**WATTLE WE DO? ALIEN ERADICATION AND THE „ECOLOGY OF FEAR"ON THE FRINGES OF A WORLD HERITAGE SITE, SOUTH AFRICA**

**This thesis is submitted in fulfilment of the requirements for the degree of**
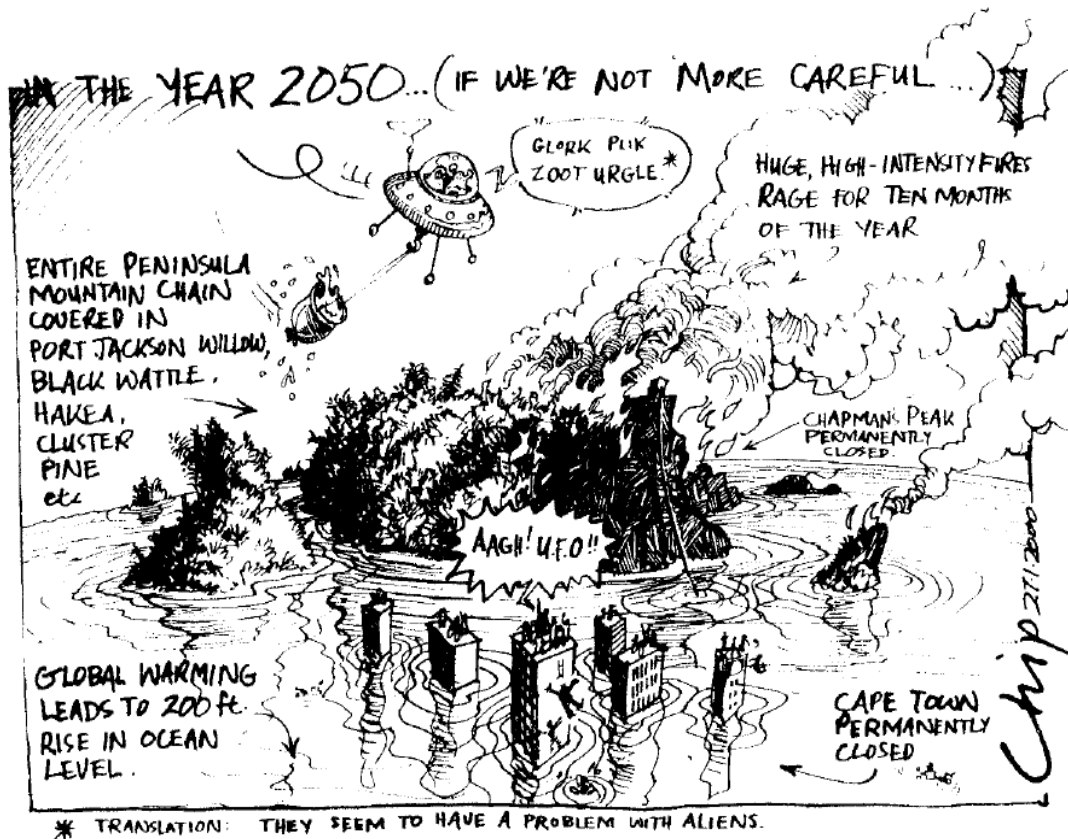
**MASTER IN ARTS**

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(Source: Chip, ‗They Seem to have a Problem with Aliens', *Cape Argus*, January 27 2000. In Comaroff & Comaroff 2001)

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**List of Abbreviations Used**

BEE -            Black Economic Empowerment

CARA -          Conservation of Agricultural Resources Act

CMA -           Catchment Management Agency

DoA -           Department of Agriculture (after 2008 became the Department of Agriculture, Forestry and Fisheries)

DWAF -          Department of Water Affairs and Forestry (after 2008 became the Department of Water Affairs and Environment)

IWRM -          Integrated Water Resource Management

NEMBA -         National Environmental Management of Biodiversity Act

PES -           Payments for ecosystem services

R³G -           Rhodes Restoration and Rehabilitation Group

SABLtd -        South African Breweries Limited

WfW -           Working for Water

WWF -           World Wildlife Fund for Nature

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**Abstract**

In their article ―Naturing the Nation: Aliens, the Apocalypse and the Post Colonial State‖ (2001) Jean and John Comaroff look at ―the contemporary predicament‖ of South Africa through the prism of environmental catastrophe. Through it they reveal the context in which alien plants have become an urgent affair of the state.   Following their lead, I show how alien plants (particularly Australian wattle) continue to provide grounds for new social and political aspirations in South Africa, though in a different setting.   With reference to a group of private landowners on the fringe of a World Heritage Site -- the Baviaanskloof Mega-Reserve, Eastern Cape, South Africa -- I show how an increasingly apocalyptic and xenophobic environmental agenda has influenced local activists seeking to address social and ecological issues in tandem with alien-eradication.

These local activists adhere to a particular brand of ‗environmentalism' which Milton (1993) argues can be considered a social, cultural and religious phenomenon.   The subjects of my main empirical investigation offer practical ways of achieving a transformational end through a new ritual activity in relation to a spread and exchange of environmental ideas and practices on a world-wide scale.   On the ground this group practices ‗ecosocietal restoration' through which they aspire to mend the bond between people and the land in a spiritual and moral sense, bolstering intrinsic incentives for environmental stewardship and achieving ―cultural reconciliation‖ in an attempt to re-imagine what South Africa could be.

# Introduction

Perceptions of the future affect the way people choose to live in the present. Sandra Wallman (1992) shows how images of the future amongst communities direct the management of public life and are decisive to public policy. The ‗futures‘ of local people are only partly determined by the local people themselves, with the vision and actions of outside agencies determining to a large extent the types of futures that can be perceived (Persoon & van Est 2000). In global contemporary society images of the future at all levels – global, national, and local - frequently occur in the context of concern for the environment, as is evident in reports on the environment, notably the Brundtland Report, also known as *Our Common Future* (Barnaby 1987).

Globally, alien invasive species are the leading cause of biodiversity loss next to habitat destruction and are responsible for massive changes and disasters in natural ecosystems (Williamson 1999; Prinzing, *et al.* 2005). In South Africa, the amount of water consumed by alien plants is comparable to the withdrawal by urban and industrial use (WWF 2007; DWAF 2008b). Plants such as Blue gums and Black wattle are a root cause of water insecurity, consuming up to 7% of the annual runoff from mountain catchments, with an exponential increase -- if they continue to invade (Calder and Dye 2001; Cullis, Gorgens and Marais 2007; Dye and Jarmain 2004; Enright 2000; Gorgens and van Wilgen 2004b; Le Maitre, *et al* 1996; Le Maitre, Scott and Colvin 1999; Le Maitre, Versfeld and Chapman 2000; Le Maitre, *et al* 2002; Le Maitre, *et al* 2007; Tabacchi, *et al* 2000; Marais and Wannenburgh 2008). This has serious implications for a country that is mostly semi-desert, some of whose water sources already suffer from severe industrial and human pollution (Murray 2005: 129).

South Africa‘s *Working for Water* (WfW), the government-sponsored programme for alien plant eradication, has ‗social objectives‘ (Magadlela and Mdzeke 2004; Hope 2006b); however these do not include the landowners. Landowners are seen as crucial to the sustainability of this programme both in terms of managing the invasion and providing jobs (Dr. Richard Cowling personal communication 2008). Yet there is no

official attention to ‗landowner perceptions‘ toward alien plant control, among other areas of concern.   Such attention to landowners was made even more relevant in light of recent (2008) legislation compelling private landowners to participate in alien plant eradication on their land.

Following interviews with 22 private landowners living on the eastern fringe of Baviaanskloof (the Langkloof) at an earlier stage of my research[1], I have an understanding of how they feel about alien plants and what they need in order to effectively ‗battle‘ the ‗invasion.‘ All of these landowners recognize that the Black wattle is a direct threat to their water sources and because their citrus (and to a lesser extent, stock) industry depends on water; they need to eradicate it.   However, they distrust certain aspects of WfW, noting that it needs to be better supervised and a better management strategy needs to be implemented. At this point they do not see the programme effectively combating the problem of alien plants and argue that it is rather just a job creation strategy with no focus on managing the water resource.

In order to gain a better insight than the survey could provide into the perspective and stake of the landowners and to pursue the theme of how future orientation affects action in the present, I selected a particular farm for intensive study. This belongs to TerraPi, an NGO marketed specifically as an ecological and educational tourism enterprise located on the largest piece of privately owned land bordering the Baviaanskloof Mega-Reserve, a UNESCO World Heritage Site, in the Eastern Cape, South Africa.   TerraPi acquires most of their money through ‗donations‘ given by foreign investors and reach prospective clients through the worldwide web, via sites such as YouTube.   The name is a play on words linking land (terra) to people (pi) in way that sounds like ‗therapy;‘ with the motto, ‗healing the land, healing the people‘.

TerraPi‘s management adheres to the principles of ‗deep ecology‘ in the sense of placing an intrinsic value on the natural landscape.   However, they are distinguished from ‗radical‘ environmentalism through their participation in a market driven environmental

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[1] For a full account of the genesis of this research project, see Appendix A.

programme - the ‚payments for ecosystem services' scheme. Such a ‚moderate' approach to environmental issues has been criticized by ‚radical' environmentalists as being anthropocentric and not conforming to the biocentrism that is seen as necessary to solve environmental problems. Nevertheless, I support the argument that TerraPi has a functional relationship with other institutions concerned with water management developments in the area particularly because their organizational culture is based firmly on specific values and behaviours which can have a positive influence on the values and behaviours of outside agencies (Nyambe, Breen and Finchman 2007).

**Structure of the thesis**

The underlying theme of this thesis is that an ‚ecology of fear' (Davis 1999) at the heart of an apocalyptic and (biologically) xenophobic environmental agenda in South Africa has made room for the emergence of a characteristically millenarian group on the fringe of a World Heritage Site, in the Eastern Cape, South Africa.

In Chapter One I discuss the narrative of the global water crisis which has both apocalyptic and xenophobic imagery in South Africa. From this narrative I will show how and why alien plants (particularly Black wattle) have become such an urgent affair of the state. This illustration will show the broader social and political developments which create room for the kind of millennial aspiration that is characteristic of the subject of my empirical study, TerraPi. I then relate this context of policy decisions to private landowners and how this has affected their practical working engagements with the land through social marketing and geopolitical engineering. This discussion leads back to my case study of one farmer and his group at TerraPi who have emerged ostensibly to test, monitor, and provide feedback on these government tools aimed at managing water resources.

In Chapter Two I take a critical look at the way knowledge is produced about the environment and focus on the use of fear in environmental marketing campaigns. Because some these campaigns in South Africa, which rely on the field of invasion

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biology (also called ―invasion ecology‖), have a contested form of meaning and have been critiqued as being value laden and biased. I will address this concern through arguing as does Hattingh (2005) that an ―ethics of conceptual responsibility‖ should be used in the highly ambiguous framework upon which its vocabulary rests in South Africa.

Chapter Three reviews the literature on environmentalism, its apocalyptic assumptions, and how this provides grounds for the development of a millenarian movement. In this discussion I focus on outlining in detail the form and function this movement has in the context of the subjects of my main empirical investigation, TerraPi.

Chapter Four reviews an appropriate methodology, ‗ethnographic futures research' (EFR) which is outlined by Textor (2000). The methodology is founded on the ethnographic method, notably prolonged interviews with main actors. Broadly, it focuses on scenarios as imagined future histories that are used to legitimize and direct social action in the present. Being based on the ethnographic approach, EFR obviously does not replace methods such as participant-observation, more general kinds of interviewing, the taking of life-histories, and so forth.

In Chapters Five and Six I relate this framework to my fieldwork experience. Here I am concerned specifically with how landowners perceive nature in relation to the vision of outside agencies and organizations, such as TerraPi, whom focus on water management through alien plant eradication. These interviews with landowners were conducted to determine their needs and constraints towards complying. The focus then shifts to the case study of a single farm in the area, TerraPi. I outline the ‗community' and focus on their manager, Harry who, while dealing with the same problems as other landowners has a unique way of going about solving them. On one hand TerraPi accepts the purely economic rationality upon which their approach is based; on the other, they add spiritual and moral aspects to the act of restoration (or, ‗ecosocietal restoration'). TerraPi can thus be seen as a compromise between moderate and radical environmentalist positions, with a strong dash of millenarianism in the mix.

In Chapter Seven I relate the findings from my empirical study not only to the conceptual discussion with which I began in Chapter Three but also to the social, political, economic, and cultural milieu in which the Baviaanskloof landowners exist. In this section I use an ethno-historical approach to discuss another millenarian movement in the area 160 years prior. Through using this example I move to question the legitimacy of ‗facts', especially those about the future that make actions intelligible in the present. Here I take a critical look at environmental discourse in general and argue that the same ‗ethics of conceptual responsibility' that is needed in the field of invasion biology should also be expanded to the wider field of ‗climate science' (which has implications on the former). It is only once the discussion is ‗cooled' (Lomborg 2010) that rational decisions can be made.

# Chapter 1 - Narratives of the Future

This Chapter offers essential background to my analysis of the perceptions, stake and role of private landowners, notably TerraPi, in the management of Kouga catchment in the Eastern Cape. I show how apocalyptic imagery - attached to the narrative of the water crisis in South Africa - has made aliens, particularly Australian Wattle, an urgent affair of the South African state. I look at how the globalization of environmental ideas, specifically those dealing with water management and the control of alien species, has become an imposition on ‗local‘ people and how this has provided a platform for millennial aspiration and charismatic institutional building.

The world‘s thirst for water is becoming the 21st century‘s most pressing resource issue after the exhaustion of oil, with severe consequences to social and economic development (Falkenmark and Mikulski 1994; Barlow and Clarke 2002; Turton, *et al* 2007; Alexander 2008). Fear of the global water crisis emerged in 1995 with the then vice president of the World Bank – Ismail Serageldin - stating that, ―if the wars of this century were fought over oil, the wars of the next century will be fought over water" (Barlow and Clarke 2002). Paraphrasing United Nations Secretary General Ban-Ki Moon‘s recent (2009) statement, a future of wars in and between nation states is very likely (Barnaby 2009). Presently, 31 countries – of which South Africa is one – are facing water stress or scarcity (Barlow and Clarke 2002; Shiva 2002). By 2025, the South African government predicts an all out water crisis (Asmal 2001; DWAF 2008b), others claim that the water crisis has already begun (Alexander 2008).

Such projections are the reason why the South African media continues to refer to the issue of water as a ―looming water crisis" and a ―ticking time bomb". Shiva (2002: 2) argues that, ―in case after case, the story of water scarcity has been a story of greed, of careless technologies, and of taking more than nature can readily replenish and clean up". South Africa is no exception to this and the situation of water management is a highly contentious one. At the end of 2008 South Africa‘s Council for Scientific and Industrial Research (CSIR) prevented their own hydro-political expert Dr. Anthony Turton from

giving his key note address at their conference, ‚Science, Real and Relevant'. They did this on the grounds of what they believed to be unsubstantiated claims connecting lack of water quality and availability with the xenophobic imagery rampant in South Africa earlier that year.

In his paper ―Three Strategic Water Quality Challenges that Decision-Makers Need to Know About and How the CSIR Should Respond" (2008), Turton states that if the water crisis is not addressed ―with a reasonable degree of certainty…social instability will grow and South Africa will slowly slide into anarchy and chaos", explicitly connecting the narrative of the water crisis to xenophobia by including the following sensationalist photograph of a ‚necklacing' in his presentation.



**Figure 1**. **The picture that Turton (2008) used in his presentation to illustrate a scenario of a water crisis.**

Different predictions have come from the South African government which, while not as value laden as Turton's, still view a future of water scarcity in South Africa. The Department of Water Affairs and Forestry (DWAF) predicts an all out water crisis by 2025 (Asmal 2001). In 2008, at the opening of the *WaterNeutral* pilot project (a project which I worked on and will detail below), former Minister of the DWAF and Forestry, Dr. Kader Asmal reiterated this decade old prediction that South Africa will experience an ―all out water crisis by 2025" which will be followed by what he calls a ―water

shedding scenario" (DWAF 2008b). During this time water will be systematically ‗shed'
to accommodate usage. This wording has obvious reference to the ‗load shedding'
imagery experienced in South Africa in 2008 when demand for electricity outweighed
supply and many South Africans were left in the dark.

The issue of water security is not new in South Africa, but recently it has become a
matter of public debate with top scientists from all disciplines stressing the need for
anticipation and social ingenuity in the face of this coming disaster. In 2008, in a
response to Turton's dismissal a national television programme, *Carte Blanche*, aired a
segment on the water crisis calling it South Africa's ―ticking time bomb". Their
interviewees included people such as World Wildlife Fund for Nature Southern Africa
Chief Director, Morne du Plessis, who warns, ―what we're saying about water today is
what the energy people were saying to the government 10 years ago" (Bongani 2009).

Further, Professor Mike Muller, Public and Development Manager at Witwatersrand
University said:

> If you look at the electricity crisis [in 2008]…the reason we had a month
> of blackouts was because, five years ago, some decisions were taken and
> were wrong…what I am saying is that in the water sector we have similar
> lead times. If you're not always looking ahead for the next four or five
> years, the chances are that, by the time you need to do something, it's too
> late and then you will be in crisis. So I am saying panic at the right time,
> and the right time is probably now (Bongani 2009).

According to Guy Preston, Director of the *Working for…* programmes (which includes
*Working for Water, Working for Wetlands,* and *Working for Energy*), an all out energy
crisis in 2008 could have been averted with simple mitigation strategies, such as the
installation of solar water heaters on some homes (personal communication 2009). The
same situation is currently happening in the water sector, this time the mitigation strategy
is based on clearing the South African landscape of alien invaders, particularly the high
water consuming Australian Black wattle (*Acacia mearnsii*).

**Institutional effects**

Water is fundamental to all life.  Human civilization has always been hinged on water sources for the development of agriculture (it should be noted here that Johannesburg is one of the only large cities in the world not located on a water body and is almost entirely dependant on the Lesotho Highlands project and the now almost dry Orange River for its fresh water).  In terms of the imperatives of ‗sustainable development' access to fresh water is essential to a dignified existence and a minimum criterion of the UN's Millennium Development Goals.  In regards to water resource management in the ‗developing' world (which includes South Africa) there is special attention paid to the relationship between reliable water provision and poverty alleviation.

While it was the Rio Summit in 1992 that developed the concept of ‗sustainable development', the conjunction of its values into water management concepts stems largely from agreements reached at the Second World Water Forum in The Hague in 2000.  Here, it was articulated that the current ‗global water crisis' is not so much a crisis of the *amount* of water available for human use, but rather about how the resource is *managed* (Barlow and Clarke 2002).  These talks led to the development of a new approach to global water governance, namely the ‗integrated water resource management' (IWRM) paradigm (Turton, *et al* 2007).

Such developments illustrate the far-reaching consequences of environmental discourse and how this has filtered into South Africa affecting regional natural resource developments.  The IWRM model was put into place within the context of the Southern African Development Community (SADC) – which includes South Africa, Namibia, Botswana, Mozambique, Lesotho, Madagascar, Angola, Democratic Republic of Congo, Malawi, Mauritius, Seychelles, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe - to ‖promote sustainable and equitable economic growth and development that will ensure poverty alleviation with the ultimate goal of its eradication, enhance the

life of its citizens and support the socially disadvantaged through regional integration"
(Ramoeli 2005).

This ‗regional integration' refers to the institutional developments that follow notably the
emergence of ‗catchment management agencies' (CMAs) in South Africa. CMAs are
based on the international trend towards a decentralization of governing agencies so that
water can be managed at the lowest possible level amongst all ‗stakeholder' including
local communities, NGOs and government agencies. It relies heavily on the concept of
‗stakeholder participation' in the design and implementation of its projects including
public, private, and corporate actors all of which have a vested interest in how the water
is managed within their particular catchment or basin.

Generally, these CMA's are split between formal (i.e. Governmental such as *Working for
Water*) and informal agencies (i.e. non-governmental organizations or charity-based
organizations such as TerraPi). According to Hoekstra (1995) these ‗informal'
institutions are invaluable in natural resource management as they reflect ―the public
meaning in the forms of norms, beliefs and values at a particular point in time" (199).
Their authority is therefore legitimized through addressing the ―felt needs of society" as
they relate primarily to the principles by which to guide and regulate the management of
an identified issue, e.g. the use of an ecosystem. Furthermore, they are expected to adapt
and respond to ―shifting public values, expectations and other environmental
developments" (Nyambe, *et al* 2007). The subject of my main empirical investigation, a
private landowner and his group TerraPi, aspires to become a part of these developments
playing a role in the development of a CMA for the Baviaanskloof catchments.

These institutions are founded on certain moral and ethical principles, the core of which
can give insight on their adaptability and responsiveness to potential threats (such as a
water crisis). The subject of my main empirical investigation, TerraPi, being an informal
group in these developments has been very receptive to these ideas and have marketed
themselves accordingly utilizing the world-wide-web through YouTube to facilitate the
global spread and exchange of their own message which is how they are acting to

mitigate an eventual water crisis through participating in alien-eradication programmes. They promote themselves as a sustainable enterprise, using iconography associated with ecotourism/education tourism. Because they have achieved ‗charity' status – and therefore have become a charity based organisation (CBO) – they are able to receive ―donations" from private investors within the social responsibility market.

