment of protected areas was often accompanied by forced removals and resource dispossession among black people. The dominant approach prevailing during this period was that protected areas ought to be "pristine", fenced-off areas. Such approaches have resulted in the widely held perception that protected areas are playgrounds for a privileged elite, and that biodiversity conservation is exclusive and irrelevant to the majority of South African people."* (Department of Environmental Affairs and Tourism (DEAT) 1997)

However, the post-Apartheid era of democracy in South Africa since 1994, has seen positive move towards re-balancing the disadvantage caused within previous conservation practices, as highlighted above, through land claims and the introduction of community-based conservation initiatives (Department of Environmental Affairs and Tourism (DEAT) 1997). And the re-introduction of the South African government into the global political community has also seen the adoption of global policies and practices, which it is anticipated will go some way in meeting the constitutional rights of the South African society.

The international Convention on Biological Diversity which entered into force in 1993 is seen as the landmark treaty which marries together the environmental objectives of biodiversity conservation with the need for sustainable development in less-developed countries (Department of Environmental Affairs and Tourism (DEAT) 1997). The convention holds as

its three objectives: the conservation of biodiversity; the sustainable use of biological resources and; the fair and equitable sharing of benefits arising from the use of such resources (ibid). In 1997 the Convention on Biological Diversity (CBD) was ratified in South Africa, resulting in policy and plans for biodiversity being mainstreamed into the ever increasingly co-operative government (South African National Biodiversity Institute (SANBI) 2006). A renewed focus on social and economic transformation, an exceptional human capacity and the presence of immense biodiversity, especially that of the Cape Floristic Region (CFR) the existence of which contributes to South Africa being the third most biologically diverse country in the world (Department of Environmental Affairs and Tourism (DEAT) 1997), meant that South Africa was eligible for funds from the Global Environmental Facility (GEF) to ensure the continuation of such a fragile and threatened ecosystem.

The CFR spans both the Western and Eastern Cape provinces, which together are populated by 5.2 million people, in both urban and rural communities. This population is as highly diverse as the biology of the CFR with people being dispersed spatially and ethnically, linguistically and culturally, through socio-economic conditions, ability of skills and resource access, with high levels of poverty in both rural and urban areas (South African National Biodiversity Institute (SANBI) 2006). The South African government can be seen to be addressing biodiversity conservation within the umbrella agenda of sustainable development – seeking to alleviate poverty, promoting sustainable livelihoods and securing participation from all levels of society (this agenda remains consistent with the objectives set at the 2002 World Summit on Sustainable Development held in Johannesburg).

It is from the World Summit on Sustainable Development that current efforts and debates on the management and sustainable use of the environment in South Africa are drawn; suggest Strydom & King (2009). The Johannesburg summit lead to the development of action plans more ambitious that those of Agenda 21 put forward at the Rio de Janeiro (Earth) Summit of 1992, which had received widespread global praise:

> *"The Heads of State and other representatives agreed on a significant change in perspective for future action, namely to base implementation efforts on a fuller integration of the three components of sustainable development – economic development, social development and environmental protection – with the overall goal of today's greatest socio-economic challenge, namely the eradication of poverty."* (ibid:iiv)

2.5.2. Case study of Driftsands Nature Reserve

It is within the objectives of the international conventions and summits, as briefly discussed above, that South Africa's provincial public institutions that are responsible for the conservation of the provinces biodiversity and natural resources operate – such as CapeNature (previously the Western Cape Nature Conservation Board) who are responsible in the Western Cape (CapeNature 2007b). As such, CapeNature reflects such objectives within its own mission statement and vision:

> *"To locate biodiversity conservation in the mainstream of local economic development through the establishment of a conservation economy in the Western Cape.* [and] *The establishment of a successful 'conservation economy' – embraced by all citizens of the Western Cape and to transform biodiversity conservation into a key component of local economic development in the province."* (CapeNature 2007a)

The case-study site for this research is Driftsands Nature Reserve it is the only urban reserve that CapeNature manages. The reserve, an area of approximately 600ha is located in the South-East sector of the Cape metropolitan area, and less than twenty kilometres from Cape Town city centre in an area which is one of the most densely populated and socio-economically deprived areas of the city (Chittenden Nicks de Villiers 1993; Open Africa 2011).

> *"Driftsands, proclaimed as a Provincial Nature Reserve in 1983 represents an endangered habitat, Cape Flats Dune Strandveld, significant at national and international levels and is given the highest priority rating in the City of Cape Town's Biodiversity Network and Open Space System."* (Sustainability Matters 2004:1 original emphasis)

From a biodiversity perspective Driftsands Nature Reserve lies within the CFR, an international biodiversity asset and the only floral kingdom to exist entirely in one country. Within the Botanical Society of South Africa inventory of critical habitats Driftsands has been listed as one of the top conservation sires in the Cape metro area as it contains pockets of the rare and endangered lowland fynbos vegetation of which only eleven percent of the original habitat remains and with only three percent being formally protected (Open Africa 2011).

Driftsands Nature Reserve is also of regional importance for the functioning of the Kuils river floodplain (Chittenden and Associates sine anno.) with forty percent of the reserve being a 1:50 year floodplain for the river system which can be considered vital for the surrounding

communities as an area for storm water management (Chittenden Nicks de Villiers 1993). The benefits of maintaining the Kuils river system, including that which runs through the Driftsands Nature Reserve, was identified within urban engineering assessments such as those commissioned by the spatial and environmental departments of the City of Cape Town council (then the Cape Metropolitan Council) during the 1990s – Chittenden Nicks de Villiers (1999a; Chittenden Nicks de Villiers 1999b) summarise that benefits could be seen through botanical conservation and recreational opportunities.

The history of Driftsands Nature Reserve has a dual narrative of both nature conservation and residential settlement; both issues contributed to the designation of the reserve and continue to be the issues which concern CapeNature's management of the area today. In the early 1980s, when the Khayelitsha area of the Cape Flats was designated by the government as an African residential area, it resulted in the loss of the diverse wetlands of the Kuils River which had previously been considered as prime areas for botanical conservation (ibid). It was from this habitat destruction, caused by the re-settlement programmes of the apartheid-era, which motivated the area now known as Driftsands Nature Reserve as an alternative area for conservation, and was subsequently proclaimed as a provincial reserve in 1983.

It was also the relocation of African [sic] people to the Khayelitsha area and the wider Cape Flats that resulted in the informal settlements within the Driftsands Nature Reserve. Due to political problems and its associated violence in the Crossroads township of Cape Town, the old mayor of the area Johnson Ngxobongwana was expelled from the area and approximately one and a half thousand of his followers set up the Sikhumbule informal settlement in the late 1980s (Chittenden Nicks de Villiers 1999a; Chittenden Nicks de Villiers 1999b; Chittenden and Associates sine anno.). Funding was secured from the Provincial Administration in 1990 which resulted in the formalising of the Sikhumbule settlement in 1993, however due to more political violence Ngxobongwana, again accompanied by fellow followers, was expelled from Sikhumbule circa 1995 and established the Green Park informal settlement, which still remains informal (Chittenden Nicks de Villiers 1999b). There still remains to be much current debate concerning how the political divides of the past still affect both the formal community of Sikhumbule, and the informal communities of Los Angeles and Green Park, all of which exist within the Driftsands Nature Reserve boundary and affects the decision-making process regarding the management and conservation of the area.

However, the communities that are considered neighbours to the Driftsands Nature Reserve go beyond those living within its boundaries, Chittenden and Associates (sine anno)

acknowledge that there are three levels of community to be considered: the communities within the reserve boundary; those in the local vicinity who have a possibility of making use of the area and; organisations such as civic or environmental groups. As has been briefly discussed with reference to some census data, Driftsands is surrounded by low-income residential areas, who have been described as inward looking due to their inability to look beyond their need to provide basic shelter (Sustainability Matters 2005).

As such, it could be argued that Driftsands Nature Reserve has a role to play in not only the conservation of the strandveld vegetation type, but also, with regards to the community neighbours, to support and benefit these communities:

> *"Driftsands has a strategic role to play in the sustainable development of the City. The site represents endangered habitat, significant at national and international levels, and is given the highest priority rating in the City of Cape Town's Biodiversity Network and Open Space System. The site has significant potential to be a focal point for urban renewal and integrated urban development through addressing existing, and future, social and economic needs of surrounding communities."* (Sustainability Matters 2005:2)

In the summary of the multiple roles that the Driftsands Nature Reserve is expected to play in order to maintain its status and keep at bay the demand for the development of human settlement demonstrates why the location has been chosen as the case-study area. Previous studies have been undertaken in the early 1990s within the broader community of Khayelitsha, Ngeleza sought to discuss the potential uses of Driftsands Nature Reserve with Khayelitsha residents and teachers (Chittenden Nicks de Villiers 1993; Chittenden and Associates sine anno); with Nguta conducting a similar study with the inclusion of traditional herbalists of the Khayelitsha community (Chittenden and Associates sine anno.).

Ngeleza writing on their study of the potential uses of Driftsands among Khayelitsha's teachers and residents made the following points in relation to the history of the area and its communities which still remain issues within the reserves management: that the main developers of community conservation initiatives and environmental education programmes are predominantly white and thus there is little appeal in such programmes for black people and; that previous land acts had ensured conservation for white people, resulting in a legacy of black people being excluded from the interaction and appreciation of natural resources (Chittenden and Associates sine anno). However, caution must be exercised in applying these ideas to a contemporary study as Ngeleza undertook their research in 1990, before the rise of democracy in South Africa and now over twenty years ago. However, it may be the case that Ngeleza's other findings do hold relevance in a contemporary society, with

residents favouring Driftsands to be used for housing and community facilities; teachers prioritising a need for conservation and education, and; both residents and teachers calling for the community to be more involved with any decision-making process with regards to Driftsands reserve (ibid).

Nguta, in 1991, also conducting a study amongst Khayelitsha residents about the potential uses of the reserve, and analysed according to group such as residents, teachers and traditional herbalists, found that there was a general consensus in the need for open space for recreation and conservation, but a priority in having a mixed-use space for the harvesting of food crops and medicinal plants, and a site for initiation and cultural activities (Chittenden Nicks de Villiers 1993). However, when Driftsands was mentioned directly, 66 per cent of respondents did not agree that it should be retained as an open space.

This study will discuss Driftsands Nature Reserve within the context of value, and will go beyond the scope of Ngeleza and Nguta's studies by comparing the values held by the communities that live within the nature reserve boundaries; other reserve stakeholders such as action group members and traditional healers; and the values held by members of CapeNature's staff in both their scientific services and, people and parks departments.

2.6. Conclusion

The dominant paradigm to conservation management has, and will continue to be informed by the way in which the dualism between society and nature is constituted and discussed. The contemporary approach, it has been suggested, it that of a constructivist (bordering of co-construction) argument, which sees both the concepts of society and nature as in a constitutive relationship with one defining the other. Thus the two concepts can no longer be considered separate issues; the influence of this academic discussion can be seen within the practice and policy development concerning biodiversity conservation, and most specifically within the contemporary approach termed community-based conservation.

Brown et al (2004:162) critiques the scientific based methods of conservation assessment and management for ignoring *"...a growing body of knowledge that indicates that humans interact most strongly with the environments and policies that govern them via their own perceptions..."* and thus calls for a pluralistic approach to conservation to be developed and employed – this would include both scientific assessment and local values, and thus the designation of protected areas must be values-based. Brown et al's (2004:162) critique however is not based solely on the ideas that communities are more responsive to

conservation when they are increased levels of participation and benefit sharing, but instead argues that scientific, and most specifically, biological data for use within management planning could be increased with the introduction of multiple values into the process.

> *"The inclusion of some element of local stakeholder review or knowledge in conservation planning is increasingly considered necessary to obtain fully legitimated policy and has lead to the widening of the knowledge base upon which the goals and practices of conservation are based...For nature conservation to embrace cultural and scientific values within a variety of worldviews pluralist approaches to conservation strategies are necessary."*

Brockington et al (2008:3) also suggest that the values of a neoliberal capitalist economy be considered within conservation management plans, previously the values of conservation have been interpreted as compromising the values of neoliberal capitalism however *"It is more appropriate to recognize that capitalist policies and values, pervade conservation practice; indeed in some parts of the world they infest it."*

This piece of research will collect and analysis the values held by community stakeholders and employees of the corporate management body (CapeNature) with regards to Driftsands Nature Reserve in order to generate a pluralistic approach to biodiversity conservation as described by Brown et al (2004). However, the processes of capitalism cannot be removed from or ignored within such research, as Marx has discussed capitalism driven society's relationship with nature through its processes of exploitation and alienation, and as such one has been seen to construct the other and vice versa. Thus the methodological approach of Marxism, dialectical thinking, will be used to examine the process, in this instance value, by which the thing nature, and most specifically the conservation of nature, becomes constituted and sustained within society.

Chapter Three -

Unearthing values within case study communities

3.1. Introduction

Within the debates of 'hard' physical science in opposition to social science there is a quantitative/qualitative divide, the notion of 'hard' quantitative science revealing the one truth about an issue or set of circumstance was challenged by the 'qualitative revolution' during the 1960s and 1970s and resulted in the birth of new qualitative research methodologies. A qualitative research methodology is suggested by Marshall & Rossman (2011) is one that elicits multiple knowledges and subjective understanding and interpretations – in this research context, this can also be described as eliciting a value. And, in direct relations to the research questions and aims, Marshall & Rossman (2011) argue that the importance of qualitative research lies in its ability to explore under which circumstances and for what reasons local knowledge and corporate/governmental policy are in opposition as qualitative research is able to acknowledge the real, as opposed to organisational, goals and ambitions (and also values).

As afore mentioned this research draws upon Marx's process of dialectical thinking in order to challenge the dichotomy of society/nature and examine the role that value has in the relationships between the concepts of conservation, nature and capital. However, as Harvey (1996) discusses in a detailed description of Marx's process of dialectical thinking, it is indeed a process and not a methodology. And thus it is suggested that within this study analysis that focused on Marx's process and not a focused research methodology may result in analysis that was unreliable and invalid. And so the research analysis uses Marx's dialectical thinking as a suggested by Harvey (1996) as a way of thinking about the relationships between concepts, in this instance the relationships between nature, conservation and capital as created, joined and recreated by community and corporate values. As such the methodology of grounded theory will be used to guide the research process, which will include Marx's dialectics as a process of thinking.

3.2 Case study area

Punch (2005) suggests that case-study research is that in which one case is studied in detail in order to develop a deep and full understanding of the research area, which could not be achieved if the research area was to be studied alongside others for the purpose of comparison. The deeper understanding that Punch (2005) discusses is generated through the recognition within the research of the complexity and context of the case-study area, thus case-study research is described as more of a strategy than a research method. This strategy is thus used within the research to develop an in-depth, complex and contextual understanding of the corporate and community values associated with Driftsands Nature Reserve.

3.2.1 Case study research

As a bounded area Driftsands Nature Reserve is ideally suited to be researched as a case-study, Punch (2005) identifies the characteristics of a case-study which must be both identifiable and describable by the researcher. Thus a case-study consists of: an identifiable bounded system and a unique or interesting case or example of something, Punch (2005) also acknowledges that a case-study must attempt to preserve the unity and integrity of the case, within this research it is hoped that the combination of research methods and ethical considerations put in place will achieve this. It is also noted within the discussion that not everything can be covered within the case-study, and although multiple means of data collection may be used, case-study research must focus on particular areas or populations of interest within the study.

As with any research methodology, approach or strategy case-study research has been critiqued, most commonly for its perceived generalising of the area of study. Punch (2005) however counters this criticism, by suggesting that, for many researchers, the intention is not to generalise their case-study to other areas, this is for two main reasons. The first reason that Punch (2005) highlights is that the purpose of undertaking case-study research is to develop an understanding of a case that is considered to be of high enough importance, for example, because of previous misunderstanding or renewed interest, to be researched in its own right as a single entity. Secondly, the case-study in question may be of significant difference to other cases that have been previously studied, thus the case-study can allow for the understanding of difference to be developed. The use of a case-study also provides an identifiable boundary which can be used within the sampling procedure (Punch, 2005).

3.2.2 Driftsands Nature Reserve

It is suggested that a case-study strategy has been employed with regards to the study of Driftsands Nature Reserve as, following Punch's (2005) above description, the reserve can be considered as a bounded system, not in the literal terms of ecology and ecosystems but rather as an area that has a physical boundary which can be identified and described. The context of Driftsands Nature Reserve is also unique in its context as the only urban nature reserve managed by CapeNature and the only provincial reserve in South Africa that is situated within a city. It can also be considered significantly interesting as it has communities living within the reserves identifiable boundaries, and the neighbouring communities surrounding the reserve experience high levels of unemployment and socio-economic deprivation.

3.3 Population of interest

As the research questions and previously discussed literature review states, this research seeks to develop an understanding of the values associated with Driftsands Nature Reserve, held by both the communities living within the reserve and other associated stakeholders, and those of the CapeNature staff directly involved with the reserves decision-making. Within the study the population of interest is defined within two categories, these will be referred to as 'community' and 'corporate'. The distinction is made between these two categories quite simply, as those participants employed by CapeNature, and those who are not.

3.3.1 Sampling

Sarantakos (2005) suggests that grounded theory, as a qualitative research model, is unique from other methods of research practice due to the sampling method it employs which is guided by an emphasis on the following three points: the whole research process (including and moving beyond the sampling procedure) is guided by the search for knowledge rather than a conventional (or statistical) practice; thus the nature of sampling and the selecting of respondent is drawn from the information gathered and the subsequent gaps in that information and; that analysis is conducted throughout the whole research process, both informing the previous point of information gathering and to ensure generated theory is truly grounded in the data.

This method of sampling procedure as employed within grounded theory, for the purpose of definition, can be termed as either purposive or theoretical sampling. As a method of qualitative research sampling, theoretical or purposive sampling differs from quantitative sampling procedures as respondents are selected in a deliberate way to fill an information gap in the data. Punch (2005) chooses to describe theoretical sampling as an example of purposive sampling, rather than as two separate approaches, describing that the principle of theoretical sampling is that *"...the idea that subsequent data collection should be guided by theoretical developments that emerge in the analysis."* (ibid:158) Thus theoretical sampling is a method used during data analysis to allow for respondents, and their resulting data, to be selected in order to develop an emerging theory:

The most appropriate definition of theoretical sampling, as employed within grounded theory research, and thus within this methodology is provided by Strauss & Corbin (1998) who comment that the importance of theoretical sampling is seen in exploring areas new to the researchers as they have the freedom to select different pathways of research and areas of interest, whilst maximising the opportunities to compare developing categories and participant reflections.