**Market environmentalism**

‗Market environmentalism' is the neoliberal response to ‗sustainable development' which seeks to protect nature through placing an extrinsic (monetary) value on nature and the ‗services' it provides. As a development approach it is based on trade, not aid. It assumes, according to David Harvey (2007: 76) that ―the environment and human wellbeing can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property ties, free markets, and free trade". Most importantly, this restoration-via-the-market approach is held by practitioners to be a solution to ineffective government mandates (command-and-control) models and community-based approaches (Ekins 1999; Ekins and Barker 2001).

This has changed the content of development. As market logic goes, scarcity increases value and indeed the growing scarcity of natural resources (water in this sense) has shifted the focus from man-made capital to ‗natural capital'. This new capital is the stock of physical and biological resources upon which man made capital is based, exposing nature and its ecosystems as something that provides marketed goods and ‗services' (Aronson *et al* 2007).

*Alien eradication*

In 2010, officials at the South African DWAF were shocked by a study which found that the invasion of alien plants was actually double what they had previously estimated. Instead of 10 million hectares (ha) of land covered it is 20 million (ha), ―which poses massive threats to South Africa's water supply as well as the country's agricultural

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potential and biodiversity" according to the Agricultural Research Council (SAPA 2010a). The "conservative" estimated cost of clearing will be R34billion over the next 25 years.

Another popular article (2010) discusses the potential relationship between ‗climate change' and invasive alien plants. The author cites a study conducted by the South African National Biodiversity Institute which holds that ―So far, one of the most significant findings was that the root and shoot systems of some Acacia species could become stronger, which means that they will be able to access water deeper below the soil surface… This could make them more aggressive and increase the potential for invasions, leading to an even bigger threat to our natural resources and biodiversity" (SAPA 2010b).

Beyond these recent reports, over 15 years of scientific work on alien plants has proven that they pose massive threats to South Africa's water resources and the ecological integrity of natural systems upon which society depends (Le Maitre, *et al* 1996; Le Maitre, *et al* 1999; Enright 2000; Le Maitre, *et al* 2000; Baskin 2002; Le Maitre, *et al* 2002; Dye and Jarmain 2004; Gorgens and van Wilgen 2004b; Le Maitre, *et al* 2007; Marias and Wannenburgh 2008). ‗High water consuming alien invasive plants' such as Black wattle consume up to 7% of South Africa's annual surface water from catchments and destroy water courses causing erosion (ibid). According to the Department of Water Affairs and Forestry (2008b), if South Africa does not clear [and manage] invading alien plants in 10 to 20 years, 30% of freshwater runoff to rivers will be lost. In 20 to 40 years, 74% will be lost. Their removal is therefore considered as an alternative water supply option over and above expensive dam construction, water transfer tunnels, and purifications systems (Carpenter 1999).

Environmental economists working in the field on invasion biology have proven through cost-benefit analyses that the eradication of alien plants is not only a better means of augmenting the water supply, but also offers a more socially and environmentally sustainable way of maintaining biodiversity, creating jobs, and indigenizing the landscape

for the sake of tourism (Le Maitre, *et al* 1996; Barbier 2001; de Wit *et al* 2001; van Wilgen, *et al* 2001; Le Maitre, *et al* 2002; Harrington *et al* 2003; Turpie 2003a; Turpie 2003b; Gorgens and van Wilgen 2004; Richardson and van Wilgen 2004; van Wilgen 2004; Born *et al* 2005; Blignaut and Moolman 2006; Blignaut *et al* 2007; Marais and Wannenburgh 2008; Turpie *et al* 2008; Currie *et al* 2009; Hartig and Drechsler 2009).

According to environmental anthropologists such as Kay Milton (1996: 77), such economists have become ―the most conspicuous social scientists to participate in environmental discourse mostly because they have been the only ones to whom policy makers are prepared to listen to". Through assigning an explicit value on the environment, and the goods and services it provides, nature can be quantified and efforts to restore it can be market driven. This has led to a ‗market environmentalism' giving rise to terms such as ‗natural capital'. This type of rationality assumes, according to David Harvey (2005: 76), that ―the environment and human wellbeing can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property ties, free markets, and free trade".

**Working for Water**

It is the combination of this ecological and economic work that has kept South Africa's *Working for Water* (WfW) programme in operation for over 15 years. WfW was set up by the South African government as part of the Reconstruction and Development Programme (RDP) in 1995 as a response by the then infant ANC government to the concept of ‗sustainable development'. The programme hires people for a two year ―development period" in which time they are taught how to clear alien plants. The programme relies primarily on international aid grants to pay its over 40,000 annual employees (Hobbs 2004; Hope 2006a; Blignaut, *et al* 2007). WfW is hinged on the rather optimistic notion that after the period of training and experience, participants would be in a position to operate as entrepreneurs in the market for alien eradication experts (or ‗exited contractors'). However, this market did not and still does not yet exist,

and those people who were once in the programme soon fall back into poverty (Knipe 2004). There is therefore no effective ―exit-strategy‖ (Hope 2006; Turpie, 2003)

As a facet of South Africa‗s Expanded Public Works Programmes (EPWP) WfW emphasizes ‗sustainable poverty alleviation‗ of ‗previously disadvantaged communities‗. WfW works as part of South Africa‗s policy of Black Economic Empowerment (BEE) which was created as ―a deliberate programme to achieve the meaningful participation of disadvantaged South Africans in the mainstream economy as managers, owners of capital and employees‖ (Knipe 2004). These ―previously disadvantaged‖ and ―poorest of the poor‖ include women, youth, and disabled who are hired for a two year ‗development period‗ during which time they are taught a range of alien eradication methods including chainsaw and herbicide application. In addition to this there is an impressive pregnancy and HIV/AIDS awareness campaign.

At the inception of WfW in 1995 the South African government was convinced that through the creation of a ‗development programme‗ they could create ―competent entrepreneurs who can solicit their skills on the outside market‖ (DWAF 2008b). However, as Knipe (2004) has observed, there is no guarantee that these contractors become anything other than really effective alien bush clearers. This is mainly because the programme does not focus on teaching business skills which the ‗entrepreneurs‗ could use to ―solicit themselves on the outside market‖. The result is that after their two years in the programme the ―exited contractors‖ usually fall back into poverty making ―post-exit‖ opportunities a major shortfall of the WfW programme.

*Imposition on private landowners*

Over 80% of alien plant invasion is on private land. At the beginning it was hoped that landowners would continue to hire ―exited contractors‖ to manage the re-growth of aliens on their land, therefore creating ―post development‖ funding. To date, the WfW programme offers one round of ―drastic reduction of existing populations‖ of alien plants with two rounds of ―follow up‖ for free on private land. After that, it is left to the

responsibility of the landowners to manage this re-growth properly.  If it is not, the invasion usually comes back with ―renewed vigour‖ (Hope 2006b).  This is legally binding through a ‗landowner agreement‘ which the landowner signs after WfW have worked on private land (DWAF 2008a).

However, what was apparent to me while doing fieldwork (which I will detail in later Chapters) is that not even the WfW programme itself can keep up with their own management activity in terms of doing timely follow-up (i.e. clearing the re-growth).  This failure to follow up on public land has been a frequent flaw of WfW with Dr. Guy Preston (2008: 9) publicly stating that, ―this is a cardinal sin…I don‘t even know how often this happens, and it‘s shocking that I don‘t know, because of poor reporting and bad management‖.  What is needed most are not incentives to get these landowners to participate but rather access to market information in general where the demand of labour is available.  These landowners call for a ‗grassroots‘ strategy.

Recent (2008) policy makes it a legal duty for landowners to participate in the follow ups and to clear any plants that are declared a ‗Stream Flow Reducing Activity‘ (SFRA) under Part 4, Section 36 of the National Water Act (26 of 1998). This is supported through the Conservation of Agricultural Resource Act (CARA) (43 of 1983), the National Environmental Management of Biodiversity Act (NEMBA), and their draft regulations (Van der Linde 2006).  It will be enforced through the Department of Agriculture (DoA) who have the authority to issue directives to landowners.  This policy will give governing bodies significant powers to enforce and hold private landowners accountable for invasions of alien plants on their land (Binns *et al* 2001; Woodworth 2003).  It will be through the delegated powers and support of local government to manage and strengthen this compliance.

However, according to one informant, a manager of WfW, there is no efficient dialogue between the Departments – DWAF and Forestry and the Department of Agriculture (DoA) - that will make these directives effective (personal communication 2009). And therefore, this command-and-control model is ineffective at actually forcing compliance

because it ―lacks the teeth‖ to bring landowners to court (personal communication, two WfW managers 2008).

Nevertheless, this intervention is seen as strategically important in realizing the long-term goals on which the South African government‗s invasive species programme is based through the creation of a market for ―exited contractors‖. Hope (2006) explains that this legislation was put in place to protect downstream users of water from any land practices that would reduce the total yield of water needed for agricultural and industrial demands. Legislation like this is not new in South Africa. As early as 1860, aliens such as the cocklebur (*Xanthium spinosum*) were declared a noxious weed in the Cape Peninsula. According to the Agricultural Resource Centre, ―even before the Noxious Weeds Act, No 42 of 1937, the various Provincial Administrations were charged with the enforcement of legislation on the compulsory eradication of weeds‖ (Agricultural Research Council 2006). However, as the Comaroffs (2001: 640) note, this legislation to curb some ‗noxious weeds‗ was ineffectual.

Going back to the recent (2008) policy, what is ‗new‗ about it is that the directives to gain compliance use market tools such as taxes, fines, and grants to accomplish their desired outcome. Under current neoliberal economic conditions, such policy is seen by many environmental economists as the most effective means of creating awareness and gaining participation from the private sector (i.e. landowners). For instance, if a landowner wishes to sell a piece of land that is invaded with alien plants, the total amount that would have to be spent clearing these plants can be deducted from their deeds (personal communication with a WfW manager). This is an especially important strategy when considering ‗absentee landowners‗ who are notorious for letting aliens spread unchecked on their land - more so than landowners who use the productive resources of their land. However, again, while thousands of these directives have been issued since 2008 (mostly

in the Western Cape), it has been realized that they are not effective in legally binding the landowners[2].

Based on my experience speaking with landowners I would agree with Blignaut *et al* (2008: 13) that in the South African context ―the most challenging component concerning the development of this market is not to prove value, nor to convince the people to participate, but it will be and is an institutional issue". That is, it is not an issue of awareness and perception of the value of alien plant management. The commodity itself (water) is well defined and the land use proxy which is likely to result in the provision of this environmental service is clear (alien eradication). What landowners need are not necessarily measurability and monetary incentives but technical assistance and access to market information and demand of services.

These sentiments among private landowners, along with their loss of faith in the top-down bureaucracy of the WfW programme, has created a desire for an outside and more locally oriented approach. It is here that TerraPi bases its aspirations. In theory, this ‗broker' or ‗facilitation agent' would function to create a dialogue with the government and other outside agencies and would liaise with local communities through existing Community Works Programmes (i.e. *Working for Water*), the government and the buyers of the services (i.e. corporations like SABLtd). This aspiration is at the very core of how TerraPi has adapted their organizational culture to their ‗local' situation, through offering their support in the development of a ‗payment for ecosystems' scheme.

*Payments for ecosystem services*

A ‗payments for ecosystem services' (PES) scheme is one that pays the ‗owner of the service' (e.g. landowner) for providing that ‗service' (water) – which in this case is alien plant eradication which increases water supply - for the use of the general public. This approach to environmental protection and rehabilitation is congruent with market based

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[2] For further reading on government and society relations in regards to alien plant legislation see Sargoff, 2009. ‗Who is the invader? Alien species, property rights, and the police power', *Social Philosophy and Policy,* 26: 26-52.

assumptions and these schemes have emerged specifically in response to perceived ineffective governmental regulatory frameworks (i.e. CARA and the New Water Act) and community-based voluntary and education approaches (i.e. TerraPi) in gaining the participation of the public (i.e. landowners). It thus seeks to use markets to compensate for its stewardship, opening up new opportunities for commodities and land-use practices that never existed before (Blignaut *et al* 2008). The World Bank has been a driving force of this discourse viewing alluring private business transactions and investment opportunities as more attractive than regulated nature conservation (Salzman 2005; Wunder and Vargas, 2005)

As mentioned previously (page 16), CARA and the New Water Act provide the legal framework for gaining the participation of landowners. These were aimed at, in Blignaut's (2008) words, ―te production potential of land, the prevention and rehabilitation of soil erosion, as well as the protection of water resources" which ―dovetail well with the objective of making markets work for people and the environment" (Turpie *et al* 2008). This is the case in point for the WfW programme, the ongoing sustainability of which is being piloted through the *WaterNeutral* project, discussed in the next section.

Additional policy in direct relation to this has been more explicitly market driven. I refer here to the draft Revenue Laws Amendment Bill which, according to Blignaut (2008), was published for comment by National Treasury in August 2008 where an amendment was proposed to create a mechanism to make environmental conservation and management income tax deductible. This step was taken to create the platform for foreign capital investment. The function of this is visible in the network of funders which TerraPi relies on. Because TerraPi had by 2008 achieved section 21 status – making them a ‗non-profit organisation' they can accept ‗donations' which are then tax-deductible for the companies (or NGOs) that donate the money.

**WaterNeutral**

The *WaterNeutral* pilot project – a partnership between the World Wildlife Fund for Nature Southern Africa; South Africa's *Working for Water* (WfW) programme through the Department of Water Affairs and Forestry; Rhodes University through the Rhodes Restoration and Rehabilitation Group (R³G); and SABMiller through South African Breweries Ltd – was implemented on TerraPi's land as a mechanism to allow the WfW programme to operate outside of poverty alleviation grants. Rather, it relies on funding from corporate investment to pay its employees. South African Breweries Ltd. was one of the first investors to realize that ―water is a challenge for the future which must be addressed today‖ (SABMiller 2007), and therefore invested in *WaterNeutral.* Acting ‗socially responsible‗, SABLtd can in return market themselves as ‗green‗ to their consumers, essentially buying goodwill and public relations through clearing alien plants.

Generally defined, *WaterNeutral* is a ‗payments for ecosystem services‗ (PES) scheme which seeks to offset the water used in the production of beer and soft drinks by funding the clearing of ―water intensive alien invasive plants‖ off of private land. Based loosely on its carbon equivalent in terms of ―offsetting‖ - a term coined at the World Summit on Sustainable Development in 2002 - it is being promoted as ―the world's first fully quantitative water neutral scheme‖. This is because the amount of water consumed by ―high water consuming alien vegetation‖ (particularly Black wattle) has been quantified (WWF 2007) and their eradication is therefore a means of releasing equivalent volumes of water back into the natural aquatic systems. Also the amount of water consumed by alien plants is comparable to the withdrawal by urban and industrial use (WWF 2007; DWAF 2008b).

However, as attractive and self-evident this approach may be in the short term, can a PES such as *WaterNeutral* provide the kind of long-term support that the landowners call for? There are several reasons to be sceptical about considering PES as a ―win-win‖ approach and the ―magic bullet‖ for South Africa's social and ecological problems (Buch 2009). One obvious shortfall is its reliance upon a volatile economic apparatus - globally and nationally - as PES assumes that payments will be ongoing (Heckman 2010: 425). Currently and during the time of my research, the global economy was under crisis which

had a direct impact on the funding on which TerraPi based its own aspirations – which, to be clear, is separate from that funding *WaterNeutral*. On the ground this resulted in the firing of some key players at TerraPi, including the keeper of the horses and the conservation manager.

Another shortcoming of the PES approach is its dehumanizing effect. Its philosophy views people simply as economic agents who act only upon an individual calculus of what maximizes their self-interest. In one sense it turns people who left the WfW programme into ‗exited contractors'. In another sense it assumes that landowners will not ―undertake environmentally-sound actions unless they contribute to their private utility" (Heckman 2010: 437). The worst case scenario here, according to Heckman, would be landowners ―holding the environment at ransom" where they would expect to be paid for actions they are currently doing voluntarily, out of moral obligation and/or social pressure (ibid: 438).

Therefore, the worry is that by injecting market logic into environmental stewardship environmental ethics and social institutions may weaken which can have serious consequences if the aforementioned funding is diminished. Thus, in this sense the erosion of intrinsic motivations (emotive incentives) through extrinsic ones (monetary incentives) could undermine the long-term goals of restoration projects (Frey and Oberholyer-Gee 1997). And, while certainly having merit, the PES approach should not be viewed in isolation to the broader process of local institutional transformation, of which TerraPi and their organisational aspirations are a part. That is, the PES should not be solely a market-based alternative for allegedly ineffective government and/or community governance (Heckman 2010: 421).

Hattingh (2005) has similar worries where it comes to alien plant eradication specifically in South Africa. He laments that the story told about alien invasive plants is one about costs to the resources (‗natural capital') and that any strategy to control them focuses specifically on it being quantifiable. Interestingly it is exactly this financial calculus that has informed the new concomitant forms of scientific management and marketing that it

implies. In Hattingh's (2005: 192) words, ―given the predominance of marketing as a tool of legitimizing narration…one would expect marketing strategies specifically designed to raise public awareness of the problem and to engineer a positive attitude towards the measures taken", such as the *AlienBusters!* campaign and *Ukuvuka* (―wake up"), which I explain at some length in the following Chapter.

## Chapter 2 - Ethics of the future

Our relationship with time has social, political, cultural and ecological consequences. Perceptions of the future affect how resources are managed at all levels – local, national, and international. NGOs, governments, and corporations have internalized a future oriented rhetoric and are becoming progressively institutionalized. However, the future that some forms of environmentalism posit is one of catastrophe. In the South African context the vision of a water crisis as a ―ticking time bomb‖ has led to the demonization of alien plants (a biological xenophobia of sorts). Because landowners own most of the land where this invasion occurs it has become their responsibility to manage the problem. Subsequently a strategy has emerged to manufacture consent for specific management activities. This Chapter reviews analyses made about these campaigns of social engineering and offers a critique their scientific justification.

### Social Marketing

The widespread distribution of alien plants was, according to Magadlela & Mdzeke (2004: 96), ―not matched by widespread understanding or awareness for their destructive effects by the general public or by key role-players‖. In 2005 the South African government through the Department of Water Affairs and Forestry implemented a social marketing campaign, *AlienBusters!,* to ―communicate to the broader South African public the massive amount of damage these aliens inflict and the potential catastrophe they bring with them‖ (Murray 2005). The use of fear with clear (biological) xenophobic undertones was prominent in this campaign (Murray 2005) which employs the arguably pseudoscientific paradigm of ‗invasion biology‗ with apocalyptic and a variant on racial discourse to achieve its end (Theodoropoulos 2003).

The effectiveness in creating awareness through these kinds of social marketing campaigns is questionable. George Monbiot (2007: ix) argues that the audiences of environmental campaigns watch it ―with the impotent fascination with which we might watch a good disaster movie‖. In the face of this apparent apathy and indifference toward

the natural environment in contemporary society, the use of fear in the design of environmental campaigns is regarded as justified. As a result, alarmist language I used that makes the natural environment a place of ―almost unimaginable future misery". (Monbiot 2006: 5).

As Schneider (2006: 201) candidly states, ―We need to get some broad base support, to capture the public‗s imagination. That, of course, entails getting loads of media coverage. So we have to offer up scary scenarios, make simplified, dramatic statements, and make little mention of any doubts we might have" (cited in Lomborg 2010: 201). However, according to Lomborg, while such a strategy might be very politically effective it undermines the opportunity for society to make informed choices between different policy goals and these scary scenarios which inhibit ―vital dialogue on the social priorities".

Fear is a potent weapon that appeals to people and threatening information arouses the kinds of emotions that can evoke changes in attitude or behaviour (Ruiter *et al* 2001). Furthermore, appeals that produce the highest levels of fear tend to be most effective (Witte and Allen 2000). Clive Hamilton (2002: 2) notes that ―often, when confronted by potential catastrophes, intellectual knowledge is not enough, no matter how compelling it may be. In order to act, people need to be shocked into a state of heightened awareness" (ibid).

Emotions, in general, play a particularly dominant role in how people respond to their environments. Fear, according to the neuroscientist Damasio (1999), is a part of the evolution of human consciousness where feelings have come to play a central role. Summarizing Damasio, the relief of negative emotions (or the promise of positive ones) is what motivates an action. This has enabled animals to adapt, ―to plan their actions to avoid unpleasant feelings and seek pleasurable ones" (Milton 2008). Further, ―emotions are the prime movers of action; without them we do nothing" (ibid: 73).

It is in this sense that ‗fear' is held by anthropologists and psychologists to have evolved in order to protect us from harm, to get us out of danger and cause us to react by means of fight or flight. Fear is useful in that we organized our lives to avoid it. As long as this leads us to avoid danger, or to eliminate it when we encounter it, the experience and expectation of fear keeps us alive (ibid). Thus, one reason why the media and scientists use fear to communicate their message to the public is because it has the potential to create a sense of urgency amongst the average person that something is going wrong, and action needs to be made immediately (Jennaway 2008). This ―fear mongering" in environmental campaigns can therefore be seen as serving a tactical function.

However, such campaigns can have an adverse effect through oversaturation of fear. As Wallman (1992: 9) writes, ―we put efforts into futures which we have some chance of controlling (personal success, healthy children, the credibility of the profession), and consign others (world events, eco-doom) to levels which are beyond the pale of our influence". Hasting *et al* (1999) note that fear campaigns (especially in regards to alien invasion) deliberately create anxiety and have ethical implications. This has led some to call for an ‗ethics of conceptual responsibility' (Hattingh 2005).