As is detailed below in sections 3.3.2 and 3.3.3, in order to inform the researchers purposive sampling procedure a level of snowball sampling was also employed in order to gain access to particular community members, to develop a level of trust between the researcher and participants and also in an attempt to ensure that the chosen respondents were those who had a genuine knowledge of and interest about Driftsands Nature Reserve.

Snowball sampling was a suitable method to be used to fill the knowledge gaps in the research analysis, however the method is critiqued as the respondents it generates *"...are not representative of a population and the findings from interviews cannot be generalised to a population."* (Henning et al 2005:71). It is argued that placing snowball sampling alongside purposive and theoretical sampling, within both grounded theory research and a case-study context prevents the lack of generalisation of the procedure to be a critique of the research. Grounded theory itself seeks to ground a developing theory in the data collected and a case-study example, as discussed previously, does not necessarily have to be extrapolated to a wider, more generalised population.

Within grounded theory research, not only is the sampling procedure defined by the researcher, but also the quantity of data gathered. In comparison to the statistically focused quantitative procedures of sampling and data collection, the grounded theory approach of qualitative research does not promote a definite sample size, rather, as Sarantakos (2005) comments, adopts the principle of as large as necessary, but as small as possible. It is

through the characteristic continuing cycle of data collection and analysis that grounded theory research reaches theoretical saturation, the phrase denotes the period in time when data collection can be stopped (Punch 2005). It is by following the principles of theoretical sampling and theoretical saturation, as characteristics of a grounded theory approach, that the following samples were generated, as afore mentioned for the purpose of simplicity and comparison within the study the two populations of interest will be referred to as 'the community' and 'corporate'.

3.3.2 The community

The community stakeholders were sampled by a process of both theoretical and snowball sampling from those people who were considered to have an intimate knowledge of and interest in Driftsands Nature Reserve. The population of interest was reduced to those with a known interest in the reserve as discussed with the community conservation managers (employed by CapeNature) at Driftsands Nature Reserve, it was believed that those already aware of the reserve would be able to articulate more adequately their values with regards to the reserve. Thus respondents were sought from those communities of Sikhumbule and Green Park, situated on the reserve; a traditional healer and; the Protected Area advisory committee for Driftsands.

Respondents were recruited in a snowball procedure through the contacts already existing within the community management structures of Driftsands Nature Reserve, and within the communities respondents were gathered by a respected community resident of Sikhumbule. These sampling procedures were put in place due to the issues concerning access to the community structures, and associated issues such as differences in language and culture, and respect for the existing working relationship CapeNature already has with the communities, which may have prevented the researcher securing access without the assistance of the gatekeeper (CapeNature).

The gaining, and sustaining, of access through the various gatekeepers is defined by Coffey (2006a:1) as *"The process of gaining and maintaining entry to a setting or social group, or of establishing working relations with individuals, in order that social research can be undertaken."* Within this research both CapeNature and the community structures acted as the gatekeepers through which access had to be sought and maintained, the process went beyond the mere gaining of consent to conduct the research and relied on the gaining of trust in both the researcher and the research, and the active engagement with all participants in the process.

In total four members of the Green Park community; four members of the Sikhumbule community; four Protected Area Advisory Committee members and; one traditional healer took part in the research. It was anticipated that respondents could also be sought from other communities, particularly the Los Angeles community, and other community stakeholder groups such as farmers, nursery workers and teachers. However, after several months and numerous attempts to arrange meetings there was no success, it is suggested that this can reflect limitations in the research methodology, or could be interpreted in the analysis as a reflection of values about the reserve.

3.3.3 Corporate

The second population of interest was the employees of CapeNature, the corporate management providers at Driftsands Nature Reserve. Theoretical and purposive sampling procedures were employed, as well as snowball sampling which began with the gatekeeper, although this term is used hesitantly as the employee is not strictly a gatekeeper for the reserve nor the management body, but rather was the first point of contact made by the researcher at the very beginning of the research process. Due to the closed and often restricted nature of employee profiles within a corporation, it was through the gatekeeper that contact was initiated with other employees of CapeNature, who were currently, or had previously, had operational knowledge of Driftsands Nature Reserve. As with the community population of interest it was decided that the population be reduced to those employees who had specific working knowledge of the reserve as it was anticipated that they would be able to articulate the values that they had with regards to Driftsands Nature Reserve.

It total six CapeNature staff participated in the research, all of which had been involved with Driftsands Nature Reserve in some capacity and were employed within both the community conservation and scientific services divisions of CapeNature.

3.4 Research design

There are multiple methods through which qualitative research can be conducted; the adopted method is dependent upon the underlying theoretical discussions and perspectives, the research questions and aims, and the constraints of the case study and potential research participants. However, Kitchin & Tate (2000) acknowledge that all forms of qualitative methodologies share common attributes described as: a concern with the use of

language; the interpretation of experience and meaning and; a resultant theory building to identify relationships between phenomena.

Within this research a grounded theory methodology will be utilised in order to evoke a concern with language in relation to values held by community members and corporate employees, the use of grounded theory will also allow the generation of a theory which holds at its core the 'raw' data gathered. As will be identified and discussed the method of semi-structured interviewing (individual and group) will be supplemented with participant observation, which will be subsequently coded resulting in a grounded theory.

3.4.1 Semi-structured interviews and focus groups

Qualitative research has been undertaken by the Commonwealth Scientific and Industrial Research Organisation within the Murray-Darling basin in Southern Australia (Cast et al 2008; Raymond et al 2009). Drawing upon natural capital and ecosystem service frameworks, qualitative research into conservation values aims to discover and understand values relating to a temporal and spatial location in such a way that they can be integrated into management policy (Raymond et al 2009).

Cast et al 's (2008) research on the values of 56 individuals involved, in many different capacities, with the South Australia Murray-Darling basin demonstrates how a qualitative study focused on interviews as the main source of data collection is best suited to this type of subjective topic. This study will employ a strategy of both semi-structured interviews and focus groups (also referred to as group interviews) in order to communicate in the most appropriate manner with both the employees of CapeNature and those community representatives as detailed previously.

3.4.1.1 Interview design

Two qualitative data collection techniques will be employed to address the best ways of communication and discussion of values of both the corporate employees of CapeNature and the community representative groups; these will be referred to as individual semi-structured interviews (interviews) and semi-structured group interviews (focus groups). Both techniques have employed the same ethical protocol and a similar structure of questions to guide the interviews/focus groups (Annexure A). This research differentiates between and employs both the interview and focus group as it is considered that focus groups create a more suitable environment for data generation amongst community groups who already have a rapport with each other, and who do not use English as their common language, than

an individual interview technique. In comparison the individual interview technique has been used when speaking with the CapeNature staff due to variety of staff spoken with, and because it was anticipated that because of the personal nature of the discussion of values discussion would be more open and valid if conducted on an individual basis.

The method of interviewing has been chosen as the primary method of data collection due to the manner in which it can be used to uncover and discover personal values, as best summarised as:

> *"The method of maintaining and generating conversations with people on a specific topic or range of topics and the interpretations which social researchers make of resultant data, constitute the fundamentals of interviews and interviewing. Interviews yield rich insights into people's biographies, experiences, opinions, values, aspirations, attitudes and feelings."* (May 2010:12)

The qualitative technique of interviewing is one which is able to take numerous forms depending upon the research it is being conducted. The questions that are included within an interview can be described as either closed or open questions, closed questions are those which have a limited (and predictable) answer, for example 'do you like ice-cream?' to which the answer would most often be 'yes' or 'no'. Closed questions are most commonly used within questionnaires which are highly structured, however open questions, which have multiple and unpredictable answers, such as 'what is it about ice-cream you like so much?' can also be used within a structured interview, Kitchin & Tate (2000) refer to these interview types as closed quantitative and structured open-ended.

May (2010) within their discussion of structured interviews suggests the benefit of such a technique is the level of presumed validity that it offers. Because each person is asked the same questions, with the same wording, and in the same order the difference in answers is seen as 'real' differences and not due to the techniques being used, validity can also be ensured by asking the same questions to the same respondents with different wording (May 2010). Kitchin & Tate (2000) also describe structured open-ended interviewing as one which is highly controlled, structured and standardised due to the manner in which the questions are asked. They suggest that this definite structure, defined before the research begins, reduces the bias and affect of the researcher and also a basis for analysis, however this technique is often criticised for the lack of flexibility it allows to researchers to tailor questions to specific individuals and circumstances, and that it may constrain normal talking relations and rapport (ibid).

At the opposite end to structured interviews, along the continuum of interview techniques, lies unstructured interviewing, referred to as informal conversation by Kitchen & Tate (2000).

As suggested by the title of the term, informal conservation as an interview technique, has no structure or predetermined questions or topics, and thus relies upon questions emerging from the immediate content of conversation (ibid). May (2010) comment that this technique is championed by many contemporary social researchers as it develops qualitative depth by allowing participants to speak within their own frames of reference; it allows for the challenge of the researcher's preconceptions and; may possibly allow for divergence within discussions which may be highly beneficial to the research. However the wide variety of responses that this technique can evoke can be interpreted as a distinct disadvantage of the approach as it could result in the participant discussing topics which are of no interest to the researcher and that the responses are increasingly difficult to compare and therefore analyse due to the variety (Kitchin & Tate 2000; May 2010).

Somewhere in the middle of this continuum of interview techniques lies semi-structured interviewing. Kitchin & Tate (2000) describe this technique as a middle ground between the structured interview and the informal conversation approach, and thus topics and questions are outlined prior to the research being conducted but the researcher is free to choose the wording and sequence of questions and therefore is given more freedom to explore different avenues of enquiry. This technique also provides the respondents greater opportunity to answer questions in their own way, whilst still maintaining a degree of comparability between the interviews for the researcher (May 2010).

Semi-structured interviews have been chosen as the single methodology despite academic debate about the degree to which they can reveal objective 'facts' or truths about the area of interest. However, a narrative approach to research such as interviews is laden with subjectivity and bias, thus there is no desire to reveal objective fact. As the interviews will be used to collect information about personal values held in a specific location, which themselves are subjective in their nature, semi-structured interviews are an ideal methodology (Cast et al 2008).

Focus group interviews are also a technique of interviewing although they are not commonly defined alongside the above discussed structured, semi-structured and unstructured techniques because as a technique they do not sit on the continuum of interview technique commonly defined by researcher control. Typically focus group interviews consist of between three and twelve people who share certain characteristics, in which the researcher asks focused questions to encourage discussion among the participants (Kitchin & Tate 2000; Marshall & Rossman 2011 and; Sarantakos 2005). The benefit of focus group interview relies upon the social dynamics of the group which, it is anticipated, will bring out

feelings and experiences of participants which would not have been uncovered in individual interviews due to the levels of participant interaction (Kitchin & Tate 2000; Sarantakos 2005).

The criticism of focus group interviews is also concerned with the power dynamics and the challenge of negotiating these dynamics within a research situation, where discussions can drift onto topics of which the research is not concerned; groups are often difficult to assemble; shyness, embarrassment and personal conflicts can cause issues and; when multiple groups are conducted analysis and comparison can become challenging due to the variety of discussions (Kitchin & Tate 2000). Sarantakos (2005) also highlights that focus group interviews can be challenging as there may be domination and non-participation from group members, and that findings may not be considered representative.

Interviews will be semi-structured and consist of open-ended questions that will guide the participants through their values in relation to natural, economic and social assets. 'Ice-breaker' questions will be used to give a personal context to the interviews (although these responses will not be used in the coding of the main interview body so as not to reveal the participants identity) and to create a rapport between the interviewer and participant (see Annexure A for an outline of questions). All interviews will be conducted within a time frame of two months, in an effort to reduce the levels of participant contamination, and the participants will be given minimal information about the expected outcomes of the research so as not to build false hope, or to allow for the 'second guessing' of what responses are wanted by the researcher. (For further details on an interview methodology concerned with the values of the environment see Cast et al 2008; Raymond et al 2009).

These values will be understood through linguistic, rather than statistical, analysis of data - this allows the research to be placed within a socio-spatial, historical, cultural context of the setting and the interactions with the researcher (Burgess 2003). The semi-structured interview of open-ended questions conducted by the researcher face-to-face will allow respondents to offer their own perceptions that the researcher may not have personally considered; whilst still enabling the method to retain continuity of questions to ensure reliability and validity of results (Rossman & Rallis 2003; Silverman 2006).

Each and every interview began with respondents being briefed on the ethical protocols which have been put in place by the researcher and has been accepted by the institutions ethical committee (see Annexure A). Within the corporate individual interviews this briefing was completed in English, the native language of the researcher, and within the majority of group interviews briefing was given by a member of CapeNature staff acting as a translator in the language of isiXhosa. When the ethical briefings were complete, and the participants

fully understood their roles and rights within the research the letters of informed consent were signed.

For two out of three of the focus groups conducted a translator was used because the first language of participants was isiXhosa. A member of CapeNature staff from Driftsands Nature Reserve acted as a translator, it must be acknowledged that this is not the most reliable method of data collection however due to the languages of the researcher and the participants, and the negotiated access to the communities there was no other options available to the researcher with regards to translation. Concerns about the translation include mistranslation; misunderstanding involved in different cultural and language meanings and; the translator omitting or adding details, which may be because of their position as a member of CapeNature staff.

Both individual and group interviews will follow a similar set of semi-structured questions, it is suggested that it would not be suitable to pose the same questions to both community members and corporate respondents due to the different levels of interaction that the two respondent groups have with the reserve. Continuity was achieved throughout the two sets of data gathering, the community group interviews and corporate interviews, as the same questions were posed to each group in the same order, with the researcher asking probing questions in order to clarify question responses and to illicit as much knowledge as possible.

In-depth interviews have been conducted with six employees of CapeNature, who have an influence on the decision-making process with specific regard to Driftsands Nature Reserve. The interviews were intended to be in-depth although the length of interview was highly dependent upon how much the respondent which to say, the interviews took between half an hour and an hour.

Within the group interviews, which began with briefings being given in isiXhosa, the interviews continued to be translated after each question and answer, with all details being recorded on a portable voice recorder. All but one of the community interviews were undertaken within a group setting, the size and demographics of the groups were dependent on the theoretical sampling method adopted, groups ranged in size from one to four, and the length of interviews being between forty-five minutes and an hour and a half.

Interviews and focus groups were recorded using and electronic voice recorder to assist in analysis and increase validity of the analysis as it creates an accurate recording of the conversation and allows the researcher to concentrate on the participant's responses and actions rather than taking notes (Kitchin & Tate 2000). May (2010) discusses the advantages and disadvantages of recording in three categories: interaction; transcription and; interpretation. Interaction, is concerned with ethical considerations of the researcher

and issues the participant may have with being recorded, and as May comments even if participants agree to being recorded their conversation may be inhibited due to the presence of the recorder, although *"...once the conversation is started, many people can forget the tape is on..."* (ibid:138) When interviews have been completed, the next stage for the researcher is the transcription of the recordings, the main challenge with regards to the transcription is the length of time it takes to complete the task, with an hours' worth of recording often taking eight or nine hours to transcribe. Interviews within this research have been transcribed to include interpretation; the recording has allowed the researcher to concentrate on the non-verbal gestures of the participant which can then be included within the data analysis (May 2010).

3.4.2 Participant observation

Within a research situation Rossman & Rallis (2003) describe a researcher as a learner, in which learning becomes a constructive, not just an inquisitive process. Within a given socio-spatial, cultural and historical context learners actively engage with and construct knowledges about participants, topics, processes and themselves as researchers. Because of this Rossman & Rallis stress that observation should form part of any qualitative research, the aim of the researcher is to collect notes, data, that allows of the creation of the 'bigger picture'. The potential importance of participant observation within contemporary social research is also emphasised by Kitchin & Tate (2000) who suggest that the focus of participate observation should be upon people's behaviours in trying to develop an understanding the meanings, values and beliefs that manifest in their actions.

Kearns (2006:105-106) suggests that the purpose of observation is to count, compliment and contextualize, these aims of observation allow for the methodology to compliment techniques of interviewing, particularly when the socio-spatial location and language is unfamiliar to the researcher:

> *"The third purpose of observation might be called <u>contextual</u> understanding. Here the goal is to construct an in-depth interpretation of a particular time and place through direct experience. To achieve this understanding the researcher immerses herself/himself in the socio-temporal context of interest and uses first-hand observations as the prime source of data."* (original emphasis)

Participant observation has not be used as means of primary data collection, in its traditional approach, within this research, it has been used as a learning technique within interviews to allow the researcher to focus on non-verbal communication and to gather contextual

information throughout the entire research process (Coffey 2006b). Data and information will be collated throughout the research in the form of research notes detailed as and when necessary, this data will be used as memos within the transcripts of interviews which can then be analysed alongside the 'core' interview data. Participant observation can be used in a supplementary way within this research because of the methods four characteristics, as described by Silverman (2006): the emphasis that participant observation places upon exploring specific social phenomena, rather than the testing of hypotheses; the collation of unstructured data which can be used in coding; a focus on a small number of cases, and often just one case in detail and; analysis that involves the interpretation of meaning and function rather than quantification and statistical analysis.

However, the technique of participant observation has been widely criticised due to the emphasis that is placed upon the researcher and the level of bias which the emphasis introduces. The researcher is only ever to view and interpret the world through their own social identity, and thus behaviours and attitudes that lie beyond this identity may be misinterpreted or can even remain unnoticed. Coffey (2006a:216) also acknowledges that there is concern with regards to the researchers position in the field, this concern can take two forms – that the presence of the researcher in the field in itself may alter the setting and behaviour, and that there is a blurring of the boundary between researcher and self which can lead to over familiarity with the setting. It is within these criticisms that reflexive in research becomes of upmost importance:

> *"The key issue is that researchers engaged in participant observation should always be reflexive about their positioning within the setting and how that is challenged or changed over the course of the research, as well as recognizing the experiences, knowledges and assumptions they bring to the field."*

May (2010) considers reflexivity to be a part of participant observation that is not only important to assist in reliability and validity of the data collected (and to assist in the recognition of biases) but also because it helps ensure that the research process is flexible and thus can take into consideration changes in research situation and the dynamics of theoretical and snowball sampling methods:

3.4.2.1 Reflexivity in research

A fundamental characteristic of science is objectivity – the idea that science offers a truth or fact that cannot be generated or challenged through other means, within the social sciences objectivity refers to the conviction that there is an underlying framework which dictates

human social interaction from which we can determine the nature of rationality, knowledge and truth (May 2010). However, an objective approach to social science is questionable due to the dual role that a researcher must adopt when conducting social research, as both a member of society and as a researcher – can the boundaries between these two roles be clearly separated to allow the research to be described as objective?

Social science research is thus more widely accepted to be subjective in its nature which allows the researcher to adopt both roles of society member and research, and in which the social worlds can be interpreted through individual conscious through 'inner' world experiences (May 2010). As with the relationship between nature and society, the relationship between communities and their environments can only be interpreted as a combined, and subjective, relationship as one cannot be know independently of the other:

Dowling (2000) refers to both subjectivity and inter-subjectivity, with subjectivity referring to the social characteristics and identity of the researcher being reflected within the research practice, and inter-subjectivity describing the ways in which meanings and interpretations of environments and situations are informed, misinformed and dismissed through interactions with others in specific contexts. Dowling (2000) continues to suggest that the best away of acknowledging and dealing with subjectivity and inter-subjectivity within research is through critical reflexivity.

Critical reflexivity is an important process within the research both within assessing the values of ethics and in assisting in the analysis and validity of conclusions. Jupp (2006a:258) defines critical reflexivity as:

> *"The process of monitoring and reflection on all aspects of a research project from the formulation of research ideas through to the publications and findings and, where this occurs, their utilization...In assessing the potential threats to validity, reflexivity is concerned with the social production of knowledge. It involves reflecting on the various social roles, interactions and processes which resulted in the kinds of observations and conclusions which emerged."*

Most importantly critical reflexivity within qualitative research is evaluative in terms of providing an assessment of the likely validity of the conclusions that could be reached, the potential threats to validity that the research design and methodology may not have been able to rule out but that required an awareness and assessment of as part of the research analysis.

3.4.3 Validity

Concerns surrounding the trustworthiness of qualitative research have grown from the traditions of quantitative research and sciences that seeks reliability, validity, objectivity and generalisability within its approaches (Marshall & Rossman 2011). The challenge upon such quantitative goals in research, and issues of objectivity and subjectivity in social research were founded throughout the qualitative revolution and postmodernism and as such new methods for conceptualising validity were developed. Lincoln & Guba (1985) refer to the challenge not as validity, but as establishing trustworthiness, a term which they describe as encompassing issues of credibility; dependability; conformability and; transferability. They suggest techniques can be employed within data collection and analysis to establish trustworthiness of research: prolonged engagement; the sharing of data and interpretation with participants; triangulation through multiple sources, methods and/or theoretical lenses and; and discussion of findings with peers to ensure it is grounded in the data (ibid).

Within the research the technique of prolonged engagement had to be balanced with a decision to complete interviews within a set period of two months in attempts to prevent participants second guessing responses and researcher expectations. However, in further attempts to ensure a high level of trustworthiness in the research process, discussions surrounding the entire research process, from proposal level to the drawing of conclusions, peers and mentors from CapeNature and other external but related areas have been consulted with, by the researcher, over a period of a year.

In order to ensure trustworthiness within the research, interviews were transcribed as accurately as possible from an audio recording of each interview or group interviews, and then emailed back to CapeNature's participants for editing and expurgation, and focus groups were contacted to meet again to ensure that the transcriptions reflect the values participants had discussed. However, there were issues with this method of validation as numerous attempts, over a two month period, to meet again with group interview participants provided unsuccessful in all cases, and although more success was achieved with CapeNature's staff interviews, only two responses to correspondence were received confirming that the transcribes were correct, and one response suggested that changes were needed but requests from the researcher to meet or gain details of the changes required were never fulfilled. As such, efforts were made to ensure trustworthiness through the sharing of data with participants; they proved on the most part, unsuccessful.

The use of participants as a technique for validating research is termed by Cho & Trent (2006) as a method of transactional validity, in which member checks are seen as a method to ensure accurate reflections of the participants realities, in this instance values, are

portrayed. This transactional approach is criticised for the emphasis is places upon corroboration and cooperation, which within this research provided to be unsuccessful. Thus, Cho & Trent (2006) suggest using a form of transformational validity, which holds central to it the notion of multiple perspectives including the researchers, which have been gathered through critical reflexivity, *"...they thus grapple with ways to ensure those voices are represented transparently and that the full dynamics of the research process are examined and critiqued."* (Marshall & Rossman 2011:42)

To compliment, and further support the use of transformational validity, Richardson's (1997) technique of crystallization has been included. This technique is draw from that of triangulation which is defined by Silverman (2006:290-291) as:

> *"Comparing different kinds of data (e.g. quantitative and qualitative) and different methods (eg observation and interviews) to see whether they corroborate one another. This form of comparison, called triangulation, derives from navigation, where different bearings give the correct position of an object."* (original emphasis)

However, crystallisation as a technique criticises triangulation for the use of only three fixed points in corroboration, Richardson (1997) suggests that the metaphorical use of crystals is more suited to the validation of qualitative research due to the physical nature of the object, which enables is to both reflect externalities and reflect within itself: *"Crystals thus offer multiple perspectives, colours, and refractions. Conceptualizing validity through the metaphor of the crystal calls on a methodology that demands self-critique or self-reflexivity."* (Marshall & Rossman 2011:43-44)

3.5 Data Analysis

Data analysis within this piece of qualitative research is intrinsically linked to the methodology employed, and methods of data collection used – all of which have been based upon the procedures of the grounded theory methodology as developed by sociologists Glaser and Strauss during the 1960s (Punch 2005; Strauss & Corbin 1998). A grounded theory approach to both research strategy and data analysis (Punch 2005) has been adopted within this research due to the emphasis it places upon the researcher as part of the research process particularly with regards to the importance of interpretation (Sarantakos 2005) and as such can allow researchers to be more confident in their conclusions due to

their levels of time spend with the data and the conceptual relationships being grounded in the raw data (Strauss & Corbin 1998).

3.5.1 Grounded theory processes

As afore commented, the grounded theory process is both a methodology and method for conducting qualitative research, as developed by the sociologists Glaser and Strauss (Strauss & Corbin 1998:12) they refer to grounded theory as:

> *"...theory that was derived from data, systematically gathered and analysed throughout the research process...Grounded theories, because they are drawn from the data, are likely to offer insights, enhance understanding, and provide a meaningful guide to action."*

In their first description of the grounded theory methodology, Glaser & Strauss (1967) define three main purposes of the strategy: to offer rationale for theory that was truly grounded in the data; to suggest logic and specifics for grounded theories through analysis, and; to legitimate careful qualitative research. In the context of traditional, and specifically quantitative research, grounded theory does not follow the theory verification model which places importance upon the testing of a hypotheses, rather it begins with an open-minded approach which aims to end up with a theory (Punch 2005). Sarantakos (2005) describes grounded theory as embedded within an interpretivist paradigm, within which theories of interpretation, as methods of analysis, are employed, rather than the rigid statistical testing and traditional quantification of qualitative data: *"Some researchers believe that data should not be analysed, per se; but rather the researcher's task is to gather data and present them in such a manner that 'the informants speak for themselves'."* (Strauss & Corbin 1990:21 original emphasis)

It is within this perspective that the afore mentioned emphasis upon the importance of the researcher becomes an active part of both the techniques of data collection and analysis, Strauss & Corbin (1990) suggest that accurate description of the ways in which data was expressed by respondents (achieved through minimal and compassionate analysis) reduces researcher bias especially when coupled with observational data and field notes to give a rich and believable description of the data.

Harding (2006) describes grounded theory as an approach developed to bridge the gap between theory and empirical research, and in response to the use of quantitative methods within the social sciences which saw research being undertaken to test existing grand theory. It is further acknowledged by Harding (2006:131) that Glaser and Strauss

"...proposed instead an inductive process in which theory is built and modified from the data collected." The use of an inductive process is highly defining within the both the data collection and data analysis stages within grounded theory, arguably more so than within any other qualitative research model, as both the data collection and analysis stages are conducted concurrently. As soon as sufficient data has been collected, analysis begins, and thus informs the sampling procedures employed, this process of concurrent collection and analysis continues until (perceived) saturation of coded categories is achieved (Harding 2006; Punch 2005).

3.5.2 Coding

Coding is "*The analytic processes through which data are fractured, conceptualized and integrated to form a theory."* (Strauss & Corbin 1998:3) In generalised and simplistic terms Harding (2006) describes coding as an analytical process used to create categories which are compared to each other in order to allow both new and better defined categories to emerge, and for relationships between them to become apparent.

Marshall & Rossman (2011) however, suggest that coding is the fourth analytical procedure that forms part of grounded theory, in total they suggest there are seven analytic procedures to be followed: organising of data; immersion in data; generation of categories and themes; coding; interpretation through analytic memos; generating alternative understandings and; the writing and presentation of findings. Within this context, organisation of and immersion within the data consists of the transcription and re-working of the transcripts into a useable format, this is also to include the addition of analytic memos to the transcripts – it can also be suggested that all of these processes result in immersion in the data. Marshall & Rossman's (2011) analytic procedures are frequently referred to as coding techniques: the generation of categories and themes is often described as open coding (Punch 2005; Strauss & Corbin 1990 & 1998); coding, is more specifically termed as axial coding (Punch 2005; Strauss & Corbin, 1990 & 1998) and; the generation of alternative understandings is referred to as selective coding, and the development of a grounded theory (Punch 2005; Strauss & Corbin, 1990 & 1998).

3.5.2.1 Open coding

Open coding, is described by Kitchin & Tate (2000) as an informal coding strategy in which data is coded into master categories of responses which are identifiable as a group and distinguishable from other categories, these identifiable characteristics are described by

Strauss & Corbin (1998:62) as the categories properties, giving a category both definition and meaning.

> *"Open coding is the part of analysis that pertains specifically to the naming and categorizing of phenomena through close examination of the data...During open coding the data are broken down into discrete parts, closely examined, compared for similarities and differences, and questions are asked about the phenomena as reflected in the data. Through this process, one's own and others' assumptions about phenomena are questioned or explored, leading to new discoveries."*

It is within this open coding stage that the data is initially broken down into abstract conceptual categories which are considered important or significant within the data (Strauss & Corbin, 1998), and which are more abstract that the data and phenomena they describe (Punch 2005).

> *"Categories are concepts, derived from data, that stand for phenomena...Phenomena are important analytic ideas that emerge from our data. They answer the question 'What is going on here?' They depict the problems, issues, concerns, and matters that are important to those being tudied."* (Strauss & Corbin 1998:114, original emphasis)

At this early stage in the coding process categories are labelled, but this labels are not to be seen as fixed or limited to the later stages of analytic coding, however the process of labelling must be undertaken to assist further analysis, Punch (2005) suggests that this process involves both the comparison of categories, and the questioning of the data, as Strauss & Corbin (1998) as cited above discuss. Thus, within the process of open coding, labelling of categories is initiated but restricted:

> *"Codes (labels) at this early stage of analysis are provisional, and any piece of data may have several labels. Closure on final codes is delayed until substantial coding has been done, and until the analyst has a stable view of what is central to the data."* (Punch 2005:207)

Once basic categorisation is complete and concepts have been abstractly labelled, the researcher is able to examine the potential meanings and understandings of responses, and thus the categories are developed in terms of both their properties and dimensions: *"Properties: Characteristics of a category, the delineation of which defines and gives it meaning...Dimensions: The range along which general properties of a category vary..."* (ibid:107 original emphasis)

3.5.2.2 Axial coding

The final step of open coding, is often considered to be the first step of axial coding, and consists of the development of a continuum of sub-categories within each labelled category (Strauss & Corbin 1998). These sub-categories are developed to refine the data and to allow the depth and breadth of the categories to emerge (Kitchin & Tate 2000), they can also demonstrate through their properties and dimensions how, when and where phenomena are likely to occur (Strauss & Corbin 1998). The development of sub-categories necessary for the next step in the coding process, axial coding, which is: *"The process of relating categories to their subcategories, termed 'axial' because coding occurs around the axis of a category, linking categories at the level of properties and dimensions."* (ibid:123)

Once sub-categories have been developed, the process of axial coding looks to reassemble the data, broken down through open coding, in a different way, Strauss & Corbin (1998:127) suggests that this involves the analyst questioning the data and looking for clues of how sub-categories relate to others, and the major categories: *"When analysts code axially, they look for answers to questions such as why or how come, where, when, how, and with what results, and in doing so they uncover relationships among categories."* Punch (2005) refers to this process as theoretical coding, and rather than questioning the data, they suggest a tactic of looking for opposites in the subcategories such as cause and consequence; indicator and property; stimulus and response.

Again, using different terminology, and a slightly different technique, Kitchin & Tate (2000) refer to the reorganisation of sub-categories as splitting and splicing, which it can be argued increases the rigour of analysis and provides a basis for the characteristic of grounding the resultant theory. They suggest that sub-categories should be cross-checked against the context of the transcripts which they had been originally drawn to ensure they reflect the participant's responses; once this is complete they can again be split into sub-categories that are internally consistent; conceptually related to one another and; analytically useful within the framework of the study (ibid).

The sub-categories, now split and spliced, can now be analysed to look for phenomena, the repeated patterns of interactions that represent what people say or do in response to situations – within the processes of coding, the categories and sub-categories represent these phenomena. Strauss & Corbin (1998:130) suggest that analysts look for conditions within sub-categories, and examine how they relate to major categories:

> *"Conditions are sets of events or happenings that create the situations, issues and problems pertaining to a phenomenon and, to a certain extent, explain why and how persons or groups respond in certain ways."* (original emphasis)

3.5.2.3 Selective coding

Selective coding is the final step of the coding process which involves both the integration of sub-categories and the creation and refining of a theory (Punch 2005) this involves the linking and connecting of coded data, and identifying how they relate within the context of their original transcripts (Kitchin & Tate 2000). It is within the identification of substantive links between sub-categories, and the nature of these relationships that a major or central category is developed this central category represents the main theme of the research, and Strauss & Corbin (1998) suggest holds the analytic power within the researcher, having the ability to pull other categories and sub-categories together to form an explanatory whole.

It is the selection of and focus upon a central category that open and axial coding ceases, and the central category becomes a piece of grounded theory; the core of a developing theory; and a central theme in the data as seen as central by the participants (Punch 2005). Strauss & Corbin (1998) refer to the central category, and its relevant abstract title, as the storyline to the research which uses sub-categories and the linkages among them to develop a theoretical scheme, a theory.

The second and final step of selective coding is the refining of the theory, as generated from the central category *"Refining the theory consists of reviewing the scheme for internal consistency and for gaps in logic, filling in poorly developed categories and trimming excess areas, and validating the scheme."* (Strauss & Corbin 1998:156) The process of reviewing internal consistency and gaps in logic is also described by Kitchin & Tate (2000) as corroboration of the evidence, which involves the cross-checking of the developed theory in order to avoid and acknowledge the genuine errors of analysis and interpretation. Kitchin & Tate (2000) suggest there are two ways in which to corroborate conclusions: to consider any alternative conclusions that could be reached with the data and its analysis, and whether these alternatives are more valid or likely than the theory developed and; check the quality of data and its conclusions compared to other research and theories, Harding (2006:132) also comments that *"When data analysis is complete, the researcher examines a number of existing theories to establish which fits best with the grounded theory that has been generated."*

To assist in assurance that the theory developed is truly a product of the grounded theory processes, the theory must be validated against the data it is drawn from:

> *"The theory emerged from data, but by the time of integration, it represents an abstract rendition of that raw data. Therefore, it is important to determine how well the abstraction fits with the raw data and also to determine whether anything salient was omitted from the theoretical scheme."* (Strauss & Corbin 1998:159)

3.5.3 Computer aided qualitative data analysis (CAQDA)

Sarantakos (2005:359) suggests that *"On balance, CADA* [computer aided data analysis] *brings more advantage to researchers than manual processing."* this is due to numerous advantages, which can be seen as even more advantageous within qualitative research. CADA and more specifically computer aided qualitative data analysis (CAQDA), can reduce the volume of time spent on analysis; automatically saves work; reduces need for personnel and thus cost; more efficient and convenient to use than manual analysis; offers easier access to transcripts and codes, and; is described by Sarantakos (2005) as accurate, reliable, flexible and powerful.

In criticism, the artificial treatment of data through CAQDA can place false emphasis on coding and produce theoretical inconsistency; through researcher training it is anticipated that some of these errors can be reduced. However, issues concerning the inadequacy of the programme cannot be managed by the researcher and thus remain a disadvantage of using CAQDA (ibid).

The computer programme ATLAS.ti has been used within the data analysis, the programme allows for the transcripts to be integrated and selectively coded within a programme with multiple functionalities. ATLAS.ti was chosen above other qualitative data analysis programmes as it places a focus on the data itself and allows for theory development, and is thus suitable to be used within grounded data analysis:

> *"ATLAS.ti helps to uncover the complex phenomena hidden in your data. ATLAS.ti offers a powerful and intuitive work environment designed to keep your focus centred on your material."* (ATLAS.ti sine anno)

3.6 Conclusion

The purpose of combining a grounded theory model of qualitative research and Marx's dialectical thinking in research analysis has been to allow for the development a theory which links the complex concepts of nature, conservation and capital through the expressed values of corporate and community members.

Employing the qualitative methods of participant observation alongside semi-structured interviews created research relationships through which theoretical and snowball sampling could be executing, as these are considered the most appropriate sampling methods within a grounded theory model and lead to the highest levels of theoretical saturation. It is

through the use of participant observation and the concurrent collection and analysis of data that complete immersion by the researcher in the data can be achieved, it also allows for the increased reflexivity which can be seen as a validation of such a subjective research topic.

A process of analysis informed by both grounded theory categorisation and coding, and Marxian dialectical thinking allows for real values to be expressed through the words of the participants, and interpreted by the researcher drawing upon participant observation and reflexive research practices.

Chapter Four -

A hierarchy of community values within a top-down approach to conservation

4.1. Introduction

The specific processes of open, axial and selective coding, as discussed in section 3.5.2, were used consecutively within the data analysis and interpretation, however due to the depth of analysis and the level of the researcher's immersion in the data, only the selective codes/categories will be discussed as the culmination of the data analysis.

It is suggested that within the final process of selective coding, a single central category should be selected in order to develop a grounded theory. As will be discussed, within this case study, it was deemed inappropriate to limit the research to one category – rather the diversity of values have been categorised within three codes which are hierarchically-dependent in their relationships.

4.1.1. Analysis and interpretation of values

Throughout this study, the methods of data analysis such as coding within the broader scope of grounded theory has been referred to as such, analysis. However, as Walcott (2001) discusses, the usefulness of analysis within the social science discipline is somewhat limited, as it is a term used most widely within the physical science discipline in reference to quantitative data that follows standardised measurements, and the statistical treatment of data. Within a qualitative study such as this, which has employed the methods of semi-structured interviewing (both group and individual) alongside the reflexive approach of participant observation, the use of analysis, it is suggested, is too narrow in its focus, and thus an approach of interpretation should also be used.