Accordingly these social marketing campaigns (or social ‗engineering campaigns) should only target audiences which have the ability to make a definitive change (Gobster 2005). This is done to avoid the exploitation of vulnerable audiences including children who lack ―the conceptual maturity to handle this information" further alienating them from nature and ―separating it into good and bad" (ibid: 263). Others note an even more severe consequence of such fear marketing, such as Theodoropoulos (2003: 83) who argues, ―Fear is a major element of the opposition to introduced species, and is relentlessly exploited by the architects of invasion biology, and the organizers of its cults".

***Fear marketing and its effect on the public, specifically private landowners in South Africa***

The *AlienBusters!* campaign, according to Murray (2005: 129), was a ―well timed strategy to communicate the abstract legal-biological jargon of policy and amendments in CARA, NEMBA, and the Water Act (with its ecological obligations) that would effect how landowners manage their land". While this campaigns target audience was all South Africans, one of the primary objectives of *AlienBusters!* was to manufacture consent amongst private landowners to change their attitudes and behaviours toward these aliens in an attempt to gain their meaningful participation (Comaroff and Comaroff 2001; Murray 2005).

Further, in Murray's (ibid: 129) words, ―In the spirit of co-operation and commitment that had come to characterize the post-1994 government's communication with the South African people" the campaign was designed to convey these biological and legal imperatives (i.e. CARA) ―in ways that might convince landowners…to take action in their own best interests rather than alienating and threatening these various publics with versions of legislative policing", such as issuing the aforementioned directives (Chapter One, pages 15-17).

This marketing strategy was a means of drawing the attention of the average South African to the scientifically proven threat that alien plants pose to the natural environment and even civil security. However, as Comaroff and Comaroff (2001) argue, the campaign exploits xenophobic terminology, using words like ―alien", ―natural", ―invasive", and ―indigenous", which have contested histories of meaning and use in South Africa. These campaigns ought not to invoke such linguistic devices by government or media practitioners solely as motivating concepts to ―rally South Africans to a green cause" (Comaroff and Comaroff 2001; Murray 2005).

The major response to this imagined other in the South African context is based on the culturally dominant metaphor of militancy. Such an emotive linguistic device has claimed a _war declared on aliens' which assumes that _we' have a shared alliance against a common enemy. According to Grover (1989: 153) this is a foundational assumption of xenophobic belief systems in general. In the words of former Minister of Water Affairs

and Forestry, Ronnie Kasrils, ―It is time to reclaim our country! We need the public to join us in our fight to rid the planet of these deadly invaders! We need as many people [as possible] out there to become AlienBusters!‖ (Williams 2001).

A real time example of endowing alien plants with malevolent intent was during a Department of Water Affairs and Forestry portfolio meeting in 2007 which discussed the progress of WfW (September 2007), Dr. Guy Preston was questioned on his labelling alien plants as a ―cancer‖. In response, Dr. Preston replied that ―the word cancer was used as an analogy. Alien plants were not problematic in themselves. But when they become invasive they become a problem, and act on other plants in a similar way to cancer cells taking over healthy cells in the body‖.

There are critics who claim that the scientific field of invasion biology is notorious for exploiting such terminology in their quest to impose management agendas. According to Theodoropoulos (2003: 154), ―these vocabularies provide rationale and precedent for invasion, occupation, [and] normalization of an imagined Other as ‗the enemy‘‖. Such categorization seems to be a psychological necessity in times of ‗crises‘. Davis (1999) notes that the conjugation of environmental crisis and race war is a familiar theme in the catastrophe literary genre. Also, Hoffman (2002) notes that ‗disaster‘ is seen as some type of monster and further, Creps and Kimball (2006) argue that, the foundational narratives that human communities create (such as the apocalypse) define the social order in relation to the perceived evils of the world where the ―monster‖ is in most cases defined outside of the ―true community‖.

Theodoropoulos (2003) argues that management activity is justified when species are defined as ‗invaders‘ and any result emerging from management activity can be called ―successful‖. One can see how the latter might be attractive to regimes that depend for their electoral success on being seen to ‗deliver‘ and yet have severe capacity issues. Thus, government agencies eager to implement policies use value laden language such as ―noxious, aggressive, invasive, choking, stealing, harmful, destructive, corrupting,

polluting, and guilty even of deliberate takeover," which is a highly anthropomorphic view of plant biology –imputing to them a malevolent consciousness" (ibid: 85).

Summarizing Comaroff and Comaroff (2001), Murray (2005: 137) further contextualizes this by saying:

> The narrative relies for supposed coherence on the oppositional trajectories of a militaristic campaign style and idea, overemphasizing 'us' against 'the enemy' even while struggling to contain the erratically acknowledged yet repeatedly suppressed suggestion that the alien and the indigenous are not, given the extremely complex, even hybridized cultural realities of the twenty-first century, polarized forms of life. Properly to have incorporated this recognition into the campaign idea would have meant admitting that descriptors such as 'alien' and 'native' as used in plant biology transfer only with extreme awkwardness to the contexts of human society - especially one such as South Africa's.

**Invasion biology, a pseudoscience?**

The science of invasion biology provides the necessary information to shape policy tools that are used as a justification for charting the course of development that is seen as preferable in the present. Taking a critical perspective is thus necessary to expose some of the underlying assumptions that govern it. I do this through exploring excerpts from David Theodoropolous' book *Invasion Biology: Critique of a pseudoscience* (2003). Here Theodoropoulos offers a psycho-social analysis and critique of the rise of the –biological nativist" in conservation circles where he argues that the field of invasion biology is founded on value-laden ideology rather than scientific evidence which –conflates human values and economic harm with ecological harm…posing a danger to environmental thinking and society at large" (Holmgren 2003: 3). Scenario planning is a large determinate to action within invasion biology. Here I am not concerned with whether the future can be known, or with the basis on which we think we know it, but

rather on interpreting it in terms of the way we and others picture the future and how these imaginings affect social organization in the present.

While alien invasion is indeed a pillar of conservation ecology (Bright 1998; Campbell 1993; Carlton 1996; Coblenz, David 1998; Diamond 1989; Elton 1958) it actually hinders biodiversity conservation as there is no credible evidence that lends truth to the claims that aliens are in fact ―second only to habitat loss‖ as a cause for biodiversity loss and endangerment; these claims rest on ―distorted and fabricated reporting of phenomena‖ (Theodoropoulos 2003: 25).

Theodoropoulos' analysis argues that the demonizing of plants and animals is similar to the methods used by racists, xenophobic, nationalistic, fascist, and authoritarian ideologies in their denunciation of the ‗other'. That is, the conceptual structure of invasion biology is found to be identical in all key points of these belief systems and it is clearly a *manifestation* of this ―common delusion‖. Interestingly enough, Bulmahn-Wolschke (1990) notes that the very roots of ecology and the environmental movement lay in Nazi Germany thus calling some ecologists ―Green Adolf's‖. Thus, in a sense, Theodoropoulos would thus see WfW as a *pogrom* rather than *programme*.

Interestingly James Corbett (2009) places the ―modern environmental movement‖ in the eugenicist ideas of the 19th century gentry beginning with Francis Galton, cousin of Charles Darwin, who extrapolated Darwin's idea of ‗survival of the fittest' to evolution not only between species but within them. Framed thus, it gave legitimacy to a social Darwinian perspective ‗proving' that the rich and powerful were so because they were genetically superior.

According to Charles Wohlforth (2010) who also links conservation and eugenics, many other leading American elites and scholars would join the eugenics movement around the turn of the 20th century, all of whom had ‗environmental' obligations as well. In the US this included John Kellogg, Henry Ford, John D. Rockefeller Jr., Andrew Carnegie,

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George Eastman, Woodrow Wilson, Herbert Hoover, George Bernard Shaw, H.G. Wells, Alexander Graham Bell, and Margaret Sanger.

It was the Nazis who took the ideas of the eugenicist movement to their ultimate conclusion. To Wohlforth (2010), ―the same Nazi officials who slaughtered human beings in death camps also passed some of the world‗s most advanced legislation to protect the environment and endangered species, even outlawing cruelty to animals, including the sort of medical experimentation they performed on their human victims". But, after World War II (the consequences of which saved the U.S. from going down the same path) eugenics of this kind was to be considered a junk science (or pseudoscience) and was discredited (ibid).

This motion did not however result in the dismemberment of the eugenics societies. The British Eugenics Society simply changed its name to the Galton Institute and the American Eugenics society changed to The Population Council (which continued to be funded by John D. Rockefeller III). These groups continued to advocate policies for reducing world (specifically 3$^{rd}$ world) population. But this time, rather than fighting ―bad genes", they were fighting ―overpopulation". Further, in 1945, Julian Huxley helped organize the United Nations Educational, Scientific and Cultural Organization (UNESCO), and as Corbett (2009) argues, in the founding document entitled ―UNESCO: Its philosophy and purpose", Huxley argues that one of their key aims would be the re-legitimization of eugenics ―so the idea would once again be thinkable" (ibid). Huxley then co-founded the World Wildlife Fund with former Nazi SS officer Prince Bernard of the Netherlands (Corbett 2009).

More broadly then it is illustrated from this history that ―the political language for protecting the environment is about conflict between forces of good and evil, the fear of annihilation, and the exaltation of purity. It‗s the language of war, with dark undertones of racism we‗ve inherited but no longer recognize" (ibid). Thus, not only the inherently xenophobic field of invasion biology but also the entire ecological movement is at risk of being a nativist ideology.

Going back to Theodoropoulos (2003), who uses Allport's (1954) book *The Nature of Prejudice,* the ―idea that doom is just around the corner…we need to do something‖ is a key coherence building mechanism amongst the so called ‗xenophobes' or ‗biological nativists' who are attempting (and succeeding) to enforce their ―delusion‖ globally via legislation (arguably the kind referred to previously under the Water Act and CARA). Theodoropoulos uses the imposition of this ideology as an example of ―biological globalization‖ through a command-and-control model. Such treatises that emerge from international environmental ideas (IWRM in my case) are simply top-down ―command and control‖ models being imposed on locals worldwide as a new sort of imperialism (such as CARA, NEMBA, and the Water Act in South Africa). This, Theodoropoulos argues, ―Increases governmental and multinational corporate powers, restricting the rights and freedoms of the individuals and communities‖ (2003: 147-148). This thesis explores the concept by focusing on individuals and communities in my ethnography section in Chapters Five and Six where I speak to ‗locals' directly affected by this discourse. From this I describe just what this ‗nativist cult' (as Theodoropoulos 2003 calls them) might look like.

As outlined in this thesis, a future orientation is inherent in the field of invasion biology which is founded on scenario planning. However, Theodoropolous argues that there is an essential ―unknowability‖ about the ‗future;' yet invasion biology's models and strategies all rest on some type of scientifically justified ‗scenario planning'(Pomerol 2001; Peterson *et al* 2003). Such scenario planning, it is argued, is almost impossible considering that scientists only know about 2% of the Earth's history – upper Cretaceous to present. Therefore, any attempts to predict biological invasions face ―the immediate limitation of the rudimentary state of our knowledge of the natural world‖ (Theodoropoulos 2003: 56). According to Paul R. Ehrlich (1989), invasion ecologists are attempting to predict the fate of organisms even though so little is actually known about the complex natural systems in which they occur.

In fact, it is usually very difficult to predict population size changes in well-studied organisms and in well-studied environments. According to Theodoropoulos (2003), predicting invasion is impossible and in fact unknowable should be obvious in light of our lack of current prediction capabilities concerning native organisms. In spite of over 50 years of scientific study of wildlife and habitat relationships we are still unable accurately to model or predict the abundance and distribution of even well-studied native wild-life. And, in predicting species ranges in responses to climate change, Davis *et al* (1998: 70) argue, the ―overwhelming evidence" from history is that ―species respond idiosyncratically to change, existing interactions couple, and totally new interactions form". According to this dissident group - predicting anything about invasion will assume the status of a weather report and have the legitimate accuracy of a newspaper astrology column (Roughgarden 1986; Theodoropoulos 2003).

But, with such evidence ‗proving' invasion biology to be a ‗pseudoscience' how has it continued to underpin ecological restoration and the economic and political environmental programmes? Theodoropolous (2003: 77) explains that the cause and effects of this discourse are found in the architecture of our psyches. This is especially relevant in the South African context which has a well known history of racism, xenophobia, and bigotry. That our minds perceive and categorize phenomena and make such casual attributions is a part of the human condition which has abstracted themselves to the natural world. This is also evident in the primal fears that may be expressed in our relationship with the environment in general which are especially salient in times of social and political unrest.

Theodoropoulos (2003: 321) draws on Gross' (1987) idea of a ‗flap' which he defines as an ―exaggerated, perhaps hysterical public reaction to a number of unusual and often alarming reports". In South Africa, such reports are related to the narrative of the water crisis. Accordingly, flaps emerge from existing disquiet drawing on underlying social tensions or fears (i.e. fears of an environmental apocalypse). According to Gross, it is the characteristic of a flap to modify the behaviour, beliefs, and perceptions of those who are the audiences of it (ibid).

Theodoropolous locates a "psychology of prejudice" emerging from this flap. He refers to Duckitt (1992) who argues that in times of social unrest, the potential for prejudice increases exponentially. Duckitt focused his observations on South African society where he notes that certain beliefs continue to rest upon faulty and inflexible generalizations arguing that they are simply a result of basic cognitive mechanics of the human mind (Theodoropoulos 2003: 67). In order to understand the world we need to simplify how we categorize phenomena. This ultimately leads to over-simplified, infantile, two-valued categorizations such as good/bad, black/white, and native/alien. Once this is established, it characterizes the perception of evidence and heavily resists change (Allport 1954). Such an "unconscious fabrication of evidence" is more common in science than is generally recognized, "especially in areas of inquiry with high emotional content, such as invasion biology" (Theodoropoulos 2003).

Furthermore, Theodoropoulos cites Babad *et al* (1983) who argues that in times of social and political stress "projection and displacement" occur whereby insurmountable events occur which result in the affected groups finding an innocent, weak, and distinctive group to blame and victimize. In Allport's (1954: 167) words, "whenever anxiety increases, accompanied by a loss of predictability in life, people tend to define their deteriorated situations in terms of scapegoats". This 'projection' in Theodoropolous' usage refers to "a defence mechanism that seeks to resolve inner conflicts by ascribing unacceptable and repressed impulses or attributes of ones own to others" (Duckitt 1992). This could explain why, in invasion biology, naturalized alien species are portrayed as "aggressive, invading, destroying, greedy, and highly reproductive (i.e. oversexed), displacing indigenous species and causing extinctions" (Theodoropolous 2003: 84).

This, according to Theodoropolous causes an "anxiety and the psychology of alarm" in society. Again, he illustrates this point through Allport (1954) who argues that urban dwellers are separate from nature and have higher levels of anxiety about its perceived loss and most academic biologists are urban city dwellers and therefore "urbanization is linked to the development of prejudice owing to insecurity, alienation, control, and loss

of freedom found in cities" (Theodoropolous 2003: 82). This is supported by Putz (1998: 69), who in reference to the ‗homogeocene' argues that there is ―undoubtedly a projection of the fear of the homogenous industrial culture that is being imposed worldwide" in the ideology of invasion science. In many senses restoration is a white middle class pastime. Often, these weekly ―hack groups" are convened to hike out to some site which a specific group has ‗adopted'. Theodoropoulos further notes that this nativist ideology is especially strong in places where there is ―a type of guilt in the dominant white culture about the dispossession of indigenous peoples". This includes the USA, Australia, New Zealand, and South Africa (Holmgren 2003).

### *Ethics of conceptual responsibility*

The connection of culture and environment is illuminated quite vividly through cultural perceptions of disaster. How people choose to anticipate disasters offers a ‗lens' through which the relationship between the ideological and the material is exposed, between culture and environment. In many cases, the source of evil is seen as an ‗other' defined outside the ‗true community' (O'Leary 1998, Lee 1994). Human communities define their social order in relationship to the perceived evils of the world (Creps & Kimball 2006). This ‗other' becomes the primary cause of panic and uncertainty as it disrupts the normal social arrangements within a social system causing what Davis (1999) calls ―disaster syndrome".

The apocalyptic tradition is one of community building where individuals and collectivities constitute their identity through shared mythic narratives used to confront this evil (O'Leary 2004). How things such as uncertainty, peril, safety, fortune and fate are constructed and perceived is a basic feature of worldview, cosmogony, cosmology, and eschatology. South Africa has culturized its landscape in an apocalyptic and xenophobic way. The ‗natural heritage' which is the *fynbos* is being over run by alien plants causing environmentalists to claim a moral obligation in the war against the alien plants. This state of affairs has created room for new social and political aspirations in how the monster is dealt with.

With such a close connection between knowledge and power one needs to be critical of the vocabulary used in dealing with the problem of alien plants in South Africa, where there is a tension between the conventional vocabulary used about alien plants and the context in which this vocabulary is used (Comaroff & Comaroff 2001). There are no absolute or objective points of reference to value choices, which makes acting upon them very much about the assumptions that unconsciously held. In South Africa alien plant management exists within the backdrop of a highly ambiguous context, one of ethnic war and rampant xenophobia in the eve of an environmental catastrophe. Just as a ‗sense of community' is delineated by us, so too is the sense of an ‗ecological community' and the border lines we draw entirely imaginary ―constructed by us, by the stories we tell, and they only exist in so far as we choose to continue to tell these stories". (Hattingh 2005; Gare 1995: 193). Therefore what has been called for is an ‗ethics of conceptual responsibility' is required (Hattingh 2005). The ethic is needed to keep people from succumbing to what Bindé (2000) calls a ‗tyranny of emergency', where the language of fear, terror and disaster affects the political debate about the external environment potentially incapacitating any sensible dialogue.

## Chapter 3 – Discourses of the Future

This Chapter presents a theoretical discussion that is based both on the preceding Chapters as well as on my own field observations (described in detail in the following Chapters). Given the South Africa's apparently apocalyptic and xenophobic environmental agenda in South Africa, is it worth considering a group as millenarian useful for their analysis? In Chapters Five and Six I illustrate the observation I made in the field which led me to consider TerraPi a millenarian group. This Chapter provides a theoretical entry point to this discussion.

Environmentalism is based upon discourse about time with the future at the centre of its rhetoric. While environmental discourse used to be a peripheral issue it has now come to the fore in contemporary public discourse with the revolutionary potential to spawn new social, political and religious aspirations (Jennaway 2008). Milton (1993) makes the case for considering environmentalism as ‗a social, cultural, political, and religious phenomenon characterized by a spread and exchange of ideas on a world wide scale'.

Some forms of environmentalism posit an apocalyptic future unless specific actions are taken in the here and now, and are led by those who are identified and legitimized by their charismatic authority. Its ideas have also been attached to the now widespread 2012 hypothesis, treating environmental issues as signs of a coming apocalypse giving eschatology to the New Age cultural movement (Anastas 2007). As such, these forms of environmentalism resemble *millenarian movements*. While Jennaway (2008) has critiqued the labelling of environmental movements – led by ―global warming theorists‖ - as millenarian, I believe that certain environmentalists – and among them those involved in TerraPi - can be considered millenarian and that this framework is useful for their analysis (Lee 1995).

Throughout human history, millenarian movements have used apocalyptic rhetoric (and fear in general) to achieve their own transformational ends. This end tends to justify their means which can be extreme and even self-sacrificial. In explaining these movements I

will define (and reduce) apocalyptic thought as a general *fear* about a particular future scenario involving, in case after case, a fear of ‗the other' (xenophobia) as well. Through illustrating this ‗ecology of fear' as it exists in the South African context I show how and why a characteristically millenarian group has emerged ostensibly to test, monitor, audit and provide feedback on government tools aimed at managing natural resources at the lowest possible level. In order to arrive at this kind of discussion, of how a millenarian movement finds its expression in South Africa, I will first look to Argyrou (2005) who plots the genesis of the modern environmental movement in the postcolonial context. The ensuing review is of relevance to a study set in Africa as being placed in the postcolonial context of South Africa where the subjects of my main empirical investigation are ‗settlers' funded internationally and influenced increasingly by Western discourse through globalization

### *The Genesis of Environmentalism*

According to Argyrou's book *The Logic of Environmentalism: Anthropology, Ecology and Postcoloniality* (Argyrou 2005), the ‗west' is currently in its fourth period of ―constructive cosmological thinking" marked with the emergence of ‗environmentalism'. Argyrou first draws on Collingwood (1945) who describes the three periods prior to the ‗environmental view of nature' calling them the ‗Greek', ‗Renaissance', and ‗Modern' periods. In each of these periods, Collingwood argues, ―the idea of nature [came] into the focus of thought, [became] the subject of intense and protracted reflection and eventually produced a new vision of reality" (cited in Argyrou 2005: 45). The result was an entirely new worldview accompanied by completely different political organizations and religious representations.

The first age began in classical Greece. Here, the idea of nature was based on an analogy: nature as an organism, where nature was collectively represented as a rational animal striving to achieve its own ends or *telos* (ibid: 2). However ancient this view, it is not strange to us in the present. For many people today, particularly environmentalists, it is a core assumption about ―the nature of nature". This belief in nature - as a sentient

creature with a soul achieving its own ends or *telos* - is said by some environmentalists to provide the only hope for the future of planet earth. This view was conceived by James Lovelock in the 1960's who over the past 50 years has developed the concept of Gaia (Lovelock 2008). Frequently this hypothesis is described as explaining the Earth as a single organism.

The second age emerged during the sixteenth and seventeenth centuries. This Collingwood called the ―Renaissance view of nature". This idea was based on yet another, albeit very different, analogy. This new idea saw nature as a machine: like a clock with parts. In this view nature can be explained in purely physical terms which were made possible by both the belief in a creative and omnipotent God and the experience of designing and constructing machines that characterized the sixteenth and seventeenth centuries. Argyrou (2005: 37) maintains that this analogy ―drained all life and intelligence from the animistic world of the ancient Greeks".

The third and final age and view of nature emerged in the 19th century. This ‗modern' conception drew its inspiration from history and found its analogy in evolutionism. Nature was now perceived in terms of ‗progress and development' and wholly devoid of conscious purpose. In this view, processes of the natural world could be viewed as an endless succession of experiments with cold scientific certitude characterized by a reduction of all physical phenomena (ibid). According to Argyrou ―nature was to be reduced to a ‗standing reserve', a stockpile of resource for the taking by ‗man'. Rather than the animistic world of the ancient Greeks, nature came to be perceived as a domain of danger and the modernist paradigm of nature marked ‗civilized man' by the extent of his mastery over it. Nature was to be feared and brought under man's control as a place of unlimited utility. It was this conception of nature that ultimately led to nature's perceived demise in the present and therefore the modernist paradigm provided the antitheses of and therefore groundwork for environmentalism (ibid).

This ‗modern' view of nature ultimately facilitated and legitimized European physical and ideological expansion to regions where those who had not yet mastered nature in

such a way became the subjects of domination and exploitation. These ‗primitive and savage others‘ were not seen by the modernists in the relative sense: as having a different vision of the world. Rather, they were understood as being stuck in an ‗earlier stage‘ of nature as innocent, ignorant and superstitious. This narrative provided ‗proof‘ of European superiority and a solid ideological ground for the legitimization of colonialism (ibid).

Argyrou adds the current view of nature, under the ‗environmental paradigm‘ to Collingwood‘s list to mark the current period of ―constructive cosmological thinking‖ in the West. What is most fascinating about this vision of reality is that it is a narrative of ‗common sense‘ and ‗practical reason‘ in the face of imminent collapse (Newport and Gribben 2006). In the eyes of many, the failure of industrial capitalism has resulted in a loss of faith in ‗progress‘ which has put an end to unqualified optimism about the future (Milton 2008). For the first time since the industrial revolution there is no collective sense of control over the future which excludes the belief in ‗progress‘ as a never ending path.

Additionally, under the paradigm of environmentalism there is an extension of human rights to an entirely different community of people, or ―others‖, specifically those inhabiting the future. Indeed an imagined community in Anderson‘s (1983) sense which was explicitly stated in the second UN Summit on Environment and Development in Rio de Janeiro in 1993 where state governments of the world agreed on Agenda 21 of Sustainable Development as a common goal of humankind. According to Malaska (2001: 236) the ‗sustainable development‘ ethos can be summarized in the following form of the Principia Ethica, formulated as a particular application of the Golden Rule: ―do not do to others what you would not want them to do to you – where ‗others‘ include your contemporaries, future generations, or Nature‖. This new orientation to others and new ethical imperative was born out of risk and uncertainty which has brought with it entirely new social, political, organization and religious representations.

*Eco-apocalypse*

An apocalypse is a revelation or a ‖disclosure of something hidden from the majority of humankind in an era dominated by falsehood and misconception". The term is historically associated with an eschatological final battle, the Armageddon, and the idea of an end of the world. Apocalyptic thinking of this kind imagines a revelation at the end of the æon, or age. Usually entailed in the new age is the emergence of a charismatic hero who is ‗called' to be the prophetic leader of a group of believers in the pre-apocalyptic world. His (or more rarely, her) visions become the justification for activities that will ensure the survival of their followers.

There are many things quite unique about the contemporary apocalypse under the environmentalist paradigm. The environmental apocalypse is all- encompassing. That is, it does not simply involve one society ending, but of a worldwide collapse. Also, contrasted with previous narratives of the apocalypse, ‗God' does not play a guiding role in the eradication of evil and the protection of good. After the invention of the nuclear bomb, humans have become the subject of this cosmic battle with salvation dependent upon themselves. The new apocalyptic scenarios therefore do not necessitate a deity (Landes 2000). According to Landes (2006: 2), ‖having dismissed God from the apocalyptic scenario [we] have replaced his immense destructive powers with our own".

**Millenarian movements**

Millenarian movements are given meaning through apocalyptic thinking. Included in their worldview is a cosmic battle between the forces of good and evil. While the term evokes millennial years such as 1000 or 2000, it is no longer restricted in this way and is unstuck in time (Barkun 1986). Adherents believe themselves to be playing a special role in preparing for the apocalypse where they will inherit an era of peace in the post-apocalyptic world, whenever it might occur (Newport and Gribben 2006). Thus millenarians use the apocalypse as a sense-making position in the present, the expectation of which transforms the meaning of their adherents' existence in history. They use the ‗end' to determine the movement, whether it be social, political, religious or artistic.

And, their idea of the future legitimizes the measures they take in making formal preparations for the ‗end of the world' (Landes 2006; Newport and Gribben 2006).

The term millenarian itself has been opened to include any charismatic group that uses the end to make sense of their actions in the present. Visions of the end are not isolated, and are arguably the foundation for any radical or revolutionary movement. Broadly speaking, the foundational narrative of nearly every religion is a story of the end, where some sort of cosmic battle between the forces of good and evil explains the successive human generations and the meaningful position of its believers in the present. For some Jews the apocalypse represents the coming of the messiah; for some Christians, the victory of the antichrist and the return of Jesus; for some Muslims, the arrival of the Dajjal (antichrist) and the Mahdi. For the New Agers it represents a period of social and cultural evolution with a focus on environmentally benign living (Robins and Palmer 1997). Even Marxism is based on a historical dialectic of the apocalypse, where the ‗end' represents the withering away of the state and the triumph of the proletariat over the bourgeoisie resulting in a radical egalitarianism involving the renunciation of private property and a utopian, no-coercive society. Conversely, for the Nazi party, the aftermath of the apocalyptic race war was a 1000 year ‗Third Reich' ruled by the nationalistic and totalitarian Aryan race (Landes 2006).

While the term millenarian (or millennial) was originally coined by scholars of religion, adherents need not have a belief in God or any supernatural saviour to qualify (Newport and Gribben 2006). According to Burridge (1969) the requirement was changed due to the observation that these movements are quite successful in sanctioning social and political aspirations leading to new religious and political identities. Millenarian movements can be seen as the first revolutionary movements: leading to new cultures or social orders in-the-making and an entirely new moral community.

These examples of millenarian movements expose the intimate linkage of religious, political, and social groupings. Lee (1995) warns that one cannot consider millenarian movements as *either* religious or political because it is difficult to distinguish them in

both theoretical and practical analyses. A belief that is primarily religious will have distinctly political and social implications. In Lee's (ibid: 17) words, ―a political movement may have religious overtones when adherents possess a moral justification for committing any actions that they perceive as necessary to achieve salvation". Because religion and politics both offer a system of order, when millenarian movements occur a transformation of that current order occurs. So, generally, millenarian movements arise in times of stress and they function to revitalize some people – particularly the ‗deprived' and fringe groups.

While the West appears to be the most apocalyptic, such beliefs feature in many non-western cultures, particularly in post colonial societies giving rise to millennial movements (Mbembe 2006). This ―syndrome", as Mbembe (2006) calls it, has been experienced by many post-colonial African countries including Liberia, Sierra Leone, Rwanda, Burundi, Congo, and Sudan. In the South African context, the best-known millenarian movement occurred amongst the Xhosa people in South Africa's Eastern Cape – ironically the location of my own field site. As a form of response to the pressures of the Frontier Wars and the lung sickness epidemic, the amaXhosa heeded the prophecies of a girl, Nongqawuse, in which killing all their cattle would have the effect of driving the colonizers into the ocean; instead it resulted in the ‗cultural suicide' of the amaXhosa.

Mbembe (2006) warned against this type of ―populist rhetoric and a millennial form of politics" which advocates self-destruction as a means of salvation, stating that there are ―good reasons to believe that the current political disorder in South Africa closely follows the pattern" that precedes such a movement. According to Mbembe, millenarian movements in the South African context always involve a certain level of mass hysteria. This leads to the emergence of a false prophet (*maprofeti*) - usually a person of very humble origins (though this hardly applied to Nonqawuse) who predicts a future where a great resurrection will take place. Mbembe claims that ―whenever questioned about the source of his actions and authority, he invariably refers to the authority of his ‗ancestors', his ‗tradition' or his ‗culture'" (ibid).

## *The sociology of millenarian movements*

Millenarian movements usually appear amongst the marginalized, oppressed, and politically powerless during periods of extreme social, political, and cultural unrest. This includes individuals experiencing the deprivation associated with a lack of perceived social and political goods (Lee 1995). It is in this sense that the sociological concept of ‗relative deprivation‘ is most revealing in the study of millenarian movements.

This concept was explicitly tied to the development of millenarian movements by David Aberle (1990) who defines relative deprivation as ‗a negative discrepancy between legitimate expectation and actuality‘, careful to emphasize that this discrepancy is relative and not absolute. In Barkun‘s (1986: 35) words, there is ―no objective yardstick with which an outside observer might measure conditions in a society". Therefore, what is important is that individuals *perceive* themselves to be in a condition where their circumstances do not meet their expectations (Lee 1994: 20).

Barkun (1986) continues to note that rather than causing a millenarian movement, relative deprivation can indeed ―prime" a society for the development of such political and religious aspiration. And thus, the conditions of relative deprivation alone are not sufficient to bring them about. What is needed is a ‗highly focused and intense‘ change that directly threatens an individual‘s ‗true society‘, or meaningful community (Lee 1994: 22). These changes involve a disruption of normal structural arrangements within a social system causing ―disaster syndrome". Millenarian movements emerge as a response to disaster syndrome, where there is a chance to ―interpret the unfamiliar in terms of the familiar and, when that fails, lapse into behaviour patters that are non-rational and reflexive" (ibid). Jérôme Bindé (2000), Director of forecasting at UNESCO warns against this type of non-rational behaviour pattern noting that in order to create sober solutions one must not succumb to ―the tyranny of emergency".

Anthony Wallace (1956) gives another account of the emergence of millenarian movements in society. He argues that societies function like biological organisms and like all organisms, they prefer to maintain homeostasis or a _steady state'. However, like all organisms they must confront continued challenges. Thus, in this process of maintaining homeostasis, social systems entail a process of adaptation and adjustment; which follows a kind of lifecycle. When the stress upon societies systems becomes too great, social movements may emerge to address the particular problem. Society is then _revitalized' through a process of destruction and then creation. Wallace outlines this cycle as follows: —existence in a steady state, increased individual stress, cultural distortion, and finally, revitalization" (Wallace 1956). Lee (1994) argues that Wallace's theory —does not offer a reliable means of accurately predicting when such movements will develop", however, —his work does provide insights into the kind of function that millenarian movements perform. They are, simply put, a means for society under stress to adapt to new conditions" (69).

**Charismatic leadership**

All millenarian movements are set in motion by a charismatic individual, regarded as a prophet or messiah, who uses apocalyptic rhetoric (and fear in general) to achieve personal and collective ends. This person is usually privy to a special kind of knowledge (Weber 1947) and brings often powerful and unrealistic solutions to society's current problems, offering their adherent meaning through revitalization.

In his analysis of social reality, Weber notes the important function of charisma in institution building. According to Weber (1947: 234, 370), in periods of social, political and cultural stress charisma is the greatest revolutionary force. According to Lindholm (1993: 23), the groups that charismatic leaders give rise to —result in a radical alteration of the central system of attitudes and direction of action with a completely new orientation of all attitudes toward the different problems and structures of the _world'". In all instances, their manic passion legitimized their sometimes erratic actions.

Weber (1941: 56) explains the charismatic as transcendent having ―supernatural, superhuman or exceptional‖ powers which reveal a new realm outside of everyday routine.  It is in this way that they are seen extraordinary and revolutionary and distinguished from other forms of authority.  Following this pattern, Hitler, Churchill, and De Gaulle were able to inspire in their followers [the conviction] that they were the masters of history and that in the long run history would be with them.  Weber explains the charismatic magnetism of the prototypic charismatic leader as ―marked by unique and innate capacity to display highly coloured emotions, of whatever kind‖ (Lindholm 1993: 23).

These charismatic‗s operate outside the profane world of everyday routine and are considered to be above the level of bureaucracy, making grand claims and attempting to disintegrate all chains of customs.  According to Lindholm (1993: 25) the charismatic is a ―negating, emotionally intense, undercutting force which is opposed to all institutional routines, those of tradition and those subject to all rational management‖.    The charismatic is careful to accept roles of power and is usually able transverse fixed lines of authority.  They do this by their rejection of economic trading and profit.  This is why, in millenarian movements, people don‗t obey dominant custom and law: ―they are revolutionary and creative, opening new future possibilities‖ (ibid).  It follows that these values are immediately at war with bureaucratic action and the instrumental nature of economic rationality. The charismatic‗s values exist above and beyond this plain. According to Weber (1947: 233), in contrast to bureaucratic organization the charismatic shuns the possession of money or income per se rejecting all rational economic conduct instead being supported by voluntary gifts, sometimes on a grand scale involving foundations.

While the foundational analysis of charisma is mostly associated with Weber, others have added their insights. For Durkheim (1964), the charismatic becomes the group personified and symbolizes the social configuration in which they find themselves. Further, ―if [society] happens to fall in love with a man and if it thinks it has found in him

the principle aspirations that move it, as well as a means of satisfying them, this man will be raised above the others and, as it were, deified" (cited in Lindholm 1993: 32).

Le Bon (1912), in his analysis of hypnotism and crowd psychology argued that, ―the passive crowd instinctively follows anyone who expresses intense beliefs, since this permits the crowd to take on a form.  Therefore, the leader must act his part with gusto in order to appear larger than life.  He must make use of emotionally charged theatricality, large gestures, dramatic illusions…It is not enough to be feverishly emotional" (cited in Lindholm 1993: 34).  Notably, the charismatic's technique is almost universally to never attempt to prove anything by reason relying instead on affirming and repeating highly emotionally charged rhetoric.

## Charismatic leaders in the environmental movement

In regards to the American based radical environmental group EarthFirst!, George Foreman stood at the apex of their organization as their charismatic leader and his speaking style has been compared to that of a Southern evangelist (Lee 1994: 74). In a more contemporary context, Al Gore has been publicly considered a millenarian leader, building an apocalyptic faith of ‗global warming theorists' through doomsday predictions in his film *An Inconvenient Truth*.  Interestingly, in 2007, The United Kingdom Court Judge Michael Burton argued that the film was not a suitable educational resource for high school children because it was ―politically partisan" and ―not an impartial analysis of the science of climate change".  Burton further notes nine ―scientific errors" as pointed out by Mellor (2009).  There are many more luminaries, including Tim Flannery, James Lovelock, George Monbiot, and Ross Gelspan all with their own vision of the future and the role that humans can (or cannot) play in the present that is delivered with as much appeal to the heart as the head.

*Environmental millenarianism*

Lee (1995) argues that within the environmental movement so-called ‗radical environmentalism' can be viewed as both religious and political. Looking at the millennial environmental movement Earth First!, Bron Taylor (1991: 263; 2001a, 2001b) argues that while many in the movement reject organized religion, the movement was nevertheless founded on a ‗radical ecological consciousness', which ―intuitively, affectively, and deeply experiences a sense of that sacredness and interconnection of all life". Deep ecology, argues Lee (1995: 14), links this ―sacredness of life with its own cosmogony, cosmology, moral anthropology, and eschatology".

Adopting ideas from Clifford Geertz's, Lee maintains, ―Religious faith is interpreted as a means of ordering the events of this world" (ibid: 14). Geertz himself further defines religion as ―a system of symbols which acts to establish powerful, pervasive and long-lasting moods and motivations in men by forming conceptions of a general order of existence'" (ibid). Here, religion is understood as a faith in a transcendent reality that gives meaning and purpose to existence in the profane world. The post-apocalyptic world is such a transcendent reality.

It is important to note that apocalyptic expectation is merely the activator of millennial movements. Western *eschatology* (the study of the end times) imagines two possible aftermaths of the apocalypse: an eschatological or final one, where the world is consumed by purifying fires and individuals are assigned heavenly rewards or hellish punishments. The second scenario is a *millennial* one in which a new world of justice appears on earth marking a messianic age of abundance, joy, and fellowship (Landes 2006). The purely apocalyptic scenario involves staggering levels of violence and destruction: ―rivers of blood, plague, earthquakes, floods, and famines – devastation from wars and natural calamities" (Lee 1994: 10). In the millennial sense, the apocalypse can be just as violent but, rather than being the final end, it involves a this-worldly transformation that emphasizes humanity's voluntary and peaceful change to a new order of things. This distinction in eschatology further marks the difference between two kinds of environmental worldviews, namely the so-called ‗radical' and ‗moderate' forms.

Apocalyptics are only concerned with the event and the earthly conditions leading up to the apocalypse. They are not interested in a millennial future for a chosen people nor are they interested in whether human life will even continue to flourish in the post-apocalyptic world. Rather than focusing on their role in the post-apocalyptic world apocalyptics are more concerned with their role in the pre-apocalyptic world. They might for example, understand themselves to be responsible for ensuring that particular conditions are met in order that the apocalypse may occur. The millenarian belief system on the other hand focuses primarily on the imminence of the apocalypse but have the added characteristic of finding *meaning* in the event as a catalyst for change in which the ‗chosen' ones will inherit the earth (Lee 1995: 19 my italics). Thus, apocalyptics believe that human nature is unchangeable whereas millenarians believe that human beings are perfectible and await the day when they (the perfected, chosen, believers) will inherit the earth (ibid 62).

Environmental discourse - with its focus on the future through its assertion of an impending crisis (apocalypse), its demand for action and its vision of a new society provides the basic elements of a millenarian movement (ibid: 18). Moreover, this faction of environmentalists argue that by adopting their principles the recipient will not yield any personal deprivation in terms of loosing quality of life. Rather, adopting their principles will provide the stepping stones toward a new society and way of living that is ‖joyous and enlivening" and a ‖more satisfying way of being fully human" (ibid: 32).

In millenarian belief in general, a massive collective change of heart occurs which tends to foster programmes of radical (and often unrealistic) social change fostered by an eccentric charismatic. The most prominent form of this type of transformational millennialism in the 20th century comes from the New Age movement, set in motion by the millennial wave of the 1960s which spawned the utopian vision of environmentally harmonized communes (Landes 2006: 11). This kind of ‗demotic millennialism', of which radical environmentalism is one, represents bottom-up and egalitarian ideas (O'Leary 1998). This millenarian form views hierarchy as the incarnation of evil and believes that ‗tribalism' is the ideal, where inhabitants act justly by choice.

Thus there is no need for government. According to Landes (2006: 9), ―for them, freedom and justice in the messianic age will abolish the domination of individual over another, promoting a kind of holy anarchy in which ‗saved' behave justly from love and not from fear". On the ground, however, demotic millennial movements have frequently turned into totalitarian adventures (such as the Taiping or Communists), reflecting precisely the kind of reversal that many cynics anticipate from proponents of equality through lessons learned from history whereby coercive purity follows the seizing of absolute power (ibid). This is a precisely the outcome Mbembe (2006) fears for the ‗new' South Africa. In summary:

- Moderate forms of environmentalism are optimistic that civilization will survive into the far future, albeit transformed, and that through social and political action in the present we can secure that future. It is important to note that these moderate environmentalists are more willing to work within the confines of the current economic order to achieve their goals, believing that the solutions to environmental problems can ultimately be achieved by enlightened economic rationality.

- Radical environmentalism on the other hand holds no special place for human beings following the apocalypse, giving more value to the amount of biodiversity in the post-apocalyptic world than the amount of human diversity. This brand of environmentalism completely distrusts all economic rationality believing that it (and humanity in general) are the root cause of the current crisis and anticipated apocalypse.

Martha Lee (1995: 12) in her investigation of the environmental apocalypse notes that groups that approach environmental problems from a more moderate perspective serve a tactical function: ―they can pursue court battles that might save the wilderness, and they can educate the general public". This so-called ‗reform environmentalism' (or in more current parlance ‗market environmentalism') aspires to create a state of affairs whereby the future can be protected via the current order of things; through reform, rigorous

economic restructuring, and effective environmental policy. By contrast, the radical environmentalist (or, deep ecologist), calls for a re-evaluation of humankind's role in the world. According to this belief system, humankind has no greater purpose or worth than any other form of life. Humans therefore have no legitimate claim to dominate the Earth at the expense of other creatures. Under this paradigm, human beings are reduced to an organism amongst many, all of which deserve the same respect.