The use of interpretation alongside the structured analytical process of coding allows the researchers participant observation to be used in conjunction with the major coding categories in order to provide a rich description and narrative of the expressed value (Bui 2009). As such, interpretation allows the researcher to acknowledge and explain any bias' that may be contained within the data, and its subsequent analysis, as well as generating a well-informed interpretation of the data which forms the basis for the development of a grounded theory.

4.1.2. Analysis and interpretation of coding levels

Following the coding processes as detailed within chapter three, through open, axial and selective coding, three major coding themes (or categories) emerged: foundation, supportive and surface values. As the abstract category names suggest the emergent themes exist in a so-called hierarchy of intricate relationships, where the existence of a surface value is dependent upon the existence of supportive values, with foundation values underlying both supportive and surface values.

The analysis and interpretation of values through the coding process was not solely informed by the research questions posed within section 1.5.1, rather as Bui (2009) suggests as an alternative discussing codes in the context of major themes and patterns which have emerged throughout the coding and analysis process. This method of discussion was adopted to allow for a true grounded theory to emerge without the constraints of fixed research questions and answers, and also to reflect the analytical issues that emerged through the transcription and the researcher's initial emersion in the data.

It was anticipated by the researcher through the research questions that the two populations of interest, the CapeNature staff members and the surrounding community members, would hold and express different values with regards to Driftsands Nature Reserve. However, each population of interest expressed very similar values, which have been categorised together within this analysis, with the exception of the following values: the use of the area for infrastructure development (discussed within Surface – Challenge values), expressed by some of the community members and no members of CapeNature staff; and the use of Driftsands Nature Reserve as a research area to inform community conservation initiatives within the wider CapeNature network (discussed within Supportive values), expressed only by CapeNature staff members. Thus each category of values has been discussed and illustrated with quotations from both populations of interest.

4.2. Foundation values

Foundation values are described as those which provide the grounding, and as such the foundations to both the supportive and surface values, the value category is discussed in terms of two non-distinct sub-categories: environmental and social. Sub-categories have been used to make specific acknowledgement to the dual-nature of Driftsands Nature Reserve, serving both as a biodiversity conservation area and a multi-purpose location servicing its neighbouring communities. As previously discussed both purposes are of great

importance due to the reserves geographical location and as such can most appropriately be described as foundation values.

4.2.1. Foundation - Environmental

The foundation-environmental category expresses the values that are geographically dependent and associated with the vegetation within the reserve, and most specifically the biodiversity of the area. This value is arguably the most important and fundamental, as without this the reserve would not have been classified, and it could be speculated would not continue to be in existence due to specific values as discussed within the surface-challenge sub-category.

This value was most widely and eloquently expressed by members of CapeNature staff, however the 'actual value' of the reserves biodiversity was considered low, as the below extract discusses:

> *"...the natural ecosystem remaining on Driftsands has not, doesn't really have that much value, it's part of the biodiversity network of the city of Cape Town and everything so it has value, I'm not saying it doesn't have value, but unfortunately because of its degraded status, in terms of the habitat and ecosystems and so on, people don't really, I believe, the majority of people don't really rate it very high, as a nature reserve.*
>
> *Ok, so from a biodiversity conservation management point of view, I, putting now my head out here, I'm pretty sure if you going to ask any of our conservation managers to rate Driftsands as a nature reserve they would say, out of ten, maybe like a two or three at the most. Versus, let's say Kogelberg, which is maybe a seven, or an eight, or a nine or something. So from that point of view I think the value of Driftsands has maybe been seen or regarded as rather low."* (CapeNature staff member)

The above quote demonstrates that the value that is held with regards to the biodiversity level of Driftsands Nature Reserve however low, in scientific terms, the biodiversity grading is deemed to be. When considered alongside other quotes, and within the specific case study context, it could be suggested that the questionable biodiversity value of Driftsands has been of little concern in the designation and continuous management of the reserve, as previously discussed the designation of the reserve was as a research centre for UWC, and as such it is argued that if biodiversity value was high then designation status would have reflected this.

When the reserve is considered, by respondents, as part of a wider ecosystem rather than as a bounded area as above, and as part of the Cape Floral Kingdom then a greater level of value is expressed. Considering both the above quote which comments upon a low biodiversity value, and the below extract from a different CapeNature staff member, there appears to be a contradiction, or at least a difference in the way in which biodiversity, or ecological value is gauged. As will be discussed and made evident within further analysis, the difference between these two extracts represents the nature of values, and the intricacies that can be expressed within the same coded category, and from the same population of interest. As such, the quotes and extracts provided within the analysis have been chosen as they best describe, explain and detail the codes in which they have been coded, and as such represent the diversity rather than the quantity of the values expressed.

Returning to the discussion of the above and below extracts, the difference in opinion could be explained in numerous ways: the difference in participant's role; the scale at which the reserve is considered; or through the use scientific approaches to conservation. In line with previous discussions concerning the changing and contemporary conservation paradigms, it is suggested that the differences in opinion associated with seemingly the same value, from CapeNature staff working within the same department, are due to the values being drawn and influenced by different paradigms of biodiversity conservation (although both are scientifically based). The first quote, commenting upon biodiversity value, can be seen to be drawn upon a less contemporary approach to the below quote, as it considers the nature reserve as a bounded system upon which a value is placed rather than an ecosystem (or larger scale) approach to conservation and biodiversity management practices.

> *"...in terms of what it is able to offer, which is a second value, in terms of connectivity. We've got the wetlands here you know, and in terms of value that they have, the filtering of the water and so many things in terms of the ecological importance of the reserve. It is also part of the BioNet, because you know most about the pieces of Rhinosterfeld and this and that that is left...but it also, it adds so much value in the sense that is the only reserve that has got that kind of vegetation within CapeNature's management."* (CapeNature staff member)

Driftsands' initial designation as a provincial nature reserve was not only based upon the use of the area as a research facility, but also as an open green area in a district of Cape Town which has limited outdoor recreational and community space. It is within this designation area that the coded categories of Foundational – environmental and Foundational – social begin to overlap. A disputed level of biodiversity value contributed to the designation and subsequent CapeNature management of the reserve, however the designation based upon

provision of an open space introduces a social aspect to the science based conservation practices.

> *"If you look around the other areas you will see that we are living in a different kind of area, in other places there are no open spaces next to their communities, and there are still medicinal plants that are inside those areas that we can utilise as well as other things, so here is totally different from other areas. We also have open space next to us, and we can find different medicinal plants in the nature reserve."* (Community member)

As a community member has discussed, Driftsands holds value to them as an open space which can be utilised by the surrounding community. It is within the dual values of the biodiversity and the utilisation of an open space that contemporary approaches to conservation should be practiced, it is argued that in an area such as Driftsands, which has a biodiversity value (particularly with regards to the Cape Flora Kingdom) but is located within a historically-disadvantaged community with little access to open green space, some of whom are settled within the reserve boundary (although this is unfenced), and a very limited provision to visit such areas, that the social foundational values should be considered as highly as the environmental and scientific based values.

4.2.2. Foundation - Social

It is the interaction between the environment and its social surroundings that makes Driftsands such a unique nature reserve and case study, and it is the influence of values held with regard to both the environmental and social characteristics that presents a challenge for conservation management practices.

As a foundation-social value, the coded category represents values which refer to the surrounding community and the positive interactions that can exist (benefiting both the community and Driftsands as a designated nature reserve). It was the recognition of the importance of the interactions between conservation and communities, and the challenge of value-laden scientific approaches to conservation which resulted in community-based conservation initiatives, the possibility of such interaction and the value of them are discussed by a CapeNature staff member:

> *"Well I think the, the most obvious and the biggest one* [value] *is the location, I think the fact that it is so close to communities, you know, it adds so much value to it. Because it's, a lot of our other reserves...are so far from communities, people have to drive to get there, people have to, have to pay to be able to get*

> *there...With that added benefit of the proximity to the communities because there is so much more that can be done here, you know when one looks at all the education that can happen, because that is also one of our goals, you know, if we are wanting to create a sustainable economy then we have to make sure that we bring people on board because conservation doesn't happen in a vacuum, it has to be, you know, within the context of the people there is no other way..."* (CapeNature staff member)

The development of the community-based conservation paradigm into a widely accepted management practice is noted in the terms the respondent uses "*...conservation doesn't happen in a vacuum...no other way...*" This reference is seen as significant as it acknowledge that conservation of important habitats, or indeed the conserving of an open space with a low biodiversity value, without the involvement and support of its surrounding communities. However, as the below extract indicates, there are issues in the implementation of community-based conservation initiatives, and in particular the problems that have arisen from the lack of understanding and acknowledgement of values.

> *"...I don't think that the values have been clearly determined, the value originally was supposed to be an open green space, not a provincial reserve, not a biodiversity functioning ecosystem, so the value of the place is the space it provides for the communities... But, that is actually the problem, in that the space is not being optimised in any direct or indirect way at the moment. So the value of Driftsands for the communities the way it is now is questionable. They can't see the value and we can't articulate the value, and that is where the challenge lies...The real value is that green space for gathering, for learning, for a breakaway to get out of your present reality of that cluster housing and just go somewhere else within walking distances, no cost and that. That's the value, but it's not actually being raised and bought to the fore."* (CapeNature staff member)

It was initially anticipated by the researcher that community values were not being integrated into conservation and reserve management plans as they were different to CapeNature's values (as articulated by their staff) and presented a challenge to conservation management and CapeNature's goals, aims and objectives. Through the analysis it was uncovered that the vast majority of corporate and community values corresponded with each other to the extent that the only value expressed by the community exclusively was with regards to infrastructure, to be later discussed. It could be suggested that the lack of values expressed within the management plans and conservation practices are a result of a lack of understanding and time spent with communities discussing values, and the limitations and

constraints that institutional procedures and protocols place upon conservation management. Furthermore, as will be discussed, the hierarchy of expressed values is dependent upon and highly influenced by the financial support of CapeNature to the nature reserve, and its associated communities.

It has been suggested through historical approaches to conservation, that a separation is required, often through a fixed physical boundary, between communities and nature in order for conservation to be successful. Within contemporary conservation paradigms and practices, communities are no longer seen as a threat to conservation but a means of increasing both the possibility and sustainability of success. As what could be described a fore-runner of community-based conservation initiatives in South Africa, Driftsands designation as an open space and a community reserve entail a clause that meant that no boundary fence could be erected as it would prevent open access. It could be suggested, as per the historical arguments and justifications, that the lack of fencing and access control has had a negative effect on the reserves biodiversity causing both settlement and misuse, however, as a CapeNature staff member discusses the reserve has managed to maintain some degree of integrity which can be seen as the community holding enough strength in value towards the reserve to maintain its existence despite social pressures.

> *"It is a wonder that that whole area has not be settled already, and maybe therein lies something perhaps, and, perhaps in some of the communities mind this place has always been, the nature, you know, and we must keep it like that, so obviously it has survived without the fence. Unfortunately the status is not good, from a natural pristine point of view and so on, but then again it's still there, it's still there."* (CapeNature staff member)

These categorised and coded foundation values represent those values which are held in regard to the geographical location of the nature reserve, both in relation to environmental conditions and biodiversity, and the social surroundings. It is suggested that these values do not only form the basis of the continuing existence of the nature reserve today, but also underpinned the reserves designation, as the current management body CapeNature supports the reserve through community-based conservation initiatives which reflects the low biodiversity values and high levels of positive values associated with the surrounding community.

4.3. Supportive values

The second level in the hierarchy of coded values has been titled – supportive, these refer to the management of Driftsands that CapeNature provides, and the opportunities that having such a management body provides. This category has been termed 'supportive' as it reflects the idea that without CapeNature many of the third category (surface values) would not be held.

Due to the perceived limited interaction between CapeNature staff and the community outside of organised meetings and initiatives, it is suggested that the community are not fully (if at all) aware of the manner in which CapeNature is required to operate with specific regard to operational procedures, protocols and funding requirements. Due to this there is a distinct absence of community responses that could be categorised within this code, and of those that were they did not eloquently examine the supportive link between shared foundational and surface values.

It is within these supportive values that a critique of community-based conservation, as further detailed within the theory development, section 4.3, one of the foci of the theory is the (supposed) development of conservation practices from those which are science based (and exclude the social) to those which are defined within the scope of community-based conservation. The lack of community representation reflects a relationship akin to the reliance of the community on Driftsands Nature Reserve, which is best represented through the economic surface values, which can create a financial incentive to the communities to participate and promote conservation of the reserves biodiversity.

As the below quotes, all taken from interviews from different CapeNature staff members, show there has been a coming together of science based conservation practices with community focused initiatives (or the ideas of) in order to make a positive and productive use of Driftsands.

> *"...I'm maybe going to make a random statement now but maybe the community is not aware of it, but if Driftsands for example is utilised as a, let's say, a place where harvesting can be done and you know people can go and enjoy and so on, I don't think the neighbours really realise that they won't do that much harm to Driftsands from a biodiversity and an impact point of view. Ok, because there is little left in Driftsands and it's not that important, of course there are important plants growing there and systems and so on, so I'm not degrading it from that point of view, but I think that probably don't realise that they can push a little harder in terms of access to Driftsands and using it, you know, as a facilitation*

> *for community engagement and whatever else and so on..."* (CapeNature staff member)

Within the above quote it is evident that the low biodiversity level is being utilised to provide greater opportunities for socio-economic development, with the respondent suggesting that there is little more to be lost or damaged so the traditional practices of keeping society and nature separate are no longer necessary.

> *"...in my mind, Driftsands has always had the potential of becoming this absolute model for, you know, for people and conservation, involving the communities and you know, traditional gardens, and medicinal this and harvesting of whatever and stuff like that and it's always been, what's the word, lauded, as you know the model. We need to, you know, Driftsands that's the place to be, and I remember that our previous CEO was actually very adamant about the fact that Driftsands must, this is it, this is the place where we're going to, um, do this conservation economy thing, and all these things and so on you know."* (CapeNature staff member)

However, it is within the process of utilisation that the researcher suggests conflict can occur between conservation paradigms. It can be argued that the initiatives, particularly with regards to utilisation, are truly based within the community conservation paradigm as they seek to conserve the natural area, promote community involvement and sustain participation through the benefit of socio-economic improvement. However, it is suggested that the use of Driftsands as a research or pilot site as described within the extracts, although having the characteristics of a community-based conservation approach is rather termed as a research or pilot area which has echoes of scientific based management and practices.

> *"...so I think there are definite opportunities in terms of what we can do with communities, there are opportunities also in terms of when we look at sustainable harvesting and all these new things that we are wanting to do, because Driftsands has got so much, one it's got the nursery so we can actually harvest some, you know, but I think more importantly it is ideal as a pilot site for the sustainable harvesting methods that we are wanting to embark on as an organisation...And see how it works, not only in terms of the growing and the harvesting of the protea itself, but also in terms of how we can actually do it together with the communities, the traditional healers and whoever that is keen to harvest the proteas, or the medicinal plants, or whatever, you know. So, let's start the process at Driftsands, we've got the land, we've got the people close by, we've got funds to do that, you know."* (CapeNature staff member)

The indication of scientific thinking is exemplified within the following extract with the use of the term 'experiment', and reference to Driftsands as an experimental management park, rather than as a nature reserve practising community-based conservation. The critique of terms used is not intended to de-value the efforts being made by CapeNature to develop and implement new community-based conservation initiatives, however, the strategy of using Driftsands, with historically (and currently) disadvantaged population which has experienced previous political tensions, an experimental site can be considered questionable.

> *"Depending on who you speak to, but I think organisationally we still have in our vision that that is the place where we are attempting new management practices, so the things that we do on Driftsands and the management that we're trying to implement on Driftsands, are informing the management practices on other more established provincial reserves, so you mustn't see Driftsands in total isolation, it is the only urban park we have but the, the because of the importance of this community interaction and the neighbouring communities we have around all our parks the same problems are encountered in all the reserves, the not at the scale or Driftsands. Driftsands is one of the only places that I know of where we have people physically living on our reserve, but the, the practice does inform executive decision and strategic management in how do we actually engage communities in new ways, how do we deal with this issue of secondary industries, benefits, utilization of resources, all that, so we can experiment on Driftsands and then we can use the lessons that are learnt to actually inform the other more established parks. So that's the value at the moment to us. As a very raw term you could call it an experimental research, an experimental management park, where we as an agency are trying and testing different approaches..."* (CapeNature staff member)

In relation to the focus of the research, the expression and integration of community and corporate values into conservation management plans, the above respondent expresses value in use of Driftsands as an experimental research park. It can be suggested that the community-based conservation referred to within these quotes is not representative of the contemporary paradigm as referred to within the academic literature.

These supportive values, however questionable they may be in their motive, are those which link the foundational values to surface values which are most widely expressed within the Driftsands and surrounding communities. As supportive values they reflect the corporate values which assist and influence the continuing existence of Driftsands Nature Reserve, as it is with the corporate body that responsibility of decision-making lies – as such it can be

questioned whether the mere existence of corporate values is more important to the communities as it allows for the maintenance of Driftsands as a nature reserve, rather than the specific details and sharing of these values.

4.4. Surface values

The most widely expressed values were those categorised as surface values, this term was derived from the dependence these values had upon both the foundational and supportive values as previously discussed.

As the most largely discussed values, both within the corporate and community interviews the category has been split into the sub-categories of cultural; economic; educational and; challenge values. These surface values have been described as dependent upon foundational values as they require the holder to see value in the location and/or environmental value of the reserve. The great majority of the values are also dependent upon supportive values, through both the influence supportive values have upon the management (and existence) of the reserve, but also due to the economic benefits that the corporate management body attracts.

It could be argued that the dominance of corporate responses within both the foundational and supportive structures is matched by the dominance of community responses within the surface value category. This could be explained through the socio-economic hardships that the communities (in general) experience, which are expressed within many of the following interview extracts. As such the surface values are those which provide a perceived improvement to socio-economic status and/or quality of life for the communities.

4.4.1. Cultural value

As afore mentioned the surface values are generally those expressed in relation to benefits for the Driftsands' and surrounding communities – as such these are often directly related to or have high levels of influence upon community-based conservation initiatives such as the cultural education to be discussed. However, other values are more closely linked to supportive values – the below extract is an example of a value which might arguably not exist without the involvement and support if CapeNature and their institutional structures. Furthermore, within the interview, this community member continues to discuss the level of support that CapeNature provides with regards to the provision of a meeting space,

transportation and the organisation and opportunity for people to come together and meet with a common concern for conservation.

> *"I would say the reserve, like Driftsands reserve, assembles the communities, the coloureds, the whites and the blacks. Alright, especially those who are just belonging to the, it is the people and parks awareness, yeah people and parks. As you know that people are belong to the forests, to collect woods. I am a traditional healer, to collect some herbs, Rastafarians, all that nature, living with that nature. So, the land, we go to land on the reserve, they collect us, they just gather us together, many communities, from Cape Town, George, just everywhere. So they are just trying to, to train us about the, to conserve. Yes, yes, just conserving the plants, you know. So there are sometimes just gather us and make some training that is to the awareness about the preservation."* (Community member)

It is through these organised meetings that the respondent refers to the cultural education value that is associated with Driftsands Nature Reserve, as opposed to the educational value which is later discussed with reference to non-cultural and more formal types of education. The concept of environmental education as part of community-based conservation can be linked within this case study to the supportive values of CapeNature staff expressed as the potential use of Driftsands Nature Reserve, and its surrounding communities, as a research area, this will be elaborated upon within section 4.4.2 on educational values, and within the theory development in section 4.6.

The below extract, from a CapeNature staff member, is an example of a value which is positioned within a community cultural value of increasing indigenous or cultural knowledge. However, this contains and assumption of generalisation and community homogeny which is considered a critique of community-based conservation initiatives.

> *"So, with the indigenous knowledge there's different areas and categories that you can touch on to teach kids, I know SANparks* (South African National Parks) *has done something a long time ago, the Wise Men programme, where the older person, or the chief, would go and take a hike with the kids and like in the evening and they would look at the stars and look at different things like tracking and things like that, so that indigenous knowledge, how to know when a lion has passed and you will look at the print and you will know, five hours ago he was here, or something like that, or when it's going to start to rain maybe, or when is the sun coming up, and things like that. They did it in traditional ways, and it's interesting stuff for the kids and that, sometimes they don't know these things*

> *because they grow up with iPods and all sorts of other things so. So that is the kind of thing I am talking about when I talk about the cultural trail..."* (CapeNature staff member)

Although it could be considered that cultural education could be provided and introduced throughout the many cultural groups of the surrounding areas, thus it would serve to further promote community cohesion and meeting as discussed previously. It is suggested that caution may be issued with the development of education that is referred to as 'cultural' as the concept and definitions of a particular culture are as challenging as definitions of society and nature, and as such the term represents a diversity of things for many scales of social grouping, from the individual, community or country. The link between nature and cultural education is also referred to within the following extract, the respondent also uses the term 'my culture' which represents the challenge that the provision of cultural education will provide.

> *"... that is the link that is needed to grow between our cultures and the reserve. The child he can learn in the different ways if he see that this is sleeping there then he must know in other names what is there, and what is other names. Because if he see in the different, you know me in my culture we have a different name for that thing that is sleeping there. We got a name what you call, so that we needed to write everything in different names. That means you will give him skills. We can never say that we have enough skills, you don't what a language is, what is this, that's why, but unfortunately we have a bad luck for our people who are not well educated."* (Community member)

Within the extract the respondent also makes reference to the building of skills, it is unclear whether the respondent differentiating between the provision of education and skills development, as there is often a separation of the two in the development of community-based initiatives, and whether the respondent is only referring to education and skills development that is cultural in their focus. This separation of the two is determined by the both the age of the participants and the subject of education/skills development, although it can be argued that both initiatives serve to produce and sustain a value in conservation. When the participants are under eighteen (school-leaving age) initiatives are termed education and focuses upon the teaching and learning of conservation processes and scientific reasoning, and when participants are above eighteen years of age it is termed skills development with skills being taught which can (and often do) lead to mainly temporary employment within the reserve, for example through alien vegetation clearing.

4.4.2. Educational value

The educational values expressed within this coded category are based upon environmental education, rather than that which is academically based and could be described as following a school type curriculum. This type of environmental education is most generally tailored to increase community involvement in conservation at Driftsands Nature Reserve. In itself this can be seen as meeting the requirements of a community-based approached to conservation, however, education can often be described as propaganda in which the aim of the education is to fulfil the needs of the educator rather than the educated.

In this context the term propaganda is used within a non politically loaded context, and is used merely to suggested that there should be caution in offering educational activities in which only offer a direct benefit to Driftsands in relation to their objectives at the reserve, and does not offer any benefits outside of the reserves context. It could be suggested that rather than educating children about specific species on the reserve and management practices that would only be useful in a very specific subject area or future career, it may be more useful to educate children about growing vegetables which could help sustain their family or schools, and the health benefits of exercise outdoors. Therefore, approaches to education which do not provide tangible benefits outside of the specific reserve context could be described as fulfilling not a community-based approach to conservation, but rather a top-down model of conservation as employed within science based approaches.

Both a community-based approach to environmental education and its critique will be discussed within the following quotes. The first appears to demonstrate a 'true' approach to community-based conservation as it not only provides environmental education but links the programme to initiatives which are aimed at improving the quality of life for the surrounding community.

> *"And then the other project I am also involved with is the Careers in Conservation, my target is high schools around the nature reserve with schools, and also trying to form a partnership now with the department of fisheries, and the marine side to also bring that in, and also just focusing on what kinds of careers high-schoolers can study towards after Matric...It brings a different flavour to it as well, because we are also very dependent on, I mean, um, for the kids to understand life skills and we want to like incorporate a little bit of health, kind of health programmes into it. Of course linking it to the environment, where they need to have soil, and they need to plant maybe vegetables to have sustainable harvesting and planting kind of programme. Also to eat healthy foods, and do a little bit of exercise on the hiking trail and something like that to*

> *incorporate a little bit of the health as well. To get it into people's every day, that's what we want to do."* (CapeNature staff member)

However, this highly positive demonstration of environmental education as part of community-based conservation can be critiqued through the source of the quote and the language which has been used. The above quote formed part of an interview with a CapeNature staff member, who was the only participant to offer the interviewer such a description of an environmental education programme linked to social upliftment. As a CapeNature staff member, it would be somewhat expected of the participant to discuss community-based conservation in such a positive manner, however the language used within the quote could suggest that education is being used as a way of creating a value in Driftsands Nature Reserve that would not exist without CapeNature's involvement.

Education being used to develop a community value in Driftsands Nature Reserve cannot be criticised when seen in isolation, it would be difficult to argue that conservation is less beneficial or successful if it results from solicited values rather than those that already existed, for are not our current values about conservation drawn from science and not the values held by our hunter-gatherer ancestors?

Within the community participants the most commonly expressed value was not directly linked to education, but rather the focus and outcome of community-based education projects. The below quote summaries the view of several community members, who place a value upon education as a means of creating a degree of separation between the reserve and the community.

> *"...there needs to be education first, and then fencing after, because if they know nothing they are going to, they are just going to make a plan to get in, if they are not educated about the reserve. So the education first and then fence after that, education is the key of everything. The awareness, these people of Driftsands must just go to the community and make the awareness about the conservation."* (Community member)

This quote is an example of the ways in which values can become contested although all values are held for and about the same area. It can be seen within the extract that there is a strong value held by the community member with regards to the protection of Driftsands Nature Reserve, it is unclear whether this value has been generated through environmental education initiated by CapeNature or whether the value had existed before CapeNature's involvement with the reserves management. However, this is not of greatest concern when examining the relationship between community and corporate values, but rather the use of

education initiated by CapeNature to achieve an aim of CapeNature rather than supporting and benefiting the local community.

As referred to at the beginning of this section, the critique surrounding environmental education as part of community-based conservation is the aim and final destination(s) of the resulting benefits. It could be suggested that education forms a part of community-based conservation if the community are involved, however this can be challenged when the outcome of the teachings are examined. It is argued that not all education can be considered to be part of a truly community-based initiative if only the main objective for the educator is to meet its own aims and not those of the community. Within this particular example the community are suggesting that education is required to ensure that the community do not enter the reserve, and if education fails then a fence should be put in place. This type of education seems to reflect the historical science-based approaches to conservation rather than expressing the other values that the communities hold with regards to the reserve as have been discussed.

The symbol of the fence is of extreme significance within the quote, as it holds both relevance to the changing approaches to conservation and the political environments of which the community members have historically experienced. As such this symbol will be further discussed as a challenge value within section 4.5.

4.4.3. Economic value

The third surface value, as expressed within interviews and group interviews, has been categorised as an economic value. An economic value is defined from participant responses as the provision of an opportunity for the generation of an economic benefit for the community (in monetary terms).

The principle of creating economic based values appears on the surface to fit in with a true model of community-based conservation, especially when discussed in terms of initiatives put in place by CapeNature which provide employment opportunities from community members in conservation based activities. As a surface value, they are supported by the institutional platform that CapeNature offers, other methods of economic generation such as farming were mentioned by community members but have been discussed within section 4.2.3.4 as a challenge value as they do not align with the values of biodiversity conservation.

The below extract discusses the different conservation based employment opportunities for the local community that CapeNature organises, these initiatives are also described as providing skills development and training as part of the employment opportunity.

> *"So, if we think of job creation and the economy and things, it's more on providing opportunities for capacity building and things like that, training the communities making sure that they get enough skills development to do other stuff, maybe in the city's different areas where they need work and things like that. So through the AVM* (Alien vegetation management) *process we also try to make a big focus on the social development and training, so that the people can develop and find something else after they've done AVM, so that I think we're just adding to the social economic values and things...Working for Water projects that is able to provide jobs to the, and it's specifically for those that live adjacent to the reserve because we don't give those jobs to anyone else it has to be for those people. So in terms of job creation, and I mean they don't only get income generation, out of the jobs, they also get skills that they don't pay for, you know the training that they get, we pay for all of that. Some of them are trained in health and safety, first aid, chainsaw operators and you know, transferable skills they get, book-keeping, office admin types of skills, they get to learn about issues, substance abuse and many other things."* (CapeNature staff member)

The training and skills development, it can be suggested, increase the sustainability levels of such initiatives however this can be critiqued along several lines. Firstly, the only employment opportunities that are being offered are only based around conservation activities and are specific to the needs of Driftsands Nature Reserve. Whilst the skills and training being offered could be used to gain other employment opportunities in the urban areas surrounding Driftsands Nature Reserve these maybe limited. Secondly, as a small nature reserve with a low value of biodiversity the sustainability and longevity of projects can also be critiqued. Currently Driftsands Nature Reserve is in a phase of change in which it is trying to establish itself as a model for CapeNature's community-based conservation programmes, and as such there is a surplus of funding available for projects which can meet its aims and objectives. However the funding can only be distributed to the community members through employment opportunities if there is work to be done on the reserve, with Driftsands being a relatively small reserve in terms of area the projects will remain unsustainable.

> *"...Driftsands provides an opportunity for some form of poverty alleviation through conservation activities that we perform...there is alien clearing to be done, soil erosion management but that's going to stop, you're not going to do that forever, you know, maintenance and those kinds of things. So really it's not going to provide a sustainable conservation economy."* (CapeNature staff member)

Thirdly, re-introducing a Marxist perspective on the relationships between nature, conservation and the economy, it could be argued that offering the opportunity of employment from Driftsands Nature Reserve is a mechanism for creating a value towards conservation and the nature reserve within a capitalist society. This suggestion is also evident in a response, concerned with employment and economic values, from a community member.

> *"I mean because this place really creates job opportunities for the people of our communities. I mean now, with this them not wanting to be involved, it's not easy to get people to come, there are lots of people who really need jobs, they don't work***."** (Community member)

Looking from a Marxist perspective on the economic value of conservation to community members brings a new interpretation to the 'make conservation pay' mantra. This saying is most commonly associated with ecotourism, but in the context of the 'green box' of conservation (as discussed in section 2.4.2 Marxism and conservation) and form of economic gain drawn from conservation, even if it also benefits the community, can be described as 'making conservation pay' in a capitalist market. It is thus implied that a 'green box' model of conservation in a capitalist market is not only describe the process of generating capital through the selling of conservation, but can also refer to the method through which community approval and values are sought towards conservation through the provision (and often mere promise) of economic gain for the community.

When economic values are seen through a Marxist perspective the concept and approach of community-based conservation can again be critiqued as tokenistic, in the sense that the minimal participation of some community members in, somewhat, unsustainable economic activities forms only a part of community-based conservation. It could be further suggested that community conservation efforts can be used to support the hierarchical frameworks of science-based biodiversity conservation – communities, often poor and underprivileged, are being offered work and an income from a supervising institution and conducting tasks that meet the science based aims and objectives of the institution concerned with little tangible benefits to the communities, for example the development of skills to get jobs in the urban economy outside of the reserve. However this approach and value association may be critiqued, this approach to conservation which involves the community still meets the dual objectives of community-based conservation – both the conservation of biodiversity and the benefiting of the communities socio-economic status.

4.5. Challenge values

The coded category of challenge values is a diverse set of circumstances and opinions which could also be described as negative values (ones which participants do not want to hold with regards to the reserve) and values which community members deem as positive but that present a challenge to the objectives of CapeNature's management of the nature reserve as an area for conservation.

However, as with any level of classification the distinction between negative values and values which challenge CapeNature's conservation management plans, or other community members values, can be blurred and interpreted in different ways. The below extract, in which a community member discusses grazing on the reserve, is an example of a value which can be interpreted in numerous different ways.

> *"And you know on this side of the reserve there's cattle farmers there, there's a whole lot of them there and all those cattle there they graze here in the reserve and now they destroying the plant life."* (Community member)

The negative value associated with the above extract is that of cattle farming which is trampling and consuming vegetation on the reserve, farming is used in a very loose sense here as it refers to a community member with cattle which roam common land in search of grazing for their cattle, often not numbering more than ten per farmer. The cattle are used more for subsistence and trading purposes within the local community rather than traded commercially. The negative value is associated with the management plans of CapeNature, of which, even within community-based conservation, grazing and the keeping of livestock within the reserve boundary is not permitted due the degrading effects it has upon the vegetation.

However, viewed from the perspective of the farmer, and possibly their wider community, Driftsands will hold a positive value as an area for grazing of the cattle, which benefit the community member through a food source and possible income.

Despite the category of challenge values being highly diverse, all of the values can be linked to the issue and symbol of the fence as previously discussed in brief. Littering and dumping, differentiated as personal and commercial waste on individual and bulk scale respectively, is highlighted by both the community and CapeNature staff members as a negative value to Driftsands Nature Reserve. Although a negative value cannot be described as contributing to the conservation or continuing designation of Driftsands Nature Reserve, it does serve as an example that some positive value does exist.

Of particular significance within the following quote is the mention of non-community members, within this interview it is believed that the respondent was referring to people who do not live within the reserve boundary, and suggests that different values are held by these two different communities.

> *"You have touched upon a very sensitive issue, because we don't have a scrap yard or factory here, but you can just wake up one morning and there will be a heap of gravel outside that has been thrown, or a heap of tyres, or a load of old sheep legs that we found on the other side so if maybe something can be done. We want people doing this to be caught, and let the law take its course as it is really damaging to our area because none of those things are coming from our community. All the old papers and all sorts of things are coming into our houses and make rubbish."* (Community member)

It could be suggested that the perceived difference in values that are expressed through different behaviours (littering or not) existed prior to CapeNature's management of Driftsands Nature Reserve and subsequent environmental education and economic development plans. As such these values existing within the community may have influenced their move to the nature reserve area, rather than the other settled communities. However, as afore discussed, the reasons for the communities relocation was political unrest and community tensions and thus the communities settled on the only available land – Driftsands Nature Reserve.

Given the above it can be alluded that community values towards Driftsands Nature Reserve, held by those communities living within its boundary has been established over time, through either the communities own appreciation of the space, CapeNature's educational and economic opportunity provision, or a combination of the two.

However as the category title suggests these values are challenges, not only between the community and CapeNature objectives but also between the communities themselves. These challenges are further complicated as the inter-community challenges cannot be differentiated as those who live within the reserve boundary, and those beyond as the challenge of community development and infrastructure is presented by community members living within the reserve.

The below extract highlights the need for two of the communities within the Driftsands boundary to be surfaced, however there is a degree of environmental awareness expressed alongside the need for a permanent housing structure and facilities. This reflects the suggestion that CapeNature's management plans and community-based conservation initiatives have had an impact upon the values held by this community member, and as such

there is a consideration between their own socio-economic need and the conservation of their surrounding environment.

> *"It was promised to us that the houses that will be built for us in this area will be environmentally friendly, it won't be the same as in the other areas as the other areas are not in a nature reserve. So we are still looking forward to that, having places that are different from the other areas and as long as we are staying here hoping for houses we are still educating the kids that we are living in an area that belongs to a nature reserve and we want to take care of the area until we have those houses that are environmentally friendly and we will still like to live in this area and take care of it."* (Community member)

In contrast, the residence of another community living within the reserve boundary challenged CapeNature and the designation of Driftsands as a nature reserve, suggesting that the reserve was holding back community development and the value they held about the reserve was as an open space to be used to support the community with infrastructure.

> *"No, the reserve is holding back community development. Because it's not the city's land it is CapeNature's and they want to keep it natural, but if we can change it we would."* (Community member)

Within the same community group interview participants voiced their need for social facilities such as schools, a police station, clinic and post office as well as a public transport infrastructure such as a train line – several participants claimed that they would rather use Driftsands as an area to build these things rather than a nature reserve as it would have a positive impact upon their lives.

In comparing the two different values of community members living within the reserve boundary, as above, it was the serviced community that expressed the greatest need for increased infrastructure and facilities provision rather than the non-serviced community. As afore discussed the difference in value with regards to infrastructure development could be due to the success levels of CapeNature's community initiatives, success is used in relation to the increased levels of understanding with regards to conservation. However, this can also be deemed success through the creation and changing of community values with regards to conservation, this could then be critiqued as a community-based conservation should include the values of a community rather than 'educate' a community to hold the values as desired by the management body.

The challenge values as have been discussed within this coded section all reflect issues concerned with access and behaviour regulation, it is the perceived need control over these

activities that the fence remains a constant debate between CapeNature and the communities. As afore mentioned, a fence, when seen in the context of both historical South African and local community political circumstances, becomes a symbol of oppression and exclusion that goes beyond a scientific approach to conservation or the dualism of society and nature.

> *"So, so the whole thing, in terms of putting up a fence to at least try and maintain what you have inside is a very valuable, opinion to put it that way, and it's a very novel, not novel, it's a good idea, it's something that you have to do because you want to, you know. But then again a fence in the South African terms, and unfortunately with the kind of history of conservation in South Africa where it was, National Parks and nature reserves that got fenced off, and people were kept out and white people were allowed in and black people weren't allowed in, and so on, and it is that thing, it's a symbol now, it's a symbol of something. So I would say that as far as, as far as Driftsands is concerned, I think if you dropped the fences around Driftsands tomorrow, you going to get some people that feel much better about this because, you know, it's not there anymore, however, you immediately, from a management, and it's a very easy sum total of there's no more fence there so people will, you know the little communities will start growing and so on."* (CapeNumber staff member)

The erection of a fence was commented upon in all interviews conducted, however within the formal designation of the reserve it was stipulated that no fence could ever be erected as it would contradict its designation as a community reserve.