Biocentrism' is the ideological means by which radical movements distinguish themselves from other groups and it is through this that they determine their own motives, tactics, and goals (ibid: 10). This perspective advocates a respect for all species and a dedication to maintaining the full biodiversity of the earth: ―all things in the biosphere have an equal right to live and blossom and to reach their own individual forms of unfolding and self-realization" (Devall and Sessions 1985). In general, this biocentric perspective requires that important (and often drastic) changes be made in the way societies are organized and what individuals demand from the environment. Its philosophical assumptions dismiss bureaucratic authority and technological society to advocate the simplicity of a ―natural life', or a return to preindustrial social organization. This, for biocentrists, is ultimately the most desirable and necessary way of adapting to an immanently chaotic future (Lee 1995: 38).

This perspective is distinguished from the New Age movement which was dominant during the development of deep ecology in the late 1960's. According to deep ecology's main author, George Sessions, the New Age movement – not unlike deep ecology -- ―often characterizes the world as sacred and criticizes the approach of industrial society" (Devall and Sessions 1985). However, its thinkers and subscribers believe they themselves ―occupy a special place in the world because [they] possess consciousness, reason, morality, and any number of privileged traits that make us fit to be stewards over the natural processes of the planet" (Lee 1995: 11). It is here that the distinction between apocalyptic environmentalists and millennial environmentalists is further concretized.

*Environmental millenarianism in South Africa*

Creps and Kimball (2006) argue that human communities tend to develop foundational narratives (of which the apocalyptic is one) that define the relationship of the social order in relationship to perceived evils of the world. In many cases, the source of evil is seen in an ‗other‘ defined as foreign or barbarian; outside the ―true community‘ (O'Leary 1998). When reviewing the literature on environmentalism and millenarianism, the conjugation of environmental crisis and race war is a familiar creature of the catastrophe genre in that in almost every literary account of disasters there is some ‗other‘ seen as the primary cause of panic and uncertainty (Davis 1999). The very idea of disaster is based on a cultural perception of vulnerability whereby the disaster is seen as some type of monster (Hoffman 2002). But the ‗other‘ doesn‘t have to be human or supernatural; it can simply be plants out of place. In South Africa, alien plants have become ‗henchmen of the apocalypse‘ in terms of bringing drought, the proof of which comes out of over 15 years of ecological work that has gone to quantify the amount of water consumed by alien vegetation (particularly Black wattle) (Le Maitre, *et al* 1996; Carpenter 1999; Le Maitre, *et al* 1999; Le Maitre, *et al* 2000; Le Maitre, *et al* 2002; Dye and Jarmain 2004; Maitre 2004; Le Maitre, *et al* 2007; Marias and Wannenburgh 2008).

This is not the first time that apocalyptic dreaming has been associated with biological xenophobia of this kind. Comaroff and Comaroff (2001) described a different type of apocalyptic imagery attached to alien plants in South Africa, which was apparent in public fears of this monster as the Western Cape burned in 2000. These aliens (notably Pine) were blamed for the calamitous scale of the blazes with private landowners held accountable for letting them spread unchecked (ibid: 627). According to the Comaroffs, the fires ―livid scars and apocalyptic proportions evoked elemental anxieties, calling forth an almost obsessive desire to construe it as an omen, an indictment, a call to arms" (ibid: 628). The fires were seen as a threat to South Africa‘s ‗natural heritage‘ - the *fynbos* biome (―fine bush" in Afrikaans) - which characterizes the Western Cape landscape giving it World Heritage Site Status because of its unparalleled amount of biodiversity. Public fears of the apocalypse at the hands of invasive aliens continued despite claims by scientists - including world renowned botanist Dr. Richard Cowling - that fire is a natural

requirement for the regeneration of the *fynbos* –and not a train smash in terms of biodiversity" (ibid: 632). A related problem currently plaguing the north eastern part of South Africa is *Chromolaena odorata* nicknamed –paraffin bush" because of the fire hazard it poses" (SAPA 2010a) and in the wake of these fires, the Department of Water Affairs and Forestry initiated the *Ukuvuka* (–wake up") campaign.

It is interesting to note that in the South African context the _monster' is seen as the agent of _creative destruction' a theme consistent with millenarian discourse (O'Leary 1994). The apocalypse begs for a monster; a monster that acts as both the agent of complete destruction and then the agent of regeneration; bringing transformation through creative destruction (Hoffman and Oliver-Smith 2002). In the face of such disasters, nature is _re-culturized'. The disaster becomes a monster whose form takes on many guises, from invisible terror to savage others, and according to Hoffman and Oliver-Smith (ibid: 20), –The monster has implications involving cultural and political control".

In the _post-racist' South African context the monster has taken on the form of an alien plant. In general Murray (2005: 140) argues that –it has become almost a national truism in South African that everyone loves to hate aliens". These sentiments were made a part of contemporary public culture with the 2009 movie, *District 9*, which was both projection and satire. Murray relates this truism to the social marketing strategy *AlienBusters* – implemented by the South African government (through DWA) in an attempt to communicate to the broader South African public the apocalyptic threat that accompanies these aliens. According to Murray (ibid: 137) –the parallels between invading alien vegetation and invading aliens in UFOs are obvious. Both are space invaders. Both threaten life on our planet. In both instances the aliens are the enemy who must be destroyed in order to protect life on earth" (ibid). Figure 1 below depicts some of this irony with a *Working for Water* team standing in front of the *District 9* movie poster:

Figure 2. *Working for Water* team in front of District 9 movie poster. Photo taken in 2009.

## Studying environmental millenarianism 'on the ground'

I have characterized the subject of my main empirical investigation - TerraPi - as a social entity that organizes itself in terms of a particular vision of the future – not in isolation but in relation to the policies of outside controllers who have their own vision of the future.  As I shall show, TerraPi is catastrophist within the general sense that I will discuss, but this organisation also exists very much in the real world. However, this real world is also influenced by local, and to a large extent concretized, policies motivated by both the perception of a looming water crisis and by the BEE (Black Economic Empowerment) policy which has led to the *Working for Water* programme and *WaterNeutral*.  These programmes provide the opportunity for leadership offered by the catchment management associations (CMAs). I have already suggested that TerraPi and other actors in the CMA and beyond may be viewed from a number of theoretical

positions.  In the following Chapter I outline my research methodology to give support to the theoretical position I have taken in describing TerraPi's form and function.

# Chapter 4 - Futures Research

The current _environmental crisis' – manufactured as it may be, according to Hattingh (2005) and Gare (1995) — involves two extremely complex and interrelated systems: nature and human society. As a result, interdisciplinary approaches and a variety of perspectives are required (Milton 1993; Milton 1996; Higgs 1997). Anthropology has enjoyed the diffusion of its knowledge into other academic and professional fields, particularly in regards to the environmental sciences which have recognized that the solutions to environmental problems require an expanded view that includes historical, cultural, political, aesthetic, moral, and temporal aspects (Puntenney 1995; Higgs 1997; Hope 2006b).

Broadly speaking, anthropology is concerned with humans everywhere and throughout time. In addition to pioneering the ethnographic method - founded on participant observation - the discipline has been particularly helpful in developing the concept of _culture' as an analytic construct. Howard (1986: 5) maintains that ─culture is the manner in which human groups learn to organize their behaviour and thought in relation to their environment". From a social organizational perspective, the investigation of _culture' involves an analysis of the attitudes, assumptions, values and belief systems peculiar to a certain social organization (Nyambe *et al* 2007).

According to Hoffman and Oliver-Smith (2002: 58), just as the progress of a disease shows the physician how the body works, in the same way a social crisis allows a social scientist the opportunity to peer into the nature of society. Thus, anthropologists working within the field of ecology have observed that the connection of culture and environment is illuminated quite vividly through cultural perceptions of disaster. How people choose to anticipate disasters offers a _lens' through which the relationship between the ideological and the material is exposed, between culture and environment.

The ideological paradigm of environmentalism is to a large extent hinged on the anticipation of catastrophe, crisis, disaster, apocalypse, etc. This orientation to the future

has done its part in affecting how some people interact with their environment. Most of this interaction is concerned with defence and focused on adaptation. This adaptation, according to Patterson (1994: 233) involves a set of material practices that are socially constituted and culturally meaningful.

Adaptation as a social and cultural process has been one of the central concepts in anthropology since the field's emergence in the nineteenth century. Organizations concerned with the implementation of the defensive ideological mandate of environmentalism (i.e. ‚sustainable development') have become increasingly institutionalized and their ideas are being systematically employed the world over (Milton 2008).

Anthropology has a long history of analyzing the values and structure of institutions and can therefore offer insight into the organizational culture, and the assumptions that make up its core, and offers insights into the adaptability and responsiveness of these organizations to potential disaster (Hoffman and Oliver-Smith 2002). Further, how things such as uncertainty, peril, safety, fortune and fate are constructed and perceived is a basic feature of worldview, cosmogony, cosmology, and eschatology.

**Anticipatory Anthropology**

The future is serious business with images of it used to justify action in the present. These ideas have continued to gain ground in popular discourse both because we are (again) worried about it and because our views are (again) unclear. As a discursive field, the future has political and analytical consequences with assumptions about the future guiding the management of natural resources at every level – domestic, national, and global (Wallman 1992).

But, without some kind of view of the future there may not be one. All goal oriented behaviour is by definition anticipatory (Textor 2007) and planned change would not be possible without a view of how things might (or ought) to be. Changes in these beliefs themselves can alter the way individuals and groups relate to each other, to the natural

environment and to culture itself. As Sandra Wallman (1993: 6) argues, "collective representations of the future sustain everything we call _culture' and they underpin the very sense of self and survival upon which social organization depends". The immediate task of anticipatory anthropology as an applied science is therefore to elicit scenarios of the future and sketch means of achieving the most preferable amongst all actors concerned. As such it makes value judgments.

The success of any alien plant eradication scheme depends crucially on the expectations of those who are the subjects (or objects) of it, and on a reasonable match between their images of the future and those of the agents in charge (ibid: 3). Ultimately, however, the futures of local people are only partly determined by the local people themselves with the vision and actions of outside agencies determining to a large extent the types of futures that are ahead (Persoon and van Est 2000). This is a critical dichotomy in national versus local philosophies that needs to be addressed in order for long-term programmes aimed at conserving biodiversity and managing water to succeed.

Although the demographic, medical, and ecological aspects of planned change are confidently assumed, on the whole, the discussion proceeds without direct input from anthropology. This anthropological impulse leads one to try to interpret the way the future is pictured and how these perceptions have led to the direction of public policy and the management of practical life. Thus, an anthropological study of the future will not be concerned with prediction but rather a focus on the causes and consequences of images of the future held within a specific context of time and place (ibid: 2).

The future is a cultural construct with no objective existence. Because the future does not exist there can be no future facts (Textor 1989). There are only facts about the past and present. It is this logical impossibility that makes the study of the future problematic. What does exist however are people's *perceptions* and images of the future which do have factual status. These images can be studied in relationship to their influence on the processes of change as the future becomes present (Gills 2008). I am not concerned with whether the future can be known, or with the basis on which we think we know it, but

rather on interpreting the future in terms of the way we and others picture it and how these imaginings affect social organization in the present (Wallman 1993).

Furthermore, it is the ontological assumption that the future exists as alternatives, as ‚futures' instead of ‚the future' (Malaska 2001). In this sense the future is un-actualized possibilities. There are three general categories of futures according to Textor (2007):

> The ‚possible' refers to (among other things) what could happen. The ‚probable' refers to (among other things) what would likely happen under appropriate circumstances subject to human control – such as political will, leadership skill, resource allocation, regulation, and education. The ‚preferable' is a normative judgement as to what should happen – by the values of an interviewee, a panel of citizens, or the like.

### *An ethnographic approach*

By definition, to be clear, ‚ethnography' is a research approach and ‚anthropology' is a specific discipline whose adepts engage with a number of research fields such as environmental anthropology. The latter provides the firm theoretical and methodological foundation upon which the former rests. In adhering to ‚participant observation' I draw closely to people and events to put the reader in the ―thick of things" achieving a documentary status grounded in the voices of ‚local' people (Bate 1997; Fetterman 2010). This highly interpretive approach is arrived at through ‚criticality' by asking why a particular social reality is the way it is and why a set of relationships or symbolic understandings are the way they are.

Through situating the subjects of my empirical investigation in historical, political, economic, cultural and social terms the object of study will be freed from being considered as an isolated entity. In rendering it in this way a window will be opened on the processes of meaning-making amongst a specific organisation and community of people located in a specific place at a specific time. Such symbolic representations of actors' meanings are typically studied by focusing on theoretical categories such as narratives, discourses, stories, metaphors, and myths; found in everyday talk and text

(Yemba 2009). The aforementioned discussion has followed from initial observations of such talk where I noticed a clear apocalyptic mythical structure at my field site.

The ‚field' and the ‚work' that is done there is an important theoretical component of the ethnographic method and paradigmatic of anthropology as a discipline. It is this process of participation and observation in the field which is the rite of passage of the anthropologist as Barley (1983, 1986) would have it. This process entails that the researcher's absorption and immersion within the context of their objects of study. However, fieldwork is often confused with participant observation and ethnography as if they were one and the same thing (ibid).

O'Reilly (2009: 2) clears this distinction by noting that, ―ethnography is a methodology, participant observation is a method, and fieldwork refers to the period of primary data collection that is conducted out of the office or library". In a now globalized context many ethnographers have had to further rethink the meaning of ‚fieldwork'. This has subsequently led to releasing the object of study from the confines of a particular location -- unbinding it from a single place and time (ibid: 4). This is exactly what has led to the interdisciplinary nature of this research. In many ways, this ‚global ethnography' is not characteristic of anthropology at all. Classical Anthropologists - by convention - have focused the entirety of their attention to the confinement of their fieldwork sites, to ―the enclosure of the village, the isolation of the tribe" (Buraway 2000).

Further, Fetterman (2010) notes that while the ethnographer focuses on keeping an open mind about the groups or cultures they are studying, this does not imply a lack of theoretical rigor in that ―the ethnographer enters the field with an open mind, not an empty head". The reader of an ethnography can only know as much as the ethnographer exposes and there is certainly room for abstraction (Descola and Palsson 1992). In mitigating this (to whatever extent it can be) a degree of reflexivity is required on the part of the writer.

This is accomplished by exposing the progression of ideas that occurs in the field as well as the assumptions that have been carried there. This reflexivity is critical to the anthropologists engagement with the people that they study (and ultimately the people

whom they write for) and brings into play a heightened self-conscious awareness of the researcher's role in ‗worldmaking' (Goodman 1978), that is, the ways in which their persons (from education and training; experience to personalities to demographic characteristics) might be shaping the knowledge claims that are advanced with respect to their research topic. Thus, has my research affected the way I see a specific group or has my experience with this group affected the way I do my research? I detail this ‗positionality' to the best of my belief through my personal background and motivation for study in Appendix A.

This thesis has its own aspirations of ultimately contributing to a specific field of knowledge, such as the broad field of ‗environmental anthropology'. In initiating my approach to the study of ‗environmentalism' I conducted a library search for ‗environmental ethnographies'. Here I found a vast amount of literature from indigenous knowledge systems to political ecology. I ultimately narrowed my focus specifically to ethnographies concerned with the imposition of environmental ideas on ‗local' people in a contemporary (and to a large extent ‗Western') context, including that of Theodossopoulos (2003 -- not to be confused with Theodoropoulos 2003 cited in Chapter Two) who looks at the imposition of environmental ideas on Greek farmers and tourism entrepreneurs concluding with a description of different perceptions of nature and the future.

According to Ade Pearce (1999: 145), ―what is most striking is the diversity of these disputes in terms of their central issues, their composition, their directions of development, and their outcomes. There is simply no such thing as a characteristic environmental conflict". In the following Chapters I deal with a case of the imposition of environmentalism on ‗local' people (mostly White Afrikaans-speaking landowners) on the fringe of a World Heritage Site and seek to show how an apocalyptic and (biologically) xenophobic environmental agenda has provided fertile ground for the emergence of new social and political aspirations in terms of millenarianism. My research reveals that the ‗futures' of local people are rarely determined by the local people themselves but are rather moulded by the vision and action of outside agencies

who determine to a large extent the types of futures that are ahead (Persoon and van Est 2000).

**Ethnographic Futures Research**

The following section summarizes my research design (or methodology) which, simply put, is focused on establishing a new way of solving problems, namely through anticipation (Textor 1978; Textor 1980; Textor and Steiner 1982; Textor *et al* 1984; Textor *et al* 1985; Textor 1990a; Textor 1990b; Textor 1995; Textor 2007).  With an interest in anticipation in general, this research is still based on the method definitive of anthropology, notably prolonged ethnographic fieldwork with primarily qualitative descriptions of social actors.  Through interactive interview techniques, interviews were structured to cover specific domains but were not fixed leaving the interviewees as free as possible to move in directions of their own choice to construct their own categories.

The Ethnographic Futures Research approach was created in 1976 by Stanford Professor Robert B. Textor (European Foresight Monitoring Network).  It is grounded in Future Research (FR), which is in general a large and disparate field of interdisciplinary participation mixed with anthropological theory and ethnographic methodology.  The purpose of FR was defined by Wendell Bell (1997) as the discovery, examination, and evaluation of possible, probable, and preferable futures in order to understand what causes change.  Cultural Futures Research (CFR) is a component of this which utilizes the concept of culture as a central theme.  Thus, studying the future anthropologically adopts the assumptions, aims and methods of FR (Riner 1987; Textor 1990b; Textor 1995).

Ethnographic Futures Research (EFR) is the method by which the researcher practicing CFR can go about her or his task (Textor 1989: 141).  The relationship between EFR and CFR is similar to the relationship between ethnography and cultural anthropology (Textor 1980; Textor 1990b; Textor 1995).  Specifically, EFR is used to ―elicit from members of an extant social group their images and preferences (cognitions and values) with respect to possible or probable future cultures for their group" (Textor, 1990b: 141).  And, while grounded in the ethnographic method, EFR is an appropriately modified and focused

mode of gathering and using anthropological knowledge to anticipate change and assess future possibilities (Textor 2008: 2). Further, Textor notes that this is relevant specifically as it relates to the field of environmental impact assessment (Textor 1985: 3).

The EFR model is a qualitative model of enquiry which has been used in numerous studies since about the 1960s (Mitchell and Gillis 2006; Textor 2007). It takes a macrotemporal approach which utilizes an awareness of vectors of socio-cultural change - with an awareness of the ecological dimensions and a long established comparative and global perspective (Textor 2000: 5). EFR is cultural, holistic, comparative, macro-temporal, and emically-etically balanced (Textor 1989: 24). It deals with the practical concerns of people and is oriented toward creating a more desirable future for them asking ―to what extent can we shape the course of the future events with interventions"? and ―to what extent can we choose aims and goals for the future according to the values held and make rational interventions toward these aims" (Olla and Choudrie 2009).

Of particular importance to the design of this methodology is the concept of ‗sœnario‘ which is explained as a story or an imagined ‗future history‘ that deals with what a situation could, might, or is most likely to be at a specific horizon date (Textor, 1995: 465; Textor 1990: 143). According to Wendell Bell (1997: 317), this is the end product of any type of Futures research: ―a story about the future, usually including a story about the past and present. Often, it is a story about alternative possibilities for the future, each having different probabilities of occurring under different conditions. Also, it often includes goals and values, evaluating alternative futures as to their desirability or undesirability".

An EFR scenario‘s primary purpose is concerned with the process of change within a specific sociocultural system over the time horizon, or a specific date that participants have in mind. There are three types of scenarios, an optimistic, pessimistic, and most probable. Thus, the goal is to ―*elicit scenarios* from a sample of interviewees, that will support conclusions as to their shared and *patterned* perceptions and *preferences* with respect to *possible* or *probable* future *cultures* (or subcultures) for their society (or

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group), usually some approximate time horizon in the *middle*-range future" (ibid: 24). The middle range scenario being about 20 years into the future.

There are five design elements to an EFR that directs the development of the study (Textor 1980, 1990a, 1990b):

1. The population and culture whose future is being discussed. This is done in order to allow the study to focus on a particular narrow theme.
2. The horizon date which is the date that a specified scenario will manifest.
3. The discovery of the domains of culture that the study will explore.
4. The identification of the most important forces driving sociocultural change.
5. A consideration of the culture's underlying assumptions.

**Problematic areas**

In regards to the results that come from such anticipatory projects, Riner (1987: 315) notes that the ─reports on the finding are presented on a contract, rather than grant-supported, basis. Reports on the findings are presented to the contractors where they accumulate in the ethically problematic domain of proprietary knowledge, and are less frequently shared with a peer audience". This was indeed true in my case where I was funded as a professional consultant for a specific development programme - the *WaterNeutral* project - and therefore through the World Wildlife Fund for Nature and the South African Department of Water Affairs. This information was disseminated to a broad range of people, in most cases environmental scientists. I also disseminated the information to my peers (in the fields of Anthropology and African Studies) through papers delivered in conferences in both South Africa and Switzerland (See Appendix A).

Another problematic area is that a future oriented approach is a value-rational field. According to Malaska (2001: 231), ─there is no way…that the values could be lacking or absent, even when they are not explicitly stated, the study may be implicitly value-laden". In mitigating this to whatever extent it can be requires that I, the researcher and author try to highlight these value (and differences) to give different interpretations of the ends that

are constructed through the technical and instrumental rationality of the people I investigate. It is from this that claims about ‗good' ends can be stated and what the possibility or probability of these ends are and which ones are worth disregarding or opposing (ibid).