Within community-based conservation the community are often referred to as 'becoming the fence' suggesting that an aim of community-based conservation initiatives is to educate or develop community values with regards to their neighbouring protected area so that they themselves become the boundary to activities detrimental to the biodiversity value of the reserve. It could also be suggested that a community boundary would be more effective than a physical fence at reducing and diffusing conflict between community users of the reserve, rather than the enforcement of the management body's regulations through more formal levels of enforcement.

Although it has been discussed within challenge values that even the communities residing within the reserve boundaries hold different values, particularly with regards to infrastructure and development, within one interview a CapeNature staff member raised a point of significant interest: there must be something being done or said by the communities residing on the reserve to other 'external' community members which has resulted in the minimal

expansion of the existing communities and residences, as would be expected in other open areas surrounding by over-populated housing.

> *"It is a wonder that that whole area has not be settled already, and maybe therein lies something perhaps, and, um, perhaps in some of the communities mind this place has always been, the nature, you know, and we must keep it like that, so, ja, so obviously it has survived without the fence, unfortunately the status is not good, from a natural pristine point of view and so on, but then again it's still there, it's still there..."* (CapeNature staff member)

The challenge within this quote is the conflict between the values held by the resident communities which prevent expansion further onto the nature reserve, and the expression of other challenge values as discussed previously. It could be suggested that the ability of existing residents to resist expansion and prevent new members joining the existing communities is a reflection of the value that the community places upon Driftsands as a biodiversity nature reserve, or the associated surface values as afore mentioned. However, as this section has discussed all of these values are conflicted by challenge values which threaten, in multiple and diverse ways, the existence and viability of the reserve.

Although the concept of a physical fence has been spoken of extensively in both the community and corporate interviews, the implementation of such a structure is not possible within the requirement of the designation of Driftsands as a community reserve. Within the context of CapeNature's community-based conservation objectives, as part of their wider organisational aims and objectives to develop and sustain a conservation economy throughout their network of reserves, it could be argued that the erection of a fence would undermine social and community objectives by removing the community from community-based conservation.

It can be interpreted that the designation of Driftsands as a community reserve, and most significantly the restrictions placed upon CapeNature with regards to the erection of a fence has ensured that community-based conservation has taken priority over any biodiversity management plans. With such a low biodiversity value in existence, it can be further argued, that the community-based focus of Driftsands Nature Reserve in an area surrounded by extreme social pressures has ensured its continued designation and protection.

With such a strong focus and high level of importance being placed upon community-based conservation the values of community are of great significance within CapeNature management plans and their approaches to conservation. As has been discussed there is a great deal of similarity between the values expressed by CapeNature staff and the Driftsands communities, however these values are not clearly expressed in the management

of the reserve, nor within some of the behaviours and activities as discussed within challenge values.

4.6. Interpretation and theory building

It was anticipated within the research that the values held and expressed by CapeNature staff members and the communities would differ to the extent that they would be representative of the traditional science based approach to conservation, and the more contemporary community-based conservation respectively and as such would be difficult to integrate into a comprehensive management plan. Throughout the grounded coding of the interview transcripts, supplemented with the participant observation, it was interpreted that the values held by both community members and CapeNature employees were very closely aligned.

In light of the similarities between the values expressed, rather the differences that could have been expected, the final research question posed in section 1.5.1 should be adjusted from: How can these multiple value systems be incorporated into a new management plan and objectives that places a more equal weighting on the values expressed? To: Why are the values expressed by the community and CapeNature staff members not being successfully incorporated into management plans?

As previously discussed, there are a highly significant number of similarities between the values expressed in relation to Driftsands Nature Reserve; despite these similarities being evident within the analysis and interpretation, they were seemingly not recognised by CapeNature staff members. Within a number of interviews CapeNature staff members commented upon the need to 'change' the mindsets within the communities, it is interpreted that the change would represent a change towards the values, aims and objectives drawn from within CapeNature.

> *"Because people don't know this is a nature reserve, so through the little programmes we do, at the end of the day we want that little change in the mind-set of people, we want to see that change with adults as well. Because we know culture, culturally it is different, there is a lot of differences around the area, people do practice kinds of rituals, and they just have different kinds of ways, which of course we respect, but we also need to bring that little bit of education and awareness."* (CapeNature staff member)

The above quote is taken from a discussion surrounding the educational value that Driftsands holds to the CapeNature staff member, it is widely accepted that education is a vital component of community-based conservation as it can provide socio-economic upliftment. However it could be interpreted as tokenism within community-based conservation critiques and a method through which to get the communities 'on-side' with top-down approaches to conservation. Although it is not being suggested that education is not a necessary part of community-based conservation, it is suggested that the topics of educational activities, the ways in which education is discussed, and the objectives and aims of education should be carefully examined to avoid such criticism.

Educational activities and initiatives which hold as their objective a change in participant mindset are those which could be interpreted as conservation propaganda, and are most often focused upon a science based approach. In the above quote the CapeNature staff member makes reference to the different cultural communities which form part of the geographical community of Driftsands Nature Reserve, it could be suggested that the critique of community-based conservation is not that of tokenism, but of the definition of community which has been used within the initiative. Within this research context the term community has been used to refer to both those within a geographical location (surrounding Driftsands Nature Reserve) and for those that have a specific interest in the area, both from the public and CapeNature staff members, however the definition could be interpreted differently within the quote as culture is referred to.

The below reference, also taken from an interview with a CapeNature staff member, refers to the need to 'change people's mindsets' towards the attitudes, objectives and aims of CapeNature. The respondent speaks of a difference in socio-economic status which results in a difference in values (although this was not entirely reflected in the expressed values as discussed). The reference to education and understanding of the concept of conservation and biodiversity has been interpreted as highly significant within this quote, as it not only refers to the socio-economic differences in educational opportunity and attainment between the communities and CapeNature staff members but also reinforces the traditional academic and scientific based approach to conservation.

> *"But before they are wanting to do something they must understand all the benefits, they must understand and accept it and it's going to be long term, people want to see like a quite solution, and they need money and jobs, and food of course because there's a lot of poverty surrounding this area so we can't now expect people to have that mindset because we studied and we understand the dynamics and that. And now people staying here, that are suffering right now as*

> *we speak, how do we change the people's mindsets? So it's all the programmes and all the initiatives and things that we have to come up with that is creative enough to get that through to the people to understand."* (CapeNature staff member)

The common critiques of tokenism and the concerns involving the use of the undefined term community are often applied to community-based approaches to conservation. However, these critiques imply that there is a difference in values held between those implementing the initiatives, and the community that are involved and benefit from the projects. It has been discussed that within the Driftsands Nature Reserve case study the CapeNature employees and community members express values which show a great deal of similarity, however this is not reflected within the physical manifestations of a community-based approach to conservation are mentioned.

The so called gap between the values held by CapeNature staff members and the community and the representation of these in the on-ground initiatives can be explained within the historical context of conservation, which has developed from a purely scientific approach towards a more contemporary community-based approach. CapeNature operates as a provincial organisation funded by public funds and as such must adhere to numerous policies and mandates at a local, provincial and national level. Given the protocols that CapeNature, as an organisation, must adhere to when managing Driftsands Nature Reserve and particularly when developing and initiating community-based conservation programmes, the process could be described as top-down in nature.

The supportive values, as previously discussed within section 4.3 when discussed within the context of the above top-down structures of CapeNature as an organisation can be seen as a reflection of such structures and processes. Interpreting these supportive values, in what could be described as a cynical manner, could lead to the suggestion that these values are not true values but are rather those justifications which support the existence of Driftsands as a nature reserve within CapeNature's top-down structure given its low quality of biodiversity and increasing socio-economic pressures. However, given the expression of supportive values from CapeNature staff members who have a responsibility to their work, and it is expected an affinity and passion for their chosen careers, and as such the expressed values will form part of their working ambition and ethic.

It could be suggested that the top-down organisational structure of CapeNature is a reason why the values of community and CapeNature members significantly similar. It could be suggested that those CapeNature employees who have direct involvement and knowledge with the reserve share many values with the community, but themselves struggle to work

through and within the top-down structures, policies and protocols of the organisation. However, this could be countered with the suggestion, as previously discussed, could be contributing to the communities values being aligned with those of CapeNature due to the educational, economic and supportive structures that the organisation provides.

A top-down approach is not only considered to be one in which initiatives are driven from the top-down but also refers to the processes through which on-ground and community driven initiatives are subjected to in order to receive financial and organisational support from organisations which control the financial and support structures. In this case study the top-down influence of CapeNature is exhibited through the control and allocation of economic funding, through employment, education, training and social upliftment which is reflected within the surface values that the communities have expressed in greater abundance than the intrinsic values.

As such, it can be suggested that the involvement and influence of CapeNature in itself has developed and created values within the communities which are drawn from a socio-economic standpoint. Although this serves the purpose of conservation education and the development of a conservation economy, as per CapeNature's goals and aims, it could be suggested that this is the manner in which Marxism and conservation are operating in collaboration. Furthermore it could be questioned whether the community's and CapeNature's values would be so aligned without the economic benefits and support that the management structure offers?

4.7. Conclusion

Marxist perceptions of conservation has been referred to within a 'black' or 'green box' model, reflecting the changing utilisation of nature as a commodity without exploitation, and evoke a transformation to social responsibility. This model can be used to interpret the hierarchical structure of values expressed by CapeNature staff and community members, in a way which expresses a method through which Driftsands is being utilised as a commodity to achieve the goal of community based conservation.

The Driftsands model, lies somewhere between the 'black' and 'green box' models, as one in which society is more reliant upon nature to meet its needs, but in a different manner to agriculture and industrialisation. Its reliance is drawn from a management organisation, whose aims and goals are aligned with the development of conservation awareness and sustainable development agendas.

Within this box model, Driftsands Nature Reserve is contained within the box as the nature/commodity/resource to be utilised. CapeNature provide the inputs, in the form of management practices, these are mainly finance, support and official designation of the reserve. The utilisation of Driftsands then acts as a vehicle through which the goals and aims of CapeNature can be met, and as such community values are developed.

Thus, the outputs within this model are community values, conservation, and a conservation economy. As has been previously discussed the values of the Driftsands community are refer most widely to some form of economic gain, whether this be directly through employment, or indirectly through education and training, and as such can have a financial value attached to them. It can also be said that the challenge values of the community, most notably infrastructure development, can also be valued in a monetary form.

Unlike the 'black' and 'green box' models as referred to be ecological Marxists, this model also provides two feedback loops which address the issues of sustainability, social transformation and the infinite capacities of nature. The first feedback loop is one which represents the meeting of CapeNature's goal and aim of creating and sustaining a conservation economy, and links the outputs back to the inputs. If the input of financial support and resources by CapeNature can be seen as generating a conservation economy and nature conservation outcomes, then the inputs are likely to be sustained or even increased. The second feedback loop also links the outputs back to the inputs, but as has been suggested, due to organisational red tape, and the top down organisational structure, this feedback is blocked. This feedback is between the community values and the CapeNature inputs.

The existence of a second loop, be it block or not, suggests that community values are not only developed or influenced by the inputs from CapeNature, but are also independent to and from them. This independence would allow for a point of reference for new inputs to be generated, through methods of support, or new community based conservation initiatives. However this route is blocked by the top down organisational structure, which has also been referred to as science based in its decision making.

What criticisms can be made of the top down organisational structure of CapeNature has a management organisation, have to be tempered by the contribution they are making towards the socio-economical development of the surrounding communities, and improvements being made to conservation practices on Driftsands Nature Reserve. In returning to the definition of community based conservation as given within the glossary, and taking into consideration the alignment of values as interpreted from the research, it could be suggested

that community-based conservation does not have to been seen exclusively within a bottom up approach.

The Driftsands model has struggled to take a bottom up approach due to the organisational structure of the CapeNature management authority. It can be extrapolated that this is a situation which will be true of the majority of government funding conservation authorities, who have to comply themselves with high levels of red tape, particularly when allocating funding. However, continuing through the quote of community based conservation given it could be suggested that CapeNature are at the start of their community-based conservation journey as they are providing opportunities, albeit limited, for the communities to participate in decision making activities, and providing them with sufficient information and support within the process.

Chapter Five

A Marxist model of community-based conservation

5.1. Introduction

The development, evolution and expansion of community-based conservation have placed an importance and necessity upon the inclusion of community perspectives in the methodologies and approaches to conservation, most notably values, knowledge and preferences of the communities (Lynam et al 2003). The concept of community-based conservation has increased the role of the social sciences within the wider, traditionally scientific based concept of nature conservation, both as a qualitative challenge to the quantitative concept, and with the use of qualitative methodologies in eliciting community values.

5.1.1. Concepts and Dualisms

It has been discussed, throughout a comprehensive view of the literature, that the concept of nature conservation has been drawn from the dualism of society and nature. As Huckle & Martin (2001) review at length, the contemporary environment is a hybrid of both nature and society, and as such one cannot exist without the other. The dualism of society and nature can also be seen to be reinforced within contemporary practices, such as the existence and continued designation of National Parks, which is presented as an area of untouched nature which should be kept separate from society and its influences, but in themselves are social creations (Irwin 2001). Irwin (2001) also questions the involvement of environmental activism and conservation in maintaining the society/nature dualism, they argue that without a boundary between nature and society how is one meant to conserve nature, a term which would then be undistinguishable?

The dissolving of the dichotomy between the concepts of society and nature has been tackled by both realism and social constructivism in the most contemporary approach to the academic discussions (Castree 2001; Demeritt 2002; Dickens 1992; Irwin 2001). Whilst Dickens' (1992) work has been used to demonstrate a critical realist perspective of the dichotomy, and Castree (2001) and Demeritt (2002) stand on the opposing end of the philosophical approach with social constructivism, all three of the academics make use of Marxism within their conceptualisation of the society/nature dualism.

The development of the society/nature dichotomy towards social constructivism and ever increasingly towards co-constructivism has introduced the role of knowledge, and its power and scale, into the discussion. Knowledge, and its influence, is most commonly discussed from the level of society or culture at which it is most dominant, and as such excludes those who are considered to have less dominance or power within society. As a result their knowledge and presence is excluded from natural places, and areas of conservation interest (Cresswell 2004). The exclusion process of these 'out of place' groups of society (ibid) has been closely linked to the Marxist process of alienation.

By placing an increased focus on the importance and influence of individual, and smaller scale knowledges up on the construction and co-construction of the society/nature dichotomy, social science in conservation has introduced new methodologies which elicit local values to nature as the source of the local natures co-construction, co-engagement and re-construction (Brown et al 2004; Hinchcliffe 2007; Mackenzie 2008; Milton 1996). Again, the use of community values can be understood from a Marxist perspective. Harvey (1996) suggests that a Marxist perspective offers the most advantage when interpreting values residing in nature. Harvey (1996) goes on to further argue that the influence and dominance of capitalism has resulted in the near removal of intrinsic values held towards nature.

The concept of conservation has been highly influenced by the social/nature dichotomy and the academic arguments surrounding it. As such it has also developed as a concept which was historically dominated by science and Western academic norms, to one, which challenged by the qualitative revolution and the re-emergence of the social sciences, now challenges the dualism with the development of community-based conservation initiatives.

The Brundtland Report (Irwin 2007; Smith 2008) marked the point at which community-based conservation became aligned with sustainable development, and as such integrated conservation practices with economic growth. As with the concepts of society and nature, the Brundtland Report suggested that economic development and conservation should not be seen as separate entities, but ones which are mutually dependent upon each other (Irwin 2001). In doing so, the Brundtland Report exposed the concept and practice of conservation to the market forces, as such conservation would be subject to economic forces and conservation would become an attractive option (Hulme & Murphree 1999).

The use of a Marxist perspective when researching the intricacies of the relationship between society and nature, and the subsequent concepts of conservation, is key as Marx placed at the centre of their perspective the relationship between society and nature at its centre, understanding that all of society's developments would be restricted by nature as a resource (Henderson & Sheppard 2006). Dickens (1992) goes as far to suggest that Marx

(and Engels) are the only writers whose works provide an adequate understanding of environmental issues. Marx understood nature to be a commodity, but one which could be utilised in a sustainable way to meet social transformation, as suggested by the Brundtland Report and the broader aim of sustainable development (Brockington et al 2008). By examining the evolving relationship between capitalism and conservation, Brockington et al (2008) suggest that it is the qualitative shift of conservation practices towards the increased inclusion of social sciences that have bought about a change in its dynamic.

5.1.2. The Driftsands case study

The development of the paradigms of biodiversity conservation in South Africa towards a community-based conservation approach has been, arguably, a more difficult task than in other post-colonial counties due to the historical legacy of race relations and apartheid, and with the socio-economic pressures of a developing capitalist economy. As such, in line with the contemporary concepts of community-based conservation and sustainable development, the South African governmental approach to conservation is one that seeks to link biodiversity with socio-economic development, particularly of historically disadvantaged communities (Algotsson 2006).

CapeNature is the institution which is responsible for biodiversity conservation within the Western Cape province of South Africa. Through its vision, missions and aims CapeNature seeks to meet the multiple demands of conservation and sustainable development: *"Vision: The establishment of biodiversity conservation as the foundation of sustainable economy in the Western Cape thereby creating benefits and opportunities for all."* (CapeNature 2007(a))

As the only provincial nature reserve within an urban context, in South Africa (Open Africa 2011), Driftsands provides a unique case study of biodiversity conservation within a community which faces high levels of socio-economic challenge. The ambition to integrate biodiversity conservation with socio-economic development lead UNESCO (2003) to call for the scientific community to develop a more comprehensive view of the value of nature which should be developed to include values from the local community, both intrinsic and economic, into a fuller and more inclusive approach to conservation.

The research questions of the study sought to uncover the values held by CapeNature staff and the Driftsands community, these were then analysed and compared.

- What values are held by those employees who hold decision-making responsibilities, with regards to Driftsands, within the corporate organisation CapeNature?

- What values are held by the community members surrounding Driftsands Nature Reserve?
- How do the corporate values of CapeNature compare with the community values expressed by Driftsands' neighbours?
- How can these multiple value systems be incorporated into a new management plan and objectives that places a more equal weighting on the values expressed?

The final research question was initially incorporated on the assumption that the corporate CapeNature staff values and those of the Driftsands communities would differ, reflecting the scientific and community-based approached to conservation respectively. Given the analysis and interpretation which suggested that the values were more closely aligned that initially assumed and as such the research question was changed to: How are these multiple value systems integrated into management plans, and why are they not being fully expressed?

5.1.3. Methodology

Given the nature of study, the research methodology employed was that of a purely qualitative approach, which was influential in the paradigm shift between historical science based concepts of conservation towards a more community-based concept which is liked to socio-economic development. The qualitative methodology was employed due to its direct relation to the context of the study, but also as Marshall and Rossman (2011) discuss the methodology is one which encourages participants to be speak of knowledges, subjective understandings and meanings, and as such can be applied to research into community and corporate values.

As has been previously referred the research was conducted within a singular case study setting at Driftsands Nature Reserve, a CapeNature managed reserve within the greater Cape Town area. A singular case study was used due to uniqueness of the case, and because it allowed for an in-depth study of the contextual complexities of the case study (Punch 2005). The specific research design and methodology of semi-structured interviews, participant observation, theoretical and snowball sampling have been drawn from the grounded theory research model with an influence from Marxist dialectical thinking.

A grounded theory dictates the process of data collection through a particular sampling methodology, specifically that data analysis is conducted concurrently with data collection until a level of theoretical saturation is achieved (ibid). The analysis consisted of the coding

of the interview scripts after transcription within a CADQA programme, and have been widely discussed and interpreted to provide a model of values-based community conservation in a top-down organisation.

5.2. Discussion

Following Brown's (2003) suggestion that a paradigm shift alone will not be enough to create a significant change in the success of conservation programmes, and that to achieve a meaningful change community-conservation must make a shift in decision-making and organisational structures, values have been explored to see where such a shift could be made in the management of Driftsands' nature reserve.

Through the processes of grounded theory coding and data analysis, three major themes (or categories) emerged from within the data, these were termed foundation, supportive and surface values. These coded themes reflect the values held by the Driftsands community and CapeNature members who took part in the research and, unanticipated within the research, the commonalities rather than differences within the values of the populations of interest have been discussed.

5.2.1. Foundational Values

Foundational values have been categorised as those which provide the grounding to the other two coded categories, supportive and surface values. In summary they can be described as those values which form the basis for the reserves existence, both in its environmental and social context, these values could also be described as intrinsic values held about nature, and as such can also be referred to as those values most affected and diminished by capitalist processes (Harvey 1996).

The category of foundational values was divided into two sub categories reflecting both the biodiversity and social significance of the nature reserve: Foundation – environmental and Foundation –social. These two categories are considered to be of equal importance given the designation of the reserve as both an area for biodiversity conservation, and for community access. The division into sub-categories can also be seen as reflecting the two dualistic elements of society and nature in the dualism, furthermore it can be argued that the combining of these elements into one category, particularly given Driftsands initial designation, reflects a co-constructional perspective of the contemporary dichotomy.

5.2.2. Supportive values

Supportive values, it could be suggested, were the most significant category of values expressed, although they were almost exclusively expressed by CapeNature staff members. This set of values refer to the opportunities that the management body provides to the communities, by way of conservation of the reserves biodiversity, and the ability for the community to participate in conservation activities which would be seen to increase their socio-economic status. The category title 'Supportive' is drawn from the sentiment that without CapeNature's involvement and economic support, the community may not be able to hold the Surface values, which can be seen to produce the tangible social benefits of community-based conservation.

It has been suggested within the discussion of analysis that the lack of expression of supportive values, from the community, is the result of a perceived lack of interaction and understanding of the operational procedures and structures of CapeNature as a management authority. It could further be suggested that the community have not been see to express any supportive values as they themselves do not feel that they hold, or represent any of these values.

Analysing these supportive values within a Marxist perspective, allows for a discussion about the market forces of capitalism on Driftsands Nature Reserve and its community, and the conservation practices of CapeNature. As Hulme & Murphree (1999), and Brockington et al (2008) suggest the impact of the social sciences upon conservation has allowed for the deepening of the relationship between conservation and capitalism. Within the context of a socio-economically deprived case study, such as Driftsands, and a science based management organisation such as CapeNature, the relationship can be seen in the corporate values expressed.

It could be further interpreted that the market forces being exerted upon Driftsands are those which come from the community, and their need to generate income from the reserve area as a natural resource, as will be discussed within surface values. These market forces are met with CapeNature's market potential, through the way of economic opportunities or opportunities which would lead to economic uplifting of the communities. However, some of the comments made by CapeNature staff about this potential, could be interpretative as the provision of a economic incentive to the community's cooperation in conservation practices, which may be science, not community based.

5.2.3. Surface values

The final category in the value hierarchy were those termed as surface values, which are dependent upon both the foundational and supportive values in turn. As this was the most widely referenced category, within both communities of interest, it was spilt into sub-categories of cultural; economic; educational; and challenge values. Although only one category was defined as having an economic benefit in its value, it was clear that the vast majority of the different values expressed throughout all of the sub-categories required some economic input, resulted in an economically expressed output, or both.

Returning to the above mentioned suggestion about the market forces being played out at Driftsands Nature Reserve, it has also been suggested that the community expressed surface values most widely as they are those which reflect their socio-economic situations, and the opportunity to improve them. The community's dominance of expression in this category is balanced with their lack of expression within the foundational and supportive codes, this could also be argued to reflect Harvey's (1996) comment that capitalism is destroying intrinsic values held in nature, and that Marxist view that nature is a commodity or resource for conservations benefit.

In summary the cultural values were those surface values which were interpreted as least associated and linked to economic benefit or need. Rather, cultural values can be seen to reflect the critique of community-based conservation which is concerned with the inclusion of community values which this research addresses, as the community voices a desire for increased cultural activities to be included within the reserves conservation. The cultural surface values have also been interpreted to show a desire for the reserve to act as an area which can address the historical issues of social exclusion and divisions. This is an area of community conservation which has been little addressed within the literature, rather it refers to the exclusion of people and not the ability from conservation to bring divided communities together. This is an interesting interpretation of community-based conservation in a very specific context of South African history, and the designation of Driftsands as a community nature reserve, and as such is one without physical boundaries.

Although many cultural values were related to cultural education, educational values as surface values referred to as environmental education which could also be formally based. For the most part the conservation educational values, expressed by both the CapeNature staff members and the community, reflected a dominance of traditional scientific approaches to conservation which involved CapeNature teaching the community about conservation in order to sustain Driftsands with an intrinsic value. As such, it could be interpreted that environmental education, is operating with this contextual model as a method of recreating

the intrinsic values of conservation and nature which have been lost to capitalist practices and progress. However, this suggestion is tempered by the idea that the community see education as a way of reinforcing the traditional practices of conservation, and comment that environmental education would be a means of justifying the erection of a physical boundary to the reserve, a concept which appears to be contradictory in its approach.

The sub-category of economic values was the most widely expressed by the community, and reflects both the communities need for some form of economic benefit to come from the reserve after the loss of intrinsic values through capitalism, and the requirement of community-based conservation to integrate with sustainable economic growth, as in the Brundtland Report. CapeNature, as discussed within the supportive values, is the key to the provision of the majority of economic values, however they are limited by governmental procedures and bureaucracy, and within their own organisational protocols to what economic benefits can be offered. It has been critiqued that the majority of economic benefits offered are based upon traditional conservation practices and provide the community with skills that may not be beneficial in the urban employment market which they reside. The sustainability of these activities can also be questioned given the size and the biodiversity quality of the reserve.

Furthermore, it is interpreted that although providing a level of socio-economic uplifting to the communities and meeting the aims of CapeNature and the concept of community-based conservation in general, the dominance of economic surface values by the community reflects a the market forces in operation. As such, it has been argued that the offer and opportunity for economic benefit to the communities can be used as a mechanism for creating values, and possibly recreating intrinsic values, through capitalist processes.

The final surface value category was termed challenge values, and reflects those values which were seen as a challenge to the concept of community-based conservation at Driftsands Nature Reserve. All of the values discussed within this category are related to the concept of bounded nature which is taken from traditional approaches to conservation and is highly symbolic in the historical South African context of social exclusion. However, further interpretation of the sub-category showed that there were not just divides between the communities and the nature of Driftsands, but also between different communities themselves, geographical, cultural and economically aspirational communities.

Of most concern within this sub-category was the expression of values from one community which reflected a complete destruction of intrinsic values to Driftsands, and as such only saw the area as an opportunity for capital investment and infrastructure development. These values must be interpreted both within the working of Marx's capitalism, but also within the

socio-economic context of the case study. To this community the lack of opportunity for development was seen as another boundary to them which excluded them from opportunities that other communities had to better their lives.

However it has been argued that these socio-economic pressures being experienced by the surrounding Driftsands communities have contributed to its continued designation as a nature reserve. A community-based focus to conservation, within a market dominant by capitalist pressures, it could be argued is the only approach that would be able to adequately meet the multiple aims of community-based conservation.

5.2.4. The Driftsands Box Model

In answer to the research questions, the above discussion has acknowledged and examined the close relationship between the values held by the communities and CapeNature staff members, and further interpretation of the complex values into a box model which assist in questioning why these closely aligned values have not been fully integrated into a conservation management plan at Driftsands Nature Reserve.

Most discussion, given the commonality of values held by both the communities and CapeNature staff members, has been in relation to the economic supportive values that the management authority provides, and the surface values that they produce, foster and recreate within the communities. The organisational structure of CapeNature can be described as top-down, and due to the governmental nature of the authority, it is suggested that this is not a management decision made by CapeNature but is rather enforced upon them from the wider funding structure. As such CapeNature is limited in the community-based conservation activities it can participate in. Furthermore it's control of economical support which the community value very highly acts as a means through which it can influence values and activities of the community towards its science based conservation practices.

In aligning conservation ambitions with socio-economic benefit of the community, the conservation approach of CapeNature at Driftsands Nature Reserve can be interpreted, within a Marxist perspective, as the use of nature as a commodity, without exploitation, as a means of creating social transformation. It is suggested that Driftsands itself is the resource which is being utilised by both CapeNature to achieve its biodiversity conservation objectives, and to create socio-economic development for the surrounding communities, with its operational and economic support.

Considered as a box model as referred to within discussions of a Marxist perspective of conservation, the Driftsands model is more complex than the ‘green’ and ‘black’ box model as it includes feedback loops. The Driftsands box model has CapeNature as the input, this is seen through the operational and economical supportive structures, and the significantly important designation of the reserve. The ‘box’ is the Driftsands area and the communities that are linked to the reserve area. The outputs of the model are the community values, biodiversity conservation and the creation of a sustainable conservation economy, which provides the socio-economic development of the community.

The two feedback loops reflect the issues of sustainable development, social transformation and the infinite, unexploited capacity of nature as within the Marxist box models of conservation, and the aims of community-based conservation. Once again, the model reinforces the argument that CapeNature’s role, as a top-down management authority, results in CapeNature having control of the supportive structure and the economic benefits. If the input of CapeNature were to be removed, due to the un-designation of Driftsands as a reserve, possibly due to the lack of conservation benefit, or due to other market forces such as demand for infra-structure and social development, it could be argued, that many of the community values would be lost as there would not be the support there from CapeNature, nor the designation to maintain the foundational values.

Both feedback loops link the outputs back to the inputs, and as such they sustain the box model, therefore sustaining the biodiversity conservation, and potential economy of Driftsands Nature Reserve, and therefore the inputs from CapeNature are maintained. The feedback loops represent the sustainability of the model, the first links all the outputs back to the inputs from CapeNature. The governance model of CapeNature also ensures that all inputs are reported upon to ensure responsibility and transparency of the operational structures, as such the reporting of conservation and economic success should result in the continuation and possible increasing of the inputs from CapeNature.

The second feedback loop is conceptual at the time of the research and reflects the difficulty, within a top-down management, of how the community values feedback into the CapeNature inputs. This feedback loop can also be interpreted within the critiques of community-based conservation, particularly that of tokenism. However, the second feedback loop also demonstrates that community values are not only developed or influenced by the CapeNature inputs to the box model, but are also independent to and from them. However, the existence of community values as previously discussed, suggests that new values are being creating and regenerated through the CapeNature supportive structures and

community-based conservation initiatives, even if it is somewhat blocked by organisational red tape.

The existence and expression of community values which are closely aligned to those discussed with CapeNature staff members, demonstrate that despite the criticisms, the community-based conservation initiatives are resulting in the meeting of the aims and goals of CapeNature and the wider concept of community-based conservation. Interpreting the community-based conservation through a Marxist perspective also demonstrates that conservation can operate as an approach which, using market forces, generates the social transformation and the sustainable, utilisation of nature in a non exploitive manner, within a top-down model. This suggests that the community-based conservation model does not have to exclusively operate within a bottom-up model.

This new model is significant, particularly as the vast majority of conservation areas are controlled and managed by governmental authorities, and as such would be limited in their down-up approaches due to their organisational structures and high levels of red tape, especially in the allocation of funding. The critiques offered throughout the discussion of community and CapeNature staff member values demonstrate that the model of community-based conservation being practised at CapeNature is not without its critiques and issues, however it is meeting the goals, aims and objectives of both CapeNature and the broader concept of community-based conservation.

5.3 Limitations

The discussions and the subsequent new box model of Driftsands Nature Reserve were drawn from qualitative semi-structured interviews, group interviews and researcher participation and reflexivity within a case study context. As such limitations within the study were those of context, methodologies used and of the researcher's participation, reflexivity and interpretation. Although these limitations could be seen as negatively affecting the conclusions sought, within this type of qualitative research it can also be suggested that they can be referred to as the critical aspects upon which the research drew and acknowledged in their making interpretations. Furthermore the awareness of such limitations and critical judgements can be seen to validate and increase the trustworthiness of the results. In discussing their own research into the interpretation of community values, knowledges and preferences in natural resource management Lynam et al (2007) comment that:

"The researcher must recognise that the relationship among the participants of an informant group, including the researcher, will influence the results. Any observed outcomes will reflect the dynamics among the stakeholders, as well as societal and cultural norms. This presents challenges to the practitioner, who must identify with underlying power relations and then either adjust for them or take them into account."

5.3.1 Contextual

The context of the research is that of a case study of Driftsands Nature Reserve, which is managed by CapeNature. As afore commented the case study method was chosen as it allowed for the detailed, full and deep understanding of a research area which may not have been achieved in a broader comparative study (Punch 2005). However, given the intricacies of the case study area, and the misassumptions that were made regarding the commonality of values between the two populations of interested, it could be suggested that a comparative study may have also been a fruitful approach.

Although the intention of the study was not to create a model for generalisation, it may be suggested that the model may benefit from a comparison to other case studies, or research areas, in order to understand its full potential and application. The uniqueness of Driftsands given its urban location and socio-economic context was the uniqueness of the study area which warranted a case study approach, however the uniqueness of the context may not imply that the result are unique because of the context. Therefore a comparative study may be beneficial to the management authority if the new model were to be extrapolated to their other reserves.

It could also be considered that there are wider contextual issues with the case study chosen, particularly relating to the identity of the researcher. This was most notable with the community population of interest. Willis (2003) suggests that the 'foreignness' of the researcher may create a dynamic where the respondents are giving 'right' answer, this could be due to the will to give a perception of their lives or because, as was apparent in the research, they felt there was something to be gained from the research that would be of benefit to them. Although the objectives and purposes of the research were outlined to participants and their understanding gained through ethical clearances, some participants voiced other benefits that the researcher's presence could bring them.

This reciprocal relationship may have also been present within the researcher's relationship with CapeNature, particularly as their permission was sought for access, both to staff

members and the communities. Patton (1990) suggests that *"This reciprocity model of gaining entry assumes that some reason can be found for participants to cooperate in the research and that some mutual exchange can occur."* This mutual exchange, particularly with the CapeNature staff members, can be interpreted as a sharing of thoughts and ideas throughout the process, and with the presentation of the research outcomes. However there was some concern that some participants felt the research would benefit them in a more practical way than the researcher has presented, this was not considered to be pressure by the researcher but was acknowledged when reflecting upon the research process.

5.3.2 Methodology

The research methods, within the case study, consisted of individual and group interviews which were semi-structured in their application. It was the methodology of the study that presented the most significant limitations of the research, however many of these were acknowledged before the research was conducted and the methods were still considered to be the most appropriate for research of this type.

For the purpose of reflective fieldwork, and to acknowledge improvements that could be made during further studies, the interview methodology and sampling methods were considered to be most influence with the research, and these influences have then be further reflected upon by the researcher using observations from the participant observation conducted.

5.3.2.1 Interview methodology

A semi-structured interview methodology was used as it was considered the most appropriate way to communicate with both populations of interest in the same manner, and as such the results would be more comparable. It was considered, upon reflection, that there were several limitations to the interview process, which were mainly: language; group interaction and; comparability between the two communities of interest.

Language was an obvious limitation to the study which was foreseen from the outset of the research. As such the research, to some extent, restricted the voices of some participants as a translator, from CapeNature, was used. There are two main issues of concern, firstly that questions were not asked in the required way to encourage the participants to speak about their values, and that their responses were not translated to the best level of comparison. There may also be concern that the use of a CapeNature staff member, who also took part in the study, could also have conflicted the data. However given the language

limitations of the researcher, the language capabilities of the participants and the contextual situation regarding research funds and time, there were no other options available to the researcher.

Kitchin and Tate (2000) acknowledge that one of the criticisms of the semi-structured interview form is that topics of interest may be omitted mistakenly. Within the research process the research was unwilling to prompt participants to speak about specific topics as there was a concern that this would lead to 'forced' and not true values being discussed. Although probing was used a method for eliciting deeper values and encouraging participants to speak further about values, the flexibility of the process may have reduced comparability of the participants values.

The use of group interviews and individual may have also reduced the comparability of the populations of interest as different dynamics can be seen to influence the values voiced. Although a benefit of group interviews was deemed to be that the community participants would feel more comfortable in a group of peers, and power relations would be reduced between the researcher and the participants, power relations within the groups often had limitations and challenges. As Sarantakos (2005) discusses the relationship between members of the group may result in participants not voicing their real opinions; a dominance from some group members in the discussion; non-participation from members; difficulty in guiding discussions, all of which could result in non-representative findings.

Although conducting individual interviews, rather than group interviews, with the communities was an option for the researcher, and could be an option in future studies, it is suggested that a combination of first group interviews and then individual interviews be conducted. This would still allow for a greater number of participants within a research time scale, but would also allow the dynamics of a group setting, and the privacy of individual interviews to generate the most representative results.