This leads to the next major challenge of conceptualizing the future which is ‗tempocentrism'. According to Textor (2007), ―ethnocentrism is to the anthropologist what tempocentrism is to the futurist". That is, while ethnocentrism refers to one being excessively centred on ones own culture; tempocentrism refers to one being excessively centred on one's own timeframe. Thus, similar to ethnocentrism -- the often false assumption about how others perceive their world based on our own limited cultural experience -- tempocentrism is a result of a narrow worldview in which people pay too little or inappropriate attention to the future.

As Textor (2007: 18) argues, there are costly examples of tempocentrism in action especially in the realm of environmental policy. He refers to the unrestrained urban growth policies that will result in unsustainable demands on water supplies in the future in places like the south-western U.S. Similarly, I try to show in this thesis that the environmental sciences in general need to focus on processes, rather than simply products or technist outcomes. Ethno- and tempocentrism both can be hindrances for individuals and organisations that must make decisions in the context of change. The EFR interview must be designed to handle the challenge of tempocentrism by helping both the interviewer and interviewee to cultivate the ―art of anticipation" by which tempocentrism can be counteracted through facing alternative futures creatively (ibid: 465). Thus, specific recommendations for decreasing tempocentrism include conducting the EFR interview in such a way that the interviewee is encouraged to be creative and have the feeling that he or she is in control of the interview. To this end, the EFR interviewer should restrict his or her role to that of ―an active, sensitive, and sympathetic listener, non-directive stimulator, and careful recorder" (Textor 1990:145).

This shares a resemblance to what Bindé (2000) argues is a ‚tyranny of emergency‛, where policies made in times of fear are at risk of being kneejerk reactions rather than sober quests for long-term solutions.  However, Lomborg (2010: xxii) argues that sometimes long-term solutions can distract from problems in the present.  In this sense, worrying too much about the environment can have counterproductive results.  That is, if the ―alarmist doomsday‖ drums continue there is a likely outcome that the policies that result will be ineffective and costly.  This, according to Lomborg (ibid: 5-6), ―will do little to help the world but much to drain us of our long-term stamina necessary for seeing us through. Instead of focusing on how intensely we should be worrying, we need to worry correctly.  We need to find the pragmatic middle ground and get smarter‖. Furthermore, ―Statements about the strong, ominous and immediate consequences of global warming are often widely exaggerated, and this is unlikely to make for good policy‖.

**Ethical, safety and regulatory issues**

While I don‛t believe this work to raise any ethical, safety or regulatory issues, practicing anthropologists are nevertheless aware of the danger of ‚creating‛ their objects of study whereby they themselves contribute to the process of change in the societies that are being studied.   The ethical question unique to anthropology is therefore how the individual anthropologist may affect public perception of a group or groups of people. This is why it is prudent for the anthropologist to interrogate their own values, assumptions, and biases that arise before and after research is conducted.

Furthermore, it is reasonable to imagine a difference in values whereby incompatible values may arise.  Anthropologists have a moral obligation as members of other groups which is why it is prudent for the practicing anthropologist to consult individuals and groups in order to establish relationships that are in the best interest of all parties. Anthropologists also have a moral obligation to scholarship and scholarly conduct.  This means using and disseminating findings in a way that is understandable.  Anthropologists also have a responsibility to the public in general.  It is thus important to be transparent

about motivations for implications of research so that it strives to be socially and politically responsible[3].

Finally, anthropologists have a primary ethical obligation and responsibility to their subjects.  The research must ensure that the safety, dignity, and/or privacy of the people with whom they work will not be compromised.   All of my informants are given pseudonyms with real names only being used where I have gained permission to reveal their identities.   The following Chapter lays out the results from my interviews and experiences.

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[3] http//www.aaanet.org/comittees/ethics/ethics.htm

# Chapter 5 – Introducing the Langkloof



**Figure 3. A view looking South within the Baviaanskloof Mega-Reserve.**



**Figure 4. The Leopard is one of the top predators in the Baviaanskloof Mega-Reserve.**

**The Baviaanskloof Mega-Reserve**

The Baviaanskloof Mega-Reserve (―Valley of Baboons‖ in old Afrikaans) is a Cape Floristic Region World Heritage Site, granted this status by UNESCO in 2004.  Its motto is ―conserving a unique ecosystem for tomorrow‖.  It is one of eight such sites and the third largest protected area in South Africa (see Figure 5).  It is located 95 kilometres (km) north-west of the coastal city of Port Elizabeth in South Africa‗s Eastern Cape.  The reserve lies in-between the Baviaanskloof and the Kouga Mountains both of whose catchments provide up to 40% of the drinking water for the Nelson Mandela Metropole of Port Elizabeth and the outlaying towns of Uitenhage and Despatch which supports nearly 1.1 million people (Board 2009).
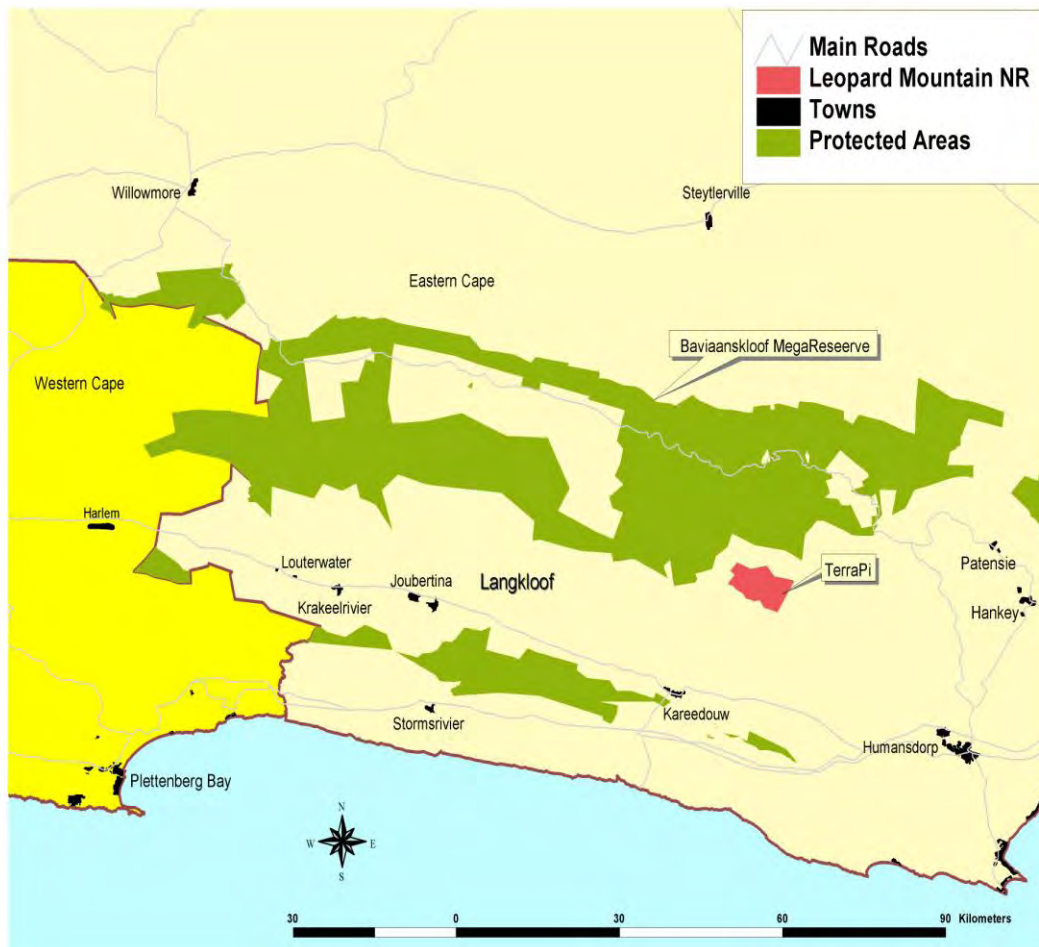


**Figure 5. Location of the Baviaanskloof Mega-Reserve and Langkloof, Eastern Cape, South Africa.**

The Langkloof is the focus of my study area and is located on the eastern side of the Mega-Reserve, in-between the Baviaanskloof and Tsitsikamma mountains (see Figure 5). It is known as ‚the fruit route' being the second largest deciduous fruit producing area in South Africa and it is also known as the ―breadbasket of the Eastern Cape". It was along this route – stretching about 120km's through the towns of Avontuur, Haarlem, Misgund, Louterwater, Krakeel, Joubertina, Kareedouw and Assegaaibos – that I spoke with 22 private landowners. Each of these towns consists of a cluster of houses, a central railway station, a school, a church and some commercial buildings (most commonly the ―Pakhuis" where the fruits are packed).

Before European settlement the area was home to the ―Bushmen" (*San*) hunter-gatherers as is evident in the countless cave paintings scattered in the area. Following this, the so-called ―Hottentots" (*Khoe)* pastoralists arrived, giving names to many of the places in the area. This group was subsequently decimated by a smallpox epidemic and the survivors incorporated into the colonial society, becoming creolised as ‚Coloureds'. The first European settlers to come to the area were mostly ‚frontiersmen' in the 1740's, most of whom were aggravated by the Cape Town authorities mostly in regards to the excessive taxes that the colonial government was requiring them to pay. By 1773 there were about eight homesteads in the Langkloof (Erasmus 2004).

*Orientation*

My official introduction and orientation was at a ‚steering committee meeting' (November 2008) which is a bi-annual gathering set to convene the various actors within the environmental management scene in and around the Baviaanskloof Mega-Reserve including scientists, landowners, directors of organizations and institutes, students and representatives of government departments. This would be the first of many meetings I would attend over a 2 year period between 2008 and 2010 in (and out) of the Baviaanskloof.

The main topics discussed were the current ecological and social results within the purview of projects happening in the area. Of primary concern were the two ‗payment for ecosystem services‘ projects running through R³G; one which operated through planting *spekboom*[4] for carbon offsetting and the other which offset water through alien plant eradication. It was the latter, the *WaterNeutral* pilot project that I became involved whose ecological data in the Eastern Cape was being provided by the Kouga Riparian Restoration Programme. I have outlined the background of *WaterNeutral* in Chapter One and will come back to it in the following Chapters (also see Appendix 2). Suffice it to say for now that this strategy is based on putting a market value on the environment and the services it provides, specifically water. *WaterNeutral* secures the water resource through eradicating alien plants thereby providing jobs and ecological restoration in tandem which is good business for those funding the programme, considered to be participating in ‗corporate social responsibility‘.

At the meeting, my colleagues introduced me by saying, ―This is James, and he will be doing a social analysis of *Working for Water* and the *WaterNeutral* pilot project". I would add to this the fact that I am a Masters student in the Department of Anthropology at Rhodes University and that I am interested in the attitudes and perceptions of landowners toward alien plants. While landowner perceptions are indeed understudied the very sustainability of alien management approaches are hinged on their ongoing support. This kind of understanding resulted in a social marketing strategy in 2005 (*AlienBusters!*) and then through public policy in 2008 which makes it a legal duty for private landowners to manage aliens on their land. My interest is in regards to the imposition of these policies on landowners and what their perceptions and attitudes towards it are.

It is very rare for the first time ethnographer to have a clear picture of what exactly it is they will write about. Focus follows from the fieldwork experience where observations

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[4] *Spekboom* is the Afrikaans name for *Portulacaria afra*, also known as Dwarf Jade Plant, Elephant‘s Food, or Elephant Bush. It is common to the Eastern Cape of South Africa and the Karoo of the Western Cape. Given increased importance for its carbon fixation properties it has become a strategy for poverty alleviation in offsetting programmes in South Africa.

are linked to interpretations (Fetterman 2010). Later on in my research, following my interviews with the landowners, I would qualify my research agenda by stating that I am conducting an ―institutional analysis‖ of the water management agency in the area and documenting the ―institutional culture‖ of a specific farm and how the group there aspires to address the needs of and constraints on private landowners as well as the broader institutional developments around CMAs.

Magadlela and Mdzeke (2004: 44) argue that the WfW intervention and its social results have not yet been ―fully researched and documented, as much of the programme's limited management and research capacity was focused on quantifying and implementing the environmental aspects‖. That is, while the technicist biophysical evaluations of the programme in terms alien plants in relation to hydrological and ecological components have been well studied, the role of the programme as a poverty reduction mechanism is under researched (Hope 2006b). Thus, through gaining an understanding of landowners' perceptions of alien plants and how this fits within the institutional landscape I hope to contribute to a model that would make the WfW programme's benefits as sustainable as possible. One which would clarify ―the extent to which it has contributed to the ability of people to diversify or add value to their livelihood strategies once they have left it‖ (Magadlela and Mdzeke 2004: 46).

At this meeting, and others, I noticed a wide range of nationalities participating with these environmental programmes. While the project leaders were usually South African, there was quite a big group of people from the Netherlands. Also, during my time I met Italian, Czech, Pakistani, and Bangladeshi students all of whom came to the Baviaanskloof Mega-Reserve to conduct research for MAs and PhDs in the environmental sciences. Because of such a diverse range of people it was common for me to be questioned about my national origins, which were correctly assumed to be American. To this I would explain that ―I am South African *and* American being born in South Africa to American parents. At the age of ten I moved to the United States. I have come back to South Africa to complete my Masters degree‖. Quite interestingly, more than a few of the scientists noted that my accent would be an asset in gaining access to

the landowners. According to them I would be seen more as a ―third party"; as neither English nor Afrikaans.

In my own experience this ‗Americanness' constituted a favourable ‗alienness' and did indeed help the interview process. It was an icebreaker and a topic of interest when speaking with the landowners. In 22 interviews I was asked to go through my personal narrative 18 times. This was usually met with interest and positivity with some of the ―bullies" (―old person" in Afrikaans slang or meaning bulls of the heard; patriarch) actually having children living and working in the U.S., mostly in the mid-West as both farming and domestic work (bore hole drilling and au pairing respectively). According to one farmer ―My son loves the graft [work] out there".

After the steering committee meeting it was suggested by Ms. Saskia Fourie (the *WaterNeutral* project leader) that I meet with Harry, owner of TerraPi, the land where the *WaterNeutral* project is located and the place we would be lodging. Harry was different from most of the attendants of the meeting: long hair, strong Afrikaans accent, and Crocodile Dundee style leather hat (which got him another nickname, ―Harry the Hat"). Because his land was the site of the *WaterNeutral* pilot project (along with other re-vegetation and alien clearing projects) Harry was entitled to be at the meeting as an ‗interested stakeholder'. Just how he aspires to function within this process was unbeknownst to me at the time but as my research progressed he, his group, and his aspirations would become the focus of my thesis.

At the meeting he was not reluctant to voice his opinions about the management of alien plants and vision of their management offering special insights on the promotion of ‗value added industries' which, simply put, seeks to put an economic value on the Wattle after it is cut. This includes making charcoal, wood chippings, fertilizer and craft material out of the by-product. One of his latest strategies was to make Ganoderma lucidum (Reishi/Ling Chi) or Shitake mushrooms out of the biomass, drawing from Paul Stamets (2005) book, *How Mushrooms Can Help Save the World*. Also, another interesting strategy he was pioneering was fertilizer from the charcoal of Wattle, which

he called *terra pratica*. These are all attempts to prove that alien management can be made an economic activity.

Upon meeting Harry in person I was instantly comforted by his friendliness and accommodating attitude as he welcomed the opportunity to be interviewed during the ride back to his farm. He loaded me into his Range Rover and we set off to TerraPi. Harry articulated his opinions clearly and most of the talking was done by him. From this 40 minute interview I gathered my initial ‗data' which formed the groundwork for a paper I would later present at the University of the Western Cape at an Anthropology Southern Africa conference. Here I gave details about the aspirations of Harry (and my project) before I conducted any in-depth research. The presentation was entitled ―Conservation on Degraded Land: Linking Permaculture and Educational Tourism on the Baviaanskloof Fringe".

Broadly, Harry considers TerraPi to be a ―border line conservation area" whereby he has positioned himself ―on the front on the war on aliens". There is a clear moral obligation in the way he speaks of the importance of TerraPi's land in mitigating a ―humanitarian crisis" posed by alien plants which would ―deprive millions in Port Elizabeth of their drinking water". The result of this lack of water would undoubtedly lead to the type of ―anarchy and chaos" that Turton speaks about in Chapter Two. Through education and tourism TerraPi hopes to create awareness of the catastrophic problem associated with alien plants. Their institutional aspiration (and transformational end) is to prove that alien plant eradication can be an economically viable land use alternative.

*Perceptions*

**Figure 6. The *Water Neutral* pilot project site**

The above picture would appear to some to be an example of ecological degradation due to de-forestation (shown in the above Figure 6). Conversely the photo shows ecological rehabilitation through deforestation. This is the *WaterNeutral* pilot site. Upon entering the field, ethnographers bring with them all types of biases. Admittedly, before entering my field site I had expected Black wattle to be a small bush, a likely association I had in mind from my knowledge of the alien invasive plant *Tamarix* (a.k.a tamarisk or salt cedar) in the U.S. In fact, my first experience of a Black wattle forest was aesthetically pleasing as they are the only large trees in the area, giving the landscape an alpine look which, to someone who has lived in the Sierra Nevada's, was pleasing (see Figure 7).

It was not long after I had entered the field that I would discover that these trees are considered the ‗henchmen of the apocalypse,‘ wreaking havoc through taking water, causing fires, and killing off biodiversity. Needless-to-say I would keep the aforementioned thoughts entirely to myself throughout the rest of my fieldwork. Interestingly though Saskia had once mentioned to me that the smell of Wattles in the spring is pleasing and the little yellow flowers that bloom in-between their dark green leaves remind her of her childhood. This came as a shock to me because I did not expect

anyone, let alone a project leader, to speak well about alien plants. I had assumed that the institutionalized hatred towards these aliens would result in the psychological necessity of rationalizing their inferiority. I was wrong, and this would be my first encounter with the various perspectives on these controversial plants.



**Figure 7. A cluster of Black wattle.**

Once, on a separate trip in the Western Cape dealing also with invasive aliens (except this time with alien fish) I came across a painting depicting another interpretation of the ‗æsthetic of alien plants'. In Figure 8 below, one artist notes the ―beauty and charm‖ that some aliens have, in this case Blue gums which, like Black wattle, place even more stress on water resources brought to South Africa from Australia for farm timber.
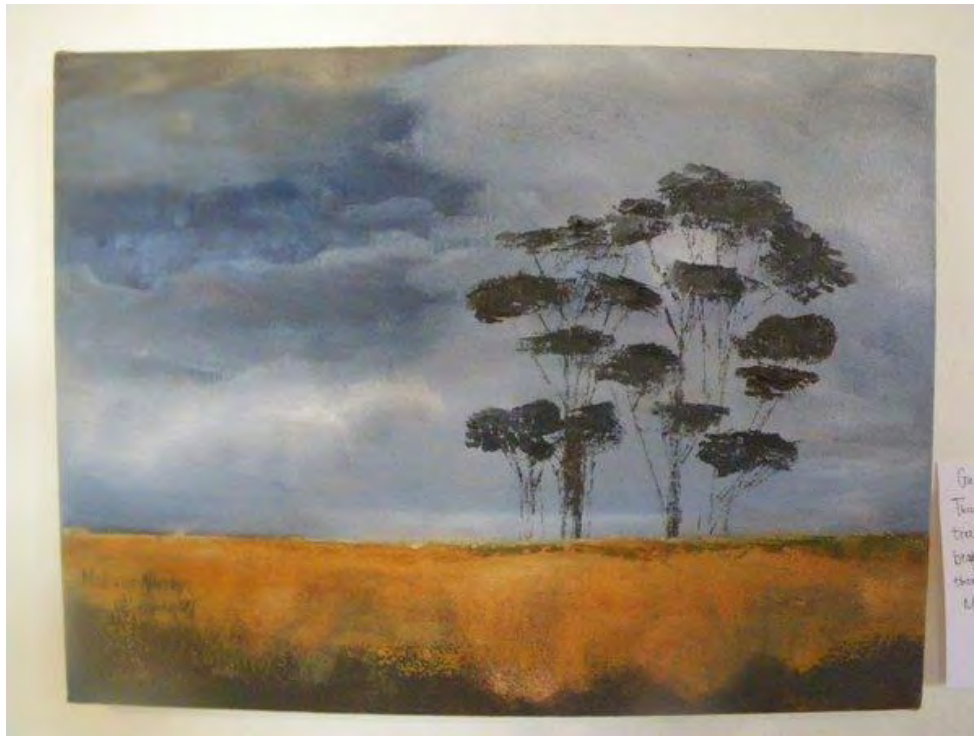
**Figure 8. Acrylic painting of a cluster of Blue gum. Photo taken in 2009.**
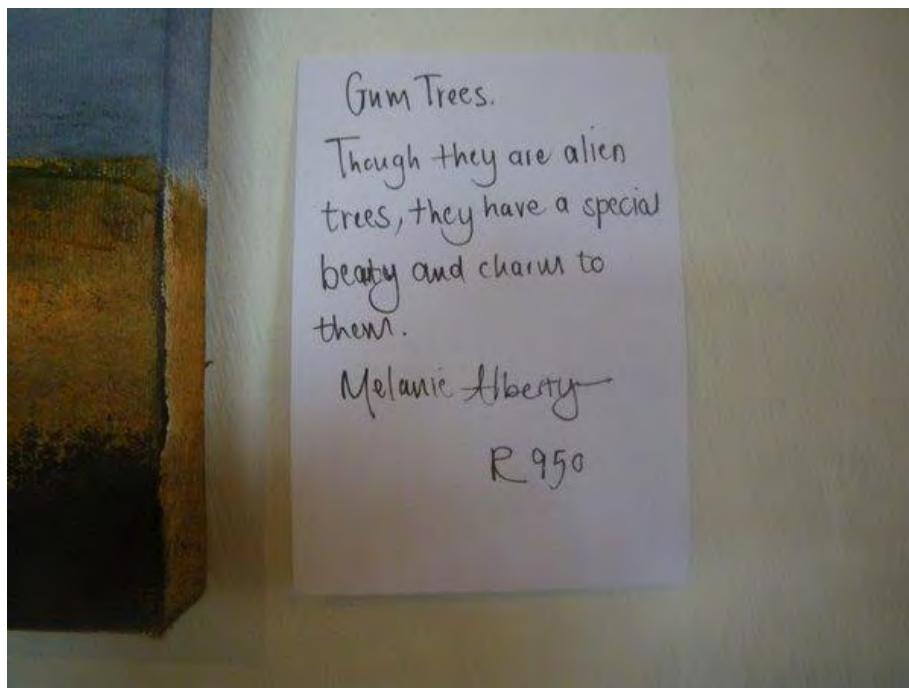


**Figure 9. A message expressing the aesthetics of alien plants. The quote next to painting reading "Gum trees. Though they are alien trees, they have a special beauty and charm to them". By Melanie Alberty. Photo taken 2009.**

As previously mentioned, one facet of TerraPi's approach to water management and landowner participation is in creating a perception of alien management as an economic opportunity. While I will wait until the following section and Chapters to delineate this, it is important to note here that TerraPi's efforts are not isolated and there are others throughout South Africa who have taken a similar approach. Indeed what this illuminates is the national awareness of specific environmental programmes that are focused on market approaches to alien plant eradication. This is not to say that TerraPi is not unique in the way staff and volunteers go about interacting with their environment but to show that this organisation is not the first to internalize the idea that alien plants can offer ‗value' to the livelihoods of people. As my thesis explains, the idea of curing the ills of society in South Africa through eradicating alien plants has been internalized and become the aspiration of NGOs, the South African government and large corporations. The figures below show the operations of PlanetWise, a company in the Western Cape about 5 hours from TerraPi, who use alien plants to make crafted objects; mostly artisan fences and pots. This was an impressive instance of what can happen in terms of ‗value added' or ‗secondary' industries and certainly represents one facet of what Harry aspires to become. The motto at PlanetWise is ―creating jobs by protecting the environment".