Furthermore Punch (2005) suggests that all interview responses must be interpreted through the researcher's reflexivity which includes the researcher's bias, identity and their cross-cultural influences. Given the diversity of participants, and the static identity of the researcher, the limitations with cross-cultural relations, language and interpretations have been acknowledged throughout the research process. It could be argued that research would have yielded different results if the researchers identities had be more closely aligned with that of the participants, however there was a diversity of participants interviewed, the researchers identity would not have necessarily resulted in a greater understanding, empathy or a shift in the power relations that exist between researcher and participant. It was also commented upon that it was refreshing to have a researcher of a different

nationality, and culture, to the participants as they may have been free from historical prejudice and influence.

5.3.2.2 Sampling

The sampling method, described as either purposive or theoretical, was employed as part of the wider grounded theory, snowball sampling was also used to gain access to a wide variety of participants. However, these methods were only deemed to be successful within the corporate community of interest, within the community the sampling was difficult and, it could be suggested, not as diverse or comprehensive as it was anticipated to be.

However it can be argued that no other sampling method would have achieved a more comprehensive or diverse sample of the community population, and that the limitation with this method was that saturation was not achieved as the sampling process stalled. The process of participant observation has allowed the researcher to offer some explanations as to why the sampling process slowed as the research progress continued, which was only anticipated to occur when saturation of the coded categories was achieved.

Upon reflection, the most significant absences within the sampling were of the Los Angeles community living within the reserve; community groups from surrounding communities; educational and school community members and; traditional healers. The Los Angeles community could be attributed to the historical tensions which had existed between the communities living within Driftsands Nature Reserve. A community leader was used to negotiate group meetings on behalf of the researcher, and after unsuccessful negotiations with the Los Angeles community it could be suggested that the community had a misconceptions about the research and the other community's involvement, resulting in them not wanting to participate in the research.

It was hard for the researcher, even with the processes of participant observation and reflection, to anticipate why negotiations between the Driftsands steering committee and other community groups. Given the enthusiasm for the research from the participants, it would be hard to suggest that they were not willing to negotiate successful meetings or introductions. However, the lack of willingness to participate could be due to the perceived 'otherness' and motives of the researcher, particularly as they were seen to be working with CapeNature. There may also exist, as with the communities living within the reserve, some political tensions between communities, which were touched upon with a committee meeting, as well as cultural tensions which existed between communities and towards the researcher as a female.

Senior members of the school and educational communities surrounding Driftsands were contacted by the researcher, by telephone and email. Although successful conversations took place and enthusiasm for the research was experienced the researcher was not able to conduct any successful interviews. There were several meetings which were cancelled, with the participants citing lack of time as their reason for not participating. Again, it is hard for the researcher to reflect upon the reasons why participation was lacking, it is highly plausible that there was indeed a lack of time, given the educational, and socio-economic strains of the communities involved.

Only one successful meeting was carried out with one traditional healer, again, the researcher had made personal contact with several other traditional healers and members of the Rastafarian community. One meeting was cancelled due to the participants working commitments, and unfortunately no members of the Rastafarian community wished to take part in the research.

Upon reflection the issues with sampling within the Driftsands communities could be resolved so that saturation of data could be achieved with the researcher participating and communicating at a deeper level with the communities. It may also be beneficial for the researcher to further understand the relationships between the communities and community groups before initialising the sampling processes.

5.3.3 Critical reflexivity

Critical reflexivity within the research process, particularly within subjective social science, is vital in analysis and gauging the validity of conclusions. Participant observation has been used within a research methodology to assist the researcher in acknowledging the full extent of both the ways in which subjectivity and inter-subjectivity is reflected within the research process and conclusions (Dowling 2000). Critical reflexivity as a process of recognising subjectivity has been influential within section 5.3 which has discussed the limitations of the research in the acknowledgement of threats to validity within the research design and methodology.

All processes and precautions put in place within the methodology to secure validity, as widely as possible, were followed within the research process. However, not all interview transcripts could be verified with the participants, as has been previously discussed within the research methodology. It is anticipated that the validity of the research has not been compromised due to the lack of participant verification as internal checks were conducted between the research transcripts, and with the participant observation and reflexivity that

was experienced by the researcher though out the research process. It could be suggested, as with the sampling methodology limitations, that an increased emersion in community activities by the researcher would have lead to a greater success in validation of transcripts, however this proved to be too time intensive within this research context.

The most important, and unseen, critical reflexive process which has been used within the validation of the research is crystallization. Throughout the data analysis process, all of the data transcripts have been validated within themselves, against participant observation records, and through researchers self-critique and self-reflexivity. Mapping and illustrative exercises have been used within the CAQDA, as part of the grounded theory process and as such forms part of the research validation.

Critical reflexivity has been used as both a part of the validation of the research process and findings, as well as forming part of Marxian dialectical thinking in a grounded theory model, which has been used to develop a model which links the complex concepts of nature, conservation and capital within a theoretical model. The limitations which have been highlighted are seen as such, limitations to the research, rather than full critiques of the research process. As such, the research methodology could be adequately refined and applied to other case study areas in order to further expand this theory without the limitations of this study.

5.4 Recommendations

As has been previously identified within the limitations of the study, there is plenty of scope for developing the methodology of the research to one which could be described as more inclusive in its approach if the limitations were to be addressed. Furthermore it is recommended that in developing the subject matter of values in conservation, and indeed community-based conservation in itself, should place a higher focus on the concept of community itself. As Klein et al (2007) note: *"Local people are generally assumed to be a group of relatively homogenous households who possess common characteristics..."* Agrawal & Gibson (1999) go on to further discuss the concept of community and its, highly influential, relationship with the concept of contemporary community-based conservation which is integrated with sustainable socio-economic development:

> *"The vision of small, integrated communities using locally-evolved norms and roles to manage resources sustainably and equitably is powerful. But because it views community as a unified, organic whole, the vision fails to attend to*

> *differences within communities, and ignores how these differences affect resource management outcomes, local politics, and strategic interactions within communities, as well as the possibility of layering alliances that can span multiple levels of politics. Attention to these details is critical if policy changes on behalf of the community are to lead to outcomes that are sustainable and equitable."* (ibid:633)

As such it is recommended that further study could be conducted with a focus on a smaller geographical community. Within the Driftsands case study this could be within the three communities living within the reserve boundary, but that the sampling methodology and analysis would be concerned with the demographics within the communities rather than the more generalised Driftsands community used within this study. It is suggested that the focus on smaller, more tightly defined communities will work better within the grounded theory sampling methodology, and as such many of the limitations discussed with regards to the applied sampling methodology will be negated.

Given the active management of Driftsands Nature Reserve, and the values that the CapeNature community have been shown to hold with regards to the reserve area, it is also recommended that further study could be conducted which would integrate and more closely inform a management plan. Drawing on Brown's (2005) study and the work of Raymond et al (2009), the values research at Driftsands may be more beneficial to CapeNature, as management organisation, if it were to include value mapping as a form of analysis. This could allow management to be focused in specific areas of the reserve for a diversity of purposes reflecting values, it would also allow the development of areas with low value consideration to be increased through a change in management practices. However, this recommendation may better be suited to a reserve larger in area than Driftsands as participants may not be able to distinguish different areas and their associated values given the relative small area size of the reserve, and if there were able to it may not be feasible, again given the size, to manage the given areas in different ways and for different purposes.

Brown (2005) also draws influence from the concept of 'sense of place' which refers to the emotional linkages communities develop between themselves and a place, which can be discussed through values, but also though emotions, meanings, symbols and historical attachment. Firth (2008) refers to aesthetic experience of place, which can be highly influential upon the relationship between the environment and society, and the meaning that is placed upon this relationship.

It is suggested that the interview methodology and sampling would not only benefit from a smaller more tightly refined definition of communities within the study, but if an approach of

'sense of place' were to be adopted instead of a more generic approach to values, then the interviewing methodology of life history interviewing could prove to be more beneficial to the research (Jackson & Russell 2009).In the South African context a life history approach to interviewing, particularly with regard to sense of place, could provide a biographical context as to how and why community-based conservation efforts and successes differ within different communities, and thus could provide new insights into the social, historical and cultural influences that personal histories have upon contemporary conservation efforts.

5.5 Conclusion

Much of the critique of the historical concept of conservation has been based on the argument that the conservation was top-down in its approach and relied too heavily on Western and scientific practices. As such the concept was seen to alienate local people and reduce its ability to integrate socio-economic development in its practice as it operated in a vacuum (Smith 2008). The top-down approach, as a result of such criticism drawn from the qualitative revolution and increasing involvement of the social sciences in environment management and conservation, and the publishing of the Brundtland Report in 1987 lead to the development of bottom-up approaches to community-based conservation.

The focus of the bottom-up, and community-based approaches to conservation was that of placing control, decision making within local communities so that their knowledge, values and cultural identities could be included within the conservation of the environments from which they has been previously excluded from (Smith 2008). It has been suggested, within the research, that a top-down approach is somewhat inevitable within management authorities which are governmentally funded, for example CapeNature, and as such it could be questioned how their community-based conservation initiatives operated within such a contradiction.

The research sought to look at the differences between the values held by the CapeNature corporate community and the Driftsands community, as a way of assessing the ways in which the community values could be better integrated into their top-down conservation practices and as such result in more successful community-based conservation activities. The similarity and cohesion in values between the two communities of interest were unexpected the researcher and as such demonstrated that there was a much greyer scale of conservation practices between top-down and bottom-up approaches than had been reflected in the literature, and most specifically the critique of science based conservation.

As such the conservation practices operational within CapeNature's management of Driftsands Nature Reserve is that of bottom-up procedures and processes within a top-down operational model. With the development of a Driftsands model of community-based conservation, which is based on Marxism box models of conservation, the limitations within the community-based approach are those of red tape and bureaucracy within the operational procedures and as such do not reflect a direct critique of CapeNature's management of community-based conservation initiatives. These feedback loops do, however, represent that challenges that CapeNature and the communities face in developing a more 'true' community-based conservation approach which is organisational context, rather than a focus on the values of the community which are already held and recognised by the corporate CapeNature community.

The feedback loops of the Driftsands model are concerned with the allocation, provision and monetary value of economic resources placed into conservation activities which the community can then utilise to develop their own socio-economic status and develop a conservation economy in partnership with CapeNature. It is this contemporary dualistic function, for both the community and the environment, of community-based conservation that Brockington et al (2008) result in a conflict in the control of funding. They continue to discuss how these funding structures are further complicated by law and policy regarding environmental conservation, human and social rights, and the involvement and evolution of governmental partnerships with NGOs, private economies, industry and community-based arenas. Although this new emerging partnerships, which Brockington et al (2008) refer to as 'private indirect government' can be the sites of conflicts, struggles and fragmentation, it is within this context that new types of territorialism and democracy can occur:

> *"In all these processes elite global networks of governance agencies, NGOs, communities as their representatives and private enterprises can be strongly involved and profit from their involvement."* (ibid:13)

Within a wider, national, context of conservation in South Africa there are challenges concerning the historical legacies of community exclusion and colonial practices, as well as the contemporary fractures and fragmentation within governance structures and policy (Müller 2009). However, a move from a technocratic to a primarily participative approach to governance, and reflected within conservation, has resulted in the devolution of decision making and the decentralisation of policies.

Given the interpretation of the research it is suggested that community-based conservation within CapeNature, with Driftsands as a complex example of biodiversity needs and the socio-economic challenges that face South African society, has demonstrated that there is a

move towards primarily participative governance and as such a move towards community-based conservation which is operational and successful within a top-down authority structure.

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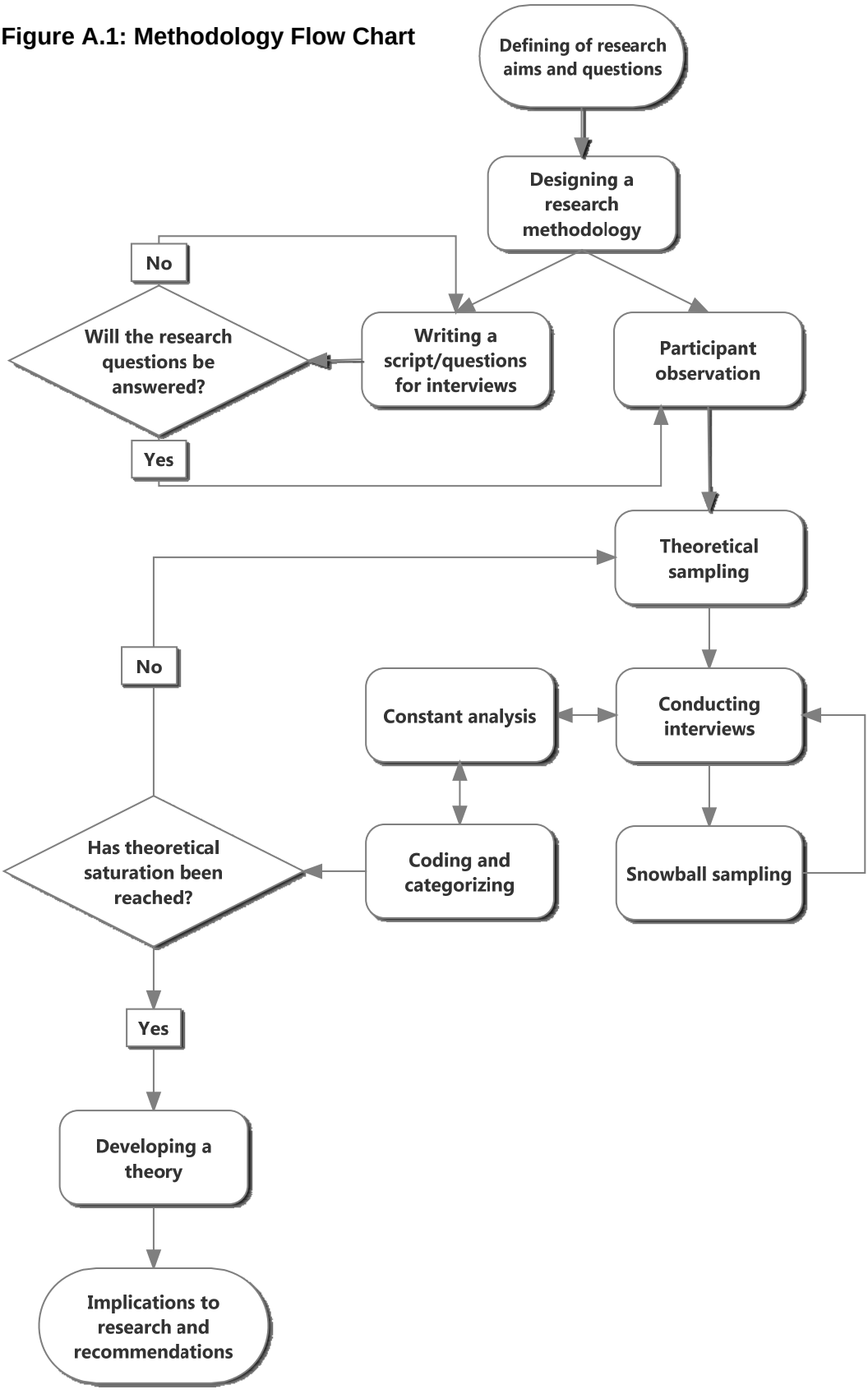
Annexure A

Figure A.1: Methodology Flow Chart



Participant Consent Form

Dear Sir/Madam,

I am conducting research for my Geography Masters degree, and I would like your help. I am studying how your personal values can be used in the plans for conserving Driftsands Nature Reserve, so that it can become a place that everyone can make use of and appreciate.

I am hoping that you will agree to speak with me about how you feel about Driftsands Nature Reserve, and help me understand what you feel is good and bad about the area. I will only be asking you to speak with me once about your values, and then meet with me again to make sure I have recorded you opinions in the right way. I will be recording the conversations on a tape recorder so I can write down accurately what has been said.

You do not have to help me, but I would appreciate it very much, even if you do speak to me you, you can tell me you do not want to carry on and we can stop talking, if you do say this I will not use your views in my research.

When I write up our conversations you will only be identifiable by your name and the community you live in (or that you work for CapeNature), if you do not want to be known by your real name then I can use a different one for you.

Once I have written up the conversations, and you have checked they are right, I will use the information to write my thesis. During this time I will keep the information safe on my personal laptop, and when I have completed my degree I will destroy all data, and under no circumstances will it be passed onto a third party. If you allow, CapeNature may wish to have a copy of our conversations, but you will be asked before I pass anything on.

If you have any further questions regarding this research please feel free to contact me.

Your participation is greatly appreciated.

Shelley Foot	Participant

Interview Guide Questions

Actions

- What activities do you undertake within Driftsands Nature Reserve? (These include all types of interaction whether they be organised by CapeNature or informal activities)
- What other activities would you do if there were no personal limits or any put in place by CapeNature?
- What changes do you think could be made to reduce the limits, and allow you to participate in more activities? (Changes should relate to the achieving of some of the interactions that were uncovered in question two)

Goals

- Why do you do these things? (as mentioned in the actions section)
- And what are the outcomes of these activities, the benefits and negative impacts to both yourselves (and your lives) and Driftsands Nature Reserve?

Attitudes and Values

- Why and how are these outcomes important to your everyday life and to Driftsands? (Outcomes as reflected in question five)
- Does Driftsands help you or cause problems in your everyday life? And how does it do this?
- What are the main things that you value about and in Driftsands Nature Reserve, how do you value these things and why?
- What are the main things that you place no value on in Driftsands Nature Reserve, how and why?
- Can you describe the locations of these positive and negative values that you have mentioned?
- How and where does Driftsands fit with the other things you value in your everyday life? And do you combine any of these other values with Driftsands Nature Reserve?

UNISA university of south africa

2011-03-26

Ref. Nr.: 2011/CAES/011

To the student: **Student nr:** 46977163
Ms S Foot
Department of Geography
College of Agriculture and Environmental Sciences

Dear Ms Foot

Request for Ethical approval for the following research project:

A case study assessment of community and corporate Values of Driftsands nature Reserve, Cape Town, South Africa

The application for ethical clearance in respect of the above mentioned research has been reviewed by the Research Ethics Review Committee of the College of Agriculture and Environmental Sciences, Unisa.

The committee is pleased to inform you that ethical clearance has been granted for the research set out in the Ethics application (Ref. Nr.: 2011/CAES/011) submitted and additional documents attached to the application.

Please be advised that the committee needs to be informed should any part of the research methodology as outlined in the Ethics application (Ref. Nr.: 2011/CAES/011), change in any way. Should that be the case, a new application, for the amendments, needs to be submitted to the Ethics Review Committee for review.

We trust that sampling, data gathering and processing of the relevant data will be undertaken in a manner that is respectful of the rights and integrity of all participants, as stipulated in the UNISA Research Ethics Policy.

The Ethics Committee wishes you all the best with this research undertaking.

Kind regards,

Prof E Kempen
CAES Ethics Review Committee Chair

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