**Figure 10. Artisanal fences made by Black wattle by-product. Photo taken November 2009.**

**Figure 11. Decorative baskets.  Behind them a large wattle tree.  Photo taken November 2009.**

Here, the perspective of alien plants is very much market driven.  These ‗secondary industries' are in fact a major aspect of the sustainability aspirations of both TerraPi and the WfW programme because it proves one way that landowners can realize a monetary benefit for guarding ‗ecosystem services'.  Dr. Guy Preston, Chair Person and National Programme leader of WfW gained media attention through his unique approach when he created a value added strategy through using pine -- removed outside of plantation areas in the Western Cape – to make low-cost coffins. This ‗secondary industry' got Dr. Preston the Terra-Nova Award in 2005 for Environmentally Sustainable Community Upliftment.

Once questioned about the ethical implications of making coffins, Preston responded that ―the Department [of Water Affairs and Forestry] would be willing to work with ethical undertakers, but did not want undertakers to use coffins as a way of making a profit"[5]. Biers, used in Muslim funerals, were also made.  This was done to keep in line ―with all major religious traditions, to hold dignified funerals that do not deepen the plight of the

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[5] http://www.pmg.org.za/minutes/20070828-departmental-progress-report-working-water-working-fire<9

poor"[6]. The press release for the Terra-Nova Award states that ―*Working for Water* is one of the most successful integrated land management programmes in the world, and is held up as a model approach internationally"[7].

Additional approaches involve mixing wood chips with cement, to make panels for new houses which provide excellent insulation. Also, according to Binns *et al*. (2001: 353), ―there is a good market for debarked wattle, exported through the port of Richards Bay, which can command prices of R320 per ton from Japanese paper manufacturers". Similar progress is being made in terms of wood for charcoal and wood-chips and ‗non-bulk' items such as crafts, furniture and building materials as shown in Figures 10 and 11. TerraPi is in the process of proving this and that it can be used as an incentive to gain the ongoing participation of private landowners.

Differing perceptions of alien plants in South Africa do not stop here. Jean and John Comaroff (2001: 639-640) note more examples:

> Time was when there was great enthusiasm at the Cape for plant imports. Already by the opening decades of the eighteenth century, species such as Mediterranean cluster pine had to be introduced to the mountain slopes in large numbers to cater for the timber demands of the settlers. By the middle of the nineteenth century, interest in horticultural borrowing had been turned to Australia – the other antipodean British colony and South Africa's enduring rival – whose heartlands constitute a Mediterranean biome so similar to the south-western Cape that some posit an evolutionary convergence between them. In an effort to bind soils on the windswept Cape Flats, the most sizeable agricultural plain in the region, the then Colonial Secretary began bringing in Australian wattles and myrtle to provide screens and enable dune formation. By 1875, *the government was encouraging large plantations of cluster pine and other imports*, including Hakea and Port Jackson, to shelter them. So eager

[6] http://www.arcworld.org/downloads/Eco%20coffin%20leaflet.pdf.
[7] www.wildernessfoundation.org.za/content.asp?PageID=807

were the authorities to see these exotics take root that they distributed millions of seeds and *awarded prizes for the greatest acreages planted*. This is in stark contrast to the present day: now there are moves to tax foreign seed and force landowners to clear their properties of these very same imports (my italics).

In a more contemporary context these alien plants fuel the national pastime in South Africa that is the *braaivleis* (or ‗barbeques') exposing how they are both condemned in public, but, ―in private, the stuff of hallowed cultural practice" (ibid: 642). In conjunction with this the lives of many migrants in South Africa are constructed near alien plant forests being a source of fuel wood as well as a standing reserve for home construction material, primarily with Australian wattles. Therefore, according to the Comaroffs (2001: 642), ―the search for fuel is a permanent feature of the lives of squatters, wherever they reside". As such this ―vegetation may, simultaneously, be one person's livelihood and another's apocalypse" (ibid: 650).

And lastly, the Comaroffs (ibid: 638-9) write:

> As recently as 1953, an authority on the subject actually described fynbos as an *invader* whose expansion threatened the mixed grassveld of the south-western Cape. What is now said of aliens was being said, not long ago, of this ‗national treasure'" (638). But so have the values that inform our perception of it. Where, once upon a time, farmers saw Cape Flora as useless, as poor grazing material on barren soil, a ‗fynbos landscape' – rather than a landscape of grassveld or of tress that bind soil and provide fuel – is now widely taken for granted as the ‗climax community'; i.e. an evolutionary end-point to be achieved and conserved.

### *Landowner perceptions*

―In the New South Africa some thought it would be the blacks who would take over our land, instead it was the Black wattle". A private landowner living in the Langkloof, 2008.

Whereas a former government encouraged landowners to plant alien plants - even offering rewards for those who could grow the most - at the present, government is enforcing policy to hold landowners responsible for the removal of aliens in an effort to ward off a water crisis (Woodworth 2006). In 2005 the South African government legitimized concern for this through a social marketing campaign *AlienBusters!* (Murray 2005). In 2001, the Comaroffs illustrated the apocalyptic context in which alien plants became an urgent affair of the state, after the fires in the Western Cape. The narrative of the water crisis has furthered this apocalyptic rhetoric. Landowner continue to be blamed for the spread of alien plants and culpable for an ensuing water crisis.

Do landowners feel this to be an imposition on them? Based on prolonged interviews with private landowners living in the Langkloof I contend that alien plants are as much an imposition on them as it is on the national psyche. First and foremost landowners understand the economics of alien plants. For these ‚stakeholders' alien plants are a threat to both their agro-economy and tourist economy. All of the landowners I spoke with were involved in the arable citrus industry. In my sample there were approximately eight landowners who have been living on their farm for at least one generation. Many (14) are both farmers and tourism entrepreneurs.

During this period of fieldwork I conducted ‚applied anthropology' acting under the title of a professional consultant for *WaterNeutral* and therefore carrying a kind of ‚officiality' (see Appendix B for letter of introduction). While there was a high degree of directiveness in my interviews, I allowed the informant to move into categories of their own understanding. And so, interviews began focusing on alien plants and then moved to broader issues of land management and government policy and how this affects their future.

Farming was an obvious commonality of these landowners. What was not so obvious at first was their participation in Tourism. Participation, even in a limited way, affects the perception of alien plants in the landscape in that their tourism economies are based on the ―pristine beauty‖ of the *fynbos*. As one informant confirmed: ―there is a difference between farmers absolutely involved in tourism, farmers semi involved in tourism, and farmers absolutely not involved in tourism…A farmer involved in tourism will perceive the beauty of the landscape partly in terms of the economic interest‖.

It is important to note that I do not attempt a definitive and holistic account of the landowners living in the Langkloof. My interactions with them were focused specifically on understanding their needs and constraints toward complying with government policy. As previously mentioned, landowner perceptions is an understudied area in ecological literature in South Africa. My own account only scratches the surface of their social realities. Also, the presentation of my results is focused on a group of nine which represent the collective viewpoints on alien plants (this group does not include the landowner of TerraPi – Harry who I will come back to in Chapter Six). I use their voices in so far as their claims illustrate the general attitudes and perceptions of this ‗stakeholder group‘.

The project leaders at *WaterNeutral* had quite specific needs in terms of information, suggesting that I ―Do not focus on WfW and its problems‖. Rather, ―the bigger question is how to deal with alien invasive plant problem, and what **strategy** can be developed to effectively deal with alien plants. This includes landowner‘s involvement – how can this take place? What are constraints and opportunities to clearing, not just WfW activities‖. However, through my interviews I found out that perceptions of alien plants are intimately tied into accounts of the WfW programme, which cannot be easily separated. Nevertheless, there was an interest by the *WaterNeutral* team to have the following questions addressed.

1. Do farmers perceive alien plants as a problem?
2. Which species?
3. Do they perceive alien plants as opportunity?

4. Which species?

5. How do they propose the problem should be dealt with?

6. Do they feel that they should assist with alien plants removal/control?

7. What do they feel their role/contribution should be?

8. What are the limitations of their involvement/contribution?

9. If they manage teams from their farms, do they feel WfW should pay for labour? And mapping? How will this be controlled?

10. Do they see any opportunities that will act as incentives to increase their involvement? i.e. value added industries?

11. How do they feel about legislation regarding alien plants and its implications for them?

12. If opportunities within secondary industries are understood how do they see this working? e.g. who will operate charcoal plants, who will transport wood to the processing plant, who will pay for this, will they sell charcoal?

During the period of three weeks that I spent speaking with landowners I continued to lodge at TerraPi. I spent my days at the *Working for Water* office located in Joubertina, the administrative capital of the Langkloof, about 45 km from TerraPi. It was from this office that I made appointments with the landowners. Of the 27 potential interviewees I phoned, 18 instantly agreed to an interview. Four resisted at first but then agreed. This was contingent on me quickly stating that I am interested in speaking about their perceptions of alien plants. Five refused a personal interview but did offer to answer some questions over the phone. Those that did permit a formal interview invited me to their homes usually around tea time (10:30) or for lunch (13:00). It was from this initial interaction, over the phone, that I realized that the perception of alien plants is intimately tied to perceptions of the WfW programme. The results of the survey are summarised in Table 12 and discussed in more qualitative vein below.

| Questions | Neutral | Agree | Strongly Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| 1. Are alien plants a problem? | | 40% | 60% | | |
| 1a. To farming? | | 70% | 30% | | |
| 1b. To tourism? | 15% | 20% | 65% | | |
| 2. Which species? | | | | | |
| 2a. Wattle? | | | 100% | | |
| 2b. Blue Gum? | 60% | 20% | | 20% | |
| 3. Are alien plants an economic opportunity? | 85% | 15% | | | |
| 4. Should the government assist? | 20% | 65% | 10% | 5% | |
| 5. Should a third party local organization assist? | 15% | 15% | 60% | 10% | |
| 6. Should landowners pay at least half of the total cost | 10% | 45% | 15% | 15% | 15% |
| 7. Is the legislation necessary? | 45% | 5% | 15% | 30% | 5% |
| 8. Should landowners manage their own teams? | 10% | 10% | 80% | | |

**Figure 12. Participant responses to interview questions regarding alien plants**

My first interview in the Langkloof was with Andre who manages both a farming and tourism economy.   While his family is ―from the area‖, he has personally owned his land since 2005.  He is very much aware of alien plants and the risk they pose to his land, both in terms of productivity as well as aesthetics.   He views alien plant management like ―going to the dentist‖.  That is, ―You need follow up. You must have management. You must go in phases.  And remember to follow up!‖   However, Andre made it clear that WfW has trouble keeping up with the follow up themselves which can make the problem worse than when they started.

Andre was quite aware of the 2008 legislation.  What I did not expect was that he had a positive outlook on it and the economic mechanisms by which it operates.  He claimed that, ―this has the potential to work without enforcement which will take the government surveillance aspect out of it…through economic means, the landowner has to clear his land or else he couldn‗t sell it because the cost of clearing is deducted from the overall purchase value…This makes the problem of alien vegetation a problem defined by a long-term gaze‖.

After this, his attention was turned to the water issue.  In this talk, Andre showed a clear awareness of how Black wattle might exacerbate an already fragile water resource upon which his farming economy is based. To this Andre makes use of another metaphor.  He says, ―You have to maximize the source or your bucket won‗t be worth anything.  Even if new dams are built, alien vegetation will still take over more and more water.  Building more dams before clearing aliens is not logical.   One must maximize the source (mountainous catchments for one) for the bucket to be worth anything‖.  Following this, he made a clear reference to the Carte Blanche episode (mentioned in Chapter Two) stating that, ―Load shedding is a past example of the future ‗water shedding scenario‗.  It was predicted that within 20 years the demand for energy would exceed its supply.  What happened this year [2008] is an example.  Today we are warned of a water shedding scenario.  This is probably imminent.  But it can be mitigated‖.

Andre was adamant that all other landowners should take up this obligation, saying ―You can't get away with doing nothing". Then, he pointed out that he has an old factory on his land saying ―I am in the process of restoring this, because it makes economic sense for me to do it as well, because, under the Department of Mineral and Energy's policy, the costs of rehabilitating a former mine is deducted from the market value of the land at the time of purchasing just like as it is the case with the plants. So I just have to do this".

Moving swiftly to politics, Andre had some interesting things to say about the ―contemporary predicament" of South Africa. He claims that ―people are not following their passions…People in the world today have such short term mindsets. They are influenced by the computer revolution which made simple people rich quickly. Where there is fast food, fast cars, money, Las Vegas! They are living in the present not thinking of the future. The right people must start thinking. No longer the ideal representation of the problem, but *a revolutionary* one".

This came right round to the WfW programme where he argues that the programme ―has a very short term plan, with no long-term scientific plan to implement. When the government works down on the ground it becomes unstable. It falls apart because it is a bureaucratic structure. It has no ‗grassroots' infrastructure. No ‗community development'. There are not the checks and balances that civil society organizations do".

Toward a better management structure that is sensitive to the locals needs Andre says that ―The money should come from the government directly into the hands of the farmers, given that they apply the employment contingent BEE structure. The government will give possibly less than what is spent on the *Working for Water* structure. And it will be used more effectively". Through this mechanism, ―Private enterprise is then supported on the bases of performance. The check and balance mechanism will be in place by the legislation decreasing the value of the land with alien vegetation on it".

Ignatius has also owned his land since 2005. While he has recently made a shift to tourism this has not made his farming economy redundant. He does indeed perceive

alien plants as a problem, both for his citrus industry and for the aesthetic value of the land in terms of tourism. The WfW programme came up and Ignatius stated that he has worked with them, but not for the past 2 years. While he appreciates their work, he thinks that the programme could be managed better and is very interested in better supervision. In regards to alien plants, like Andre, if he had a choice of WfW over managing his own teams he would advocate managing his own teams. This means getting money from the government and hiring "politically correct workers", these being those who fit the BEE requirement.

Ignatius is interested in how the programme works, as an "ethical way to manage land". He then referred to the fact that he has spent "thousands of rand" on Anatolian dogs which "sleep, eat, and live with the sheep and chase the leopards away". Such an approach, Ignatius says, will "mark a shift in thinking about how to solve problems on the farm and to deal with the realities that exist and how they exist". At that point his wife came in, and agreeing with him, she stated, "If we take care of the land, it will take care of us".

The next person I met with was Basil, who has been leasing his land since 2006. He says that *Working for Water* is a "waste of time and they have a very short conception of time and the problem". He was critical of how the management activity operates specifically in regards to the follow up. He said that the teams came once and "chopped a bunch of wattle over a few months". Then, they never came back and now the problem is even worse. He argues that they [WfW] only offer immediate assistance and don't support the landowners long-term needs. Ultimately, "in this top down way the money is squandered". He would rather work with an independent contractor who is personally accountable to do proper follow up.

Piet, a general manager overseeing many other farms (including Basil's) also has issues with management plans. He was adamant about the fact that he would like to change how the teams operate. For instance, rather than working at the bottom of the stream "they should go to the top and start there. That's where all the seed is coming from. I

can't understand their efforts. It's like what they are doing is just providing jobs". He said that the WfW teams –are just too lazy to walk up river. The teams always go for the easiest to access. You know the new South Africa. No one likes steps, everyone wants a lift". He is very willing to pay as long as the job is done properly. But, –the problem is long-term and it will not be solved in this generation".

Deon, who sublets on 350ha was a special case and one of only 3 landowners that were overtly positive about the governments' efforts. He notes that at one time 200ha of his land was invaded. But, –*Working for Water* came out and are doing a great job, and are on their second round of follow ups". But, he is privy to the issues of maintaining the follow up and is willing to help pay for future follow up as long as it is –managed properly". He notes in general that –some landowners just like to moan and complain. But, how can you moan and complain when the government is clearing Black wattle. Everyone they chop down is good".

Speaking with another general manager, Deon, who like Piet runs an investment corporation that leases land, states that –Wattle is indeed a problem, and WfW has come and cleared three sites. Only one was not successful because of the amount of re-growth". He is eager to be in contact with someone, even asking me for the names and telephone number of the –new guys" at WfW. But, he has his own ideas. He thinks the workers are –lazy and are not supervised properly". Also, the environmental aspects need to be managed and monitored properly with the sites put in distinct plots that can be monitored. He said they operate now in such a way that they get paid the same amount of money whether the plot is cleared in three weeks or three months.

Marius, who is subletting from Deon, is willing to participate but only when he is convinced that the funds are managed properly. He refers to the time he saw a helicopter hired by WfW come to his land to –pick up lamb for eating at a party that weekend". Interestingly, he was the 6th landowner to cite the helicopter issue as a sign of mismanagement. Marius argues for more agency in deciding how WfW does their mapping. He, like Piet, does not see them –tackling the source". According to him

Marius, the *hulpbron* (resource) is running out (speaking here of the water resource).  He speaks about water saying that ̶people are digging bore holes all around the area decreasing the water table.  In the future I will have to do the same.  But for now there is plenty of water on the farm.  But still, not as much as there used to be five years ago".

There is, by and large, a feeling of doubt whether the WfW programme is effectively addressing the issue of Black wattle, or merely operating as a poverty relief programme with no vested interest in long-term ecological functioning and sustainable benefits for private landowners.  There is a strong awareness amongst the participants I interviewed of the widespread problem of Black wattle and what it means for the future of water security, productive use of land, fires, and biodiversity.  This motivates a willingness to participate with its management, particularly because they have a stake in the resources concerned.  Most landowners do their own clearing, but usually in the most pragmatic areas, leaving inaccessible areas invaded.  It is these areas, beyond their logistical reach, that are the most important for the landowners to have cleared.

My informants advocate a system which mimics the way in which they supervise their own staff, whereby supervision of the activities on the land would be facilitated by the owner of the land.  Following from this, my informants have called to allow people from within the farm community to tender for contracts to clear their land, rather than teams from outside the community.  This was understood to increase trust, promise better living conditions, and decrease the amount of petrol needed to transport the teams from far off towns.

All in all, I would argue that the main need of landowners reinforces Claassen's (2001) statement that access to market information which includes demand of service, price for service, and duration of contracts is their main constraint (cited in McNeely 2001).  Farmers do not have it in their means to manage other than the most pragmatic areas on their land because they lack a management strategy and adequate manpower.  What is called for is more accountability and better management in a grassroots manner; a locally oriented strategy.

Most of my informants had a positive attitude toward participating in clearing and paying *part* of the costs. But, until a clear ‗post development' plan has been implemented in the sense that those leaving the programme after their two years ―are properly trained not only in alien bush eradication but also in business and management skills" the success of the programme may not be realized. The landowners are optimistic that with a better management structure and accountability mechanism, timely follow-up could be accomplished, and the ecological goals of water security and biodiversity conservation could be met more effectively. But, landowners are quick to claim that the problem is long-term and will not be solved in the short term.

Interestingly, two landowners made a point of outright denying culpability for the spread, instead blaming the government for bringing aliens. According to one landowner, ―these seeds are still finding their way from the plantations in Mpumalanga and KwaZulu Natal". While I cannot support or negate this claim, it is a fact that there still exits a highly profitable forestry industry in the well-watered areas of the north-eastern part of South Africa. According to de Wit *et al* (2001: 168), ―formal wattle plantations cover 130,000 ha in the KwaZulu-Natal and Mpumalanga provinces while earlier plantations established in the Eastern Cape Province have been abandoned".

Black wattle is used commercially as a source of tannin from its bark for various classes of soft leather production. Minor uses include treating boiler water, dye production, mining work, and paper manufacture. However, what creates the sentiment of culpability amongst the landowners that I spoke with is the awareness that lightweight timber used for firewood, charcoal, poles, wood and as an agricultural shade source once utilized by farmers themselves and therefore they are only partly to blame (Binns *et al* 2001: 46).

Lastly, an important feature of my interviews was noticing a specific narrative about landowners' relationship with the productive resources of their land. Their practical working engagement with the land was characterised as a ‗struggle'. But, this struggle is reciprocal, with one informant telling me ―We work hard on the land, and it works hard

for us‖.    I was reminded here of Theodossopoulos‗ (2003: 60) ethnography of Greek farmers whom have a similar relationship with a similar landscape.  The struggle with the cultivation of the land is very much a part of their religious cosmology in the sense that - as Genesis 3, 19 explains Man‗s fall - ―you shall gain your bread by the sweat of your brow‖.

In Theodossopoulos‗ case, as in mine, this struggle involves transforming the bush into cultivated land and then enduring the process of guarding it from returning back into wilderness.  Such was the process entailed in personal interactions I had with landowners, such as my participation in a controlled burn; one way of keeping undesirable vegetation under control and providing fresh grazing areas.  Theodoropolous (2003: 60) notes that, in this laborious process, ―plant species take on personalities of their own‖.  Further, these ―wild‖ plants are attributed with persistence which is also a virtue of human protagonists.  As one of Theodoropolous‗ (2003: 60) informant‗s states: ―Look at those weeds…look at them! They come out of nowhere…it was only a month ago when I cleared [destroyed] them.  Here they are! They never stop growing…this struggle will never end!‖

**Encounters**

In order to gain an in-depth perspective into the daily lives of the more conservative landowners in the area, I chose one farmer directly bordering TerraPi for extensive study. The farm belongs to Oom Wessel (Oom meaning ‗unde‗ in Afrikaans).  This was my opportunity to gain empirically based evidence of how TerraPi actually interacts with its neighbours and therefore how TerraPi fulfils some of their aspirations.

Brett, the (then) conservation manager at TerraPi (for 2008), acted as gatekeeper to this farm.  Brett was not characteristic of the other staff at TerraPi in that he was not a friend of Harry before coming to the farm – which might explain his ‗retrenchment‗ during the time of my stay.  That is, Harry had hired him five months earlier but asked him to leave as funding was beginning to feel the effects of the ‗financial crisis‗ in 2008 (a point

which I will come back to later). My conversations with Brett allowed me to grasp the more nuanced details conservation practices. I would also frequent the local pub with him at lunch time, taking the opportunity to speak and interact with a wider range of people living and working in the area. Brett was more than willing to participate and act as an interpreter where needed. Although English, Brett spoke very good Afrikaans as well as fluent isiZulu. Born in Zimbabwe to English parents he spent most of his life on his father's farm where he gained an interest in conservation. Then, as a young adult he came to South Africa to do his University degree in environmental management. Afterwards, he spent some years in KwaZulu-Natal managing various pieces of land and participating in alien plant management before coming to TerraPi. In Figure 16 below is Brett.



**Figure 13. Brett suited in his "Eastern Cape tuxedo". Photo taken December 2008.**

The drive from TerraPi to Oum Wessel's, was approximately 10 minutes and 4 gates along a dirt road. When we arrived we were greeted at his house by two energetic border collies (a good indication at the time that I would be speaking with a stock farmer). We found Wessel taking shelter from the rain under his garage where he and one of his staff

were fixing a motorcycle – a Triumph Scrambler.  Brett greeted Wessel, I shook Wessel's hand and we then proceeded into his house where I met his wife, Netty.

Brett and I were sent into the living room with our coffee and rusks.  Wessel and Netty shortly followed.  Wessel took his favourite chair in front of a stuffed leopard.  Netty took a seat beside him.  Brett introduced me in Afrikaans and gave a brief description of my work.  From there I proceeded to give further details about my interest and why I was here speaking with them.  Wessel looked at Netty who looked at me and began acting as translator.  Brett sat back and added where he could.   We spoke about alien plants and WfW and they were proud to mention that they were the first landowners in the area to have invited the teams onto their land in 1996.

Conversation quickly progressed into the area of problems they have with the programme, mainly a perceived lack of management (which I detailed in Chapter Five p.78-88, with Wessel and Netty's sentiments being similar to the others).   Before continuing, Wessel asked me directly about my personal history (in English): ―where are you from James?"  I went through my personal narrative once again.  With his English becoming progressively better, Wessel told me that his son is in the U.S. working on a farm in the Mid-West. I was also interested to find, sitting inconspicuously next to a silver spoon collection, a glass sculpture of the World Trade Centre displayed in the living room cupboard with ―gone but not forgotten" onto its side.

After about one hour of more informal chit chat, Wessel turned to Netty and asked her something in Afrikaans. Brett had a grin on his face.  Netty began describing the time Wessel was attacked by a leopard.  Before going into the story, she mentioned that they were a bit reluctant to bring this up before as I might be involved in the leopard conservation programme in the area.  Seeing that my interests were vested elsewhere, she excused herself for a moment and returned with a large photo album.  In it were pictures of Wessel with massive lacerations across his arms, head and face.  After these photos came an article from the local media documenting the incident.

What is most interesting about this case is that it illustrates an example of other ‗environmental' issues which landowners deal with on a day-to-day basis, and how outside agencies have emerged in response to their needs and constraints. Leopards are considered a problem by stock farmers in the area. Ironically, the encroachment of wattle and leopard correlate as the later is finding perfect shelter in the former. Over the months prior to the incident Wessel had been losing quite a number of his lambs to a leopard. In response he went off in search of it. On horseback he tracked and stalked the leopard until he found it hiding in a bush. Feeling cornered, the leopard jumped out and attacked Wessel. Just before the leopard began mauling him, Wessel let off one round which lodged itself in the leopards head. This didn't stop the massive cat from proceeding to rip Wessel to shreds and then running several kilometres away. The corpse of the leopard was found some week's later, sex indeterminate. According to one source, there were seven killed in 2008 alone. However, what this does is open new territory for another wandering leopard, which will subsequently be stalked and shot as well.

Wessel claims he is willing to participate with conservation programmes because they offer ―real solutions". The Landmark Foundation, a leopard conservation fund operating in and around the Baviaanskloof Mega-Reserve have created a strategy to address landowners (and leopard) needs. If Landmark is able to come onto the landowners land to trap and tag a leopard, then, if on another occasion a lamb is taken and it can be proven (through using GPS) that the leopard was in fact at the scene of the crime then the foundation will refund the costs of the lost stock. Wessel is a part of this approach and with the help of Brett (and therefore TerraPi) was attempting to trap and tag the leopard on his land. Following our interview Wessel, Brett, and I set off into the far corners of his land to check some traps. All were empty. On a later occasion Brett, Wessel, additional TerraPi staff, and I would prepare a trap with him (see Figures 17-19).

**Figure 14. Oom Wessel coordinating the placement of a leopard trap. Photo taken November 2008.**



**Figure 15. The leopard trap covered in wattle branches to disguise its appearance. Photo taken November 2008.**

**Figure 16. Spreading the bait which includes the carcass of a sheep. Photo taken in 2009.**

On another occasion with Wessel and people from TerraPi we did a controlled burn to prepare some new grazing areas for his sheep. I was very eager to participate in this practice of land modification which Davis (1994) notes is characteristic of human interaction with this type of Mediterranean environment. Wessel and Brett lit the fires and together with some staff from TerraPi, we walked around its perimeter containing it by spraying water on its fringes. This was an important experience for me not only because of the chance to participate in a practice but also because it was here that I began hearing the kind of talk that represents place and place-making.

As we moved through the *fynbos* I began hearing the kind of talk that Peace (1999) calls ―an emergent aesthetic of place‖ in the collective imagination. These speech acts referred to alien plants as an assault on the pristine wilderness which was also constituted as an assault on the integrity of the community. I later wrote in my notes: ―these pronouncements certainly seemed strategically deployed as they were made in reference to what TerraPi could do to solve this problem. It is a discourse about themselves and their relationship to nature which makes their action intelligible and legitimate and

subsequently provides them with an important strategic resource in the wider political arena".

During our time setting up the trap and burning the veldt, we come across some truly splendid locations. I noted in my field notes: ―Those involved here bear witness to the landscape. There is a refined pleasure in detailing the richness of biodiversity, its flora and fauna. Through the ‗discoveries' (as they were referred to) that were made while in the field the area's ‗special', a truly ‗unique' place aspects were constituted". As one example, the amount of crystals that could be found in this area and the importance of TerraPi as being located on a ―crystal fault" were mentioned. This fault line is considered sacred ground and relates to the more metaphysical aspects of this unique farm. This belief is indeed a part of its cosmological positioning and something which is mentioned countless times to new visitors. It was at this point that I began to be interested in the way the people at TerraPi think about the natural world, this specific landscape, and their place in it in a spiritual and moral sense.

TerraPi embodies the ―natural heritage" that is the *fynbos* landscape in South Africa, a major attraction to tourists and the ―distinctive wealth of the nation" (Comaroff & Comaroff 2001). According to one of TerraPi's residents, Markus, ―the amazing thing is that you can walk through an area here and you can walk through three or four different ecosystems within 5 to 10 minutes making it very unique and very special". Through such discursive acts the community took on a degree of unity, a sense of purpose and a shared notion of moral obligation through their elaborate conceptualization of the landscape's ecological complexity. And, as previously stated in Chapter One p.25-27, much of this is culminated in their battle against foreign flora, the monster through which the ‗true community' is in opposition to.

**Figure 17. Participants involved in the controlled burn. From the right: Wessel, WWOOF volunteer, Brett, WWOOF volunteer. All taking shade under a wattle tree. Photo taken November 2008.**



**Figure 18. The author participating in the controlled burn. A wattle stand to my right. Photo taken November 2008.**

**Figure 19. A picture of the *fynbos* just after the burn. Photo taken November 2008.**

Harry has his own opinion about how this land should be managed which is quite different from the landowners. But, being sensitive to their attitudes, perceptions, needs, and constraints Harry offers assistance with their burning. Harry says, ―the resources here have been classified from the agricultural resource perspective which is not necessarily ecosystem friendly. What you have under this perspective is a monocultural approach. We are basing our perspective on a very permacultural approach where we can say that whatever is enhanced within the ecosystem supports the community". Fires may not be the best thing for the *velt* (even though it is necessary for the fynbos to regenerate), as the very invasiveness of the Black wattle is partly its ability to produce many long-lived seeds which are triggered to germinate following a bush fire.

After the burn we went back to the house. Following dinner, the TerraPi staff, the volunteers and I watched a movie by Masaru Emoto ―Messages From Water" (2002). In it Emoto makes a causal link between water and human emotion through both physical and metaphysical explanation. While his research has been criticized for being pseudoscientific (Haryadi and Karni 2007), Emoto draws a causal link between thoughts,

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emotions and the structure of water. In one of his experiments, he has participants project some kind of emotion onto jars of water. These jars are then put under a micro scope and pictures are taken of the molecular structure of the water molecules. It is shown that the good emotions give the water a clearly aesthetically pleasing appearance while the negative ones give a misshapen and relatively ugly appearance.

This movie is one example of the ‚educational' aspects of TerraPi. Subsequently, one of the staff members would say ―love and gratitude‖ to every glass of water he drank for the duration of my stay. When the movie ended, one of the volunteers stated that she believes in such metaphysical attributions, not only in regards to water but to the entire natural world referring to a recent problem she was having with ―red bugs‖. She stated ―I got a crystal from TerraPi (sandstone crystal) and asked the bugs to leave – with intent. There are now no more bugs‖. This same person runs the nearby greenhouse where I found the message below written under some growing trays (Figure 23).



**Figure 20.  A message of thanks written at a nearby greenhouse.  Photo taken January 2009.**

*Apocalyptic Sundowner*

The apocalyptic tradition is one of community building where individuals and collectivities constitute their identity through shared mythic narratives used to confront the problem of evil in time and history (O'Leary 2004). One evening, over a glass of 'Old Brown' (a common Sherry drink reserved for chilly nights) I sat with some TerraPi staff members, volunteers, and researchers watching springbok socialize in the grass not more than 10 meters away. The conversation began on a fairly superficial level (where the ecological aspects of the wattle invasion were discussed) but ended on a deeper one (with star gazing and philosophical speculation). It was here, on this veranda, that I began to wonder about the types of beliefs that make up the core assumptions and worldviews of this group of people – which include scientists, volunteers, and TerraPi staff. These observations were made specifically in reference to how they view the future, and how this vision justifies their action in the present (their eschatology).

Parenthetically, while anthropology has been criticized for being practiced on some mission veranda somewhere in Africa overlooking the 'others' (Barley 1983), some have agued that at least that veranda is closer to 'Africa' than the university library (Waters 1995). Nevertheless, I certainly found the veranda a comfortable place to engage in non-directive conversation. On one occasion, during a braai (or, BBQ), I heard something very interesting. Speaking about the environmental movement in general, a volunteer asked, "why does environmentalism have to be an "I told you so" philosophy? Why can't people see environmentalism as a lifestyle rather than something to do with the end of the world? Why do people have to be scared in order to live this way?"

To this, Jay (Harry's 'right hand man') cited the environmental problems, not only those in the immediate area, but also globally, are a sign of a coming apocalypse. According to him, on December 21, 2012, there will be some type of event that would cause massive disasters the world round which would ultimately result in a restructuring of human society. Jay said the goal in the present is to "preserve the land and to gain the kind of values and way of seeing the world that will make for a safe transition".

In fact, according to Jay, the safest places in the post apocalyptic world will be the Langkloof, as well as the broader Baviaanskloof area, and the even broader Drakensberg mountain range that extends from the Eastern Cape west to KwaZulu-Natal. In addition to this, ̶there is a good chance that the other Mediterranean environments of the world would be included.  This means Chile, Greece, and Southern California".  While I took this comment with a grain of salt at first, the following year it came up in a Hollywood blockbuster movie, *2012* (2009). Below is the final dialogue of the movie following the massive earthquakes and floods:

**Professor West:** The equalization of the oceanic seabed has not turned out to be as extreme as we expected. The waters are receding much faster than we thought, thank God. And this is hard to believe, the Himalayas are no longer the roof of the world. It's now the Drakensberg Mountains of KwaZulu-Natal.
**Adrian Helmsley:** The entire African continent has risen.
**Professor West:** Several thousand feet, and likely never even flooded.
**Captain Michaels:** That's why they call it the Cape of Good Hope. We've already set course for it.



**Figure 21. A view of the veranda. Photo taken January 2009.**

**Figure 22**. A view from the veranda. Photo taken in January 2009.

### *An apocalyptic migration?*

Those at TerraPi are not the only group living in the Baviaanskloof with an apocalyptic image of the future. During a vacation to the Western side of the Mega-reserve at the end of my research period, a place I had not yet visited, I stayed on a friend's olive farm. Over dinner she told me about a commune of ―hippies" who lived close by who are friends of her parents. I jumped at the opportunity to meet with them and the next day we took a short drive to their commune. The first person we met with was Lois Stahl who in 2008 published a book, *The Neptune Cycle 2012,* which details apocalyptic dreaming and why people have moved specifically to the Baviaanskloof in light of this. She was the third person to state that the Baviaanskloof will be the safest place in the post-apocalyptic world.

As I had come to meet Lois through happenstance, I did not have the same ‗official' role that I had while on the eastern side of the Baviannskloof Mega-Reserve. Also, as they did not know anything about me or my interests, their conversations were completely non-directed. It was interesting then that after about 15 minutes Lois began describing why she had left a successful career as an artist in Cape Town and come to the

Baviaanskloof in preparation for the "disaster" they anticipated to happen. She came here from Cape Town in 1999 to build a place in preparation for the year 2000 (Y2K apocalypse), which they called "millennium fever", and through this process she got caught up in "the wave of earth consciousness".

The millennium then passed with none of the apocalyptic consequences that were foreseen. However, now Lois is preparing for the expected 2012 apocalypse. Interestingly, this tendency amongst apocalyptic/millenarian groups to rationalize the non-coming of the millennium rather than abandon the movement is typical. Indeed as Wallman (1992: 8) writes, "in our real life anxieties we tend to replace one Armageddon with another: pollution and global warming have eclipsed the threat of nuclear war…and the AIDS pandemic has taken the collective mind off world hunger".

Explaining her participation in the second apocalyptic "wave", Lois (2008: 9) states: "You know, events normally come in waves and now this present wave of 2012 is another wake-up call to us all to take responsibility and care for the earth as Mother and Nurturer of us all. Of course, I predominantly felt it was my destiny to come here and learn skills that may be more appropriate with the new wave of 2012 and in that respect I was also caught up in ‗millennium fever‗'". She explained to me that the "Tzolkin, the Sacred Mayan calendar, the day sign was Ahau, the day of completion…endings which flow into new beginnings. This ending happens on 21 December 2012" and the new beginnings presumably happen in South Africa.

While her book is filled with the rather abstract and dense New Age philosophy concerned with 2012, the introductory chapter was quite revealing in regards to the larger migration of people to this area. According to Stahl, these people were "called" to live this way because the world would be going through changes in the near future. This "task" or "calling" which "fell" upon these people convinced them to "establish and create a way of life that others could emulate" (7).

*The Neptune Cycle 2012* opens with a dialogue between residents of the Baviaanskloof explaining why they have decided to move here. This conversation takes place in the future, on the eve of 2011. While an imaginary conversation and literary creation many of these characters do actually exist and live on the plots adjacent to Lois. She writes that the year prior had frequent and disastrous floods, causing many people there hardships. All the crops were washed away. These floods were treated as an omen, as indicative of immanent changes that would come the following year, in 2012. According to one resident, ―If the floods and disasters since April this past year are anything to go by, then I think us humans are in for a rough ride in the forthcoming year" (ibid: 9). Accompanying these sudden disasters was an awakening of ―spiritual happenings" which would beckon the millennium and the transformation (Stahl 2008: 17). Ruinous droughts have plagued the Eastern Cape from at least the beginning of this research at the end of 2008 up until at least one month before its submission at the end of 2010.

According to another resident, the Baviaanskloof was a place to escape the city ―laden with crime, drugs, rape" to a more ―ecologically conscious" way of life. This resident's main reason for coming to the area was for her daughters. She states, that ―the initial letting go and moving on to a new way of life was the daunting part. But now we have our own place where we can let our daughters grow up with true values and not the consumerism that we were all locked into. [We] have never been so happy in our lives and although we know it won't be easy, and has not been easy up to now, it is certainly worth the while…my girls are definitely cut out for this lifestyle" (ibid: 11). According to another resident, living in the city made him angry and full of rage but, ―the planting and growing process that he embarked on, to create his own sustainable lifestyle, slowly allowed the anger and fear to disperse and get absorbed into the earth" (ibid: 13).

Another resident, in regards to 2012 stated that ―so many speculations and predictions have been made around this date [2012] that I think everywhere people are awaiting with bated breath to see what transpires" (ibid: 10). According to a resident astrologer, the stars are telling of an uncertain future. She explains what will happen in 2012: ―it's hard to name specifics but as we already know there will be major earth shifts which of course

affect us all…looking at the configuration of the planets this forthcoming year [2012] there are inevitably a lot of transformations and changes that are going to take place…I mean, already you can see that the world is going through massive shifts and life is not the same anymore – when food supplies run out then there will be a lot of events that can tip the scales as well as the pollution of the air and water which will cause destruction too" (ibid: 15, 19).

As mentioned previously, the apocalyptic tradition is one of community building where individuals and collectivities constitute their identity through shared mythic narratives used to confront the problem of evil in time and history (O'Leary 2004). In the millenarian case, there are specific practices that need to be preformed in the present to usher in a transformational post apocalyptic world.

What is different between TerraPi and this commune are the kinds of practical solutions that they see as viable. TerraPi is catastrophist within the general sense but they also exist very much in the real world. This real world is influenced by local, and to a large extent concretized, policies motivated by both the perception of a looming water crisis and by the BEE (Black Economic Empowerment) policy which has led to the *Working for Water* programme and *WaterNeutral.* The opportunity for leadership which this programme requires has opened up room for the kind of charismatic institution building that is at the heart of TerraPi's organisational culture.

The ―mythic narrative" which features at the heart of Lois Stahl and the commune that surrounds here is one where the Baviaanskloof will be the safest place in the pre- and post-apocalyptic world, a haven from the evils of city life with its consumer driven rationality and growing violent crime. Lois and her apocalyptic group too are not catastrophists in isolation but also belong to larger school of thought under the elusive and vague ideas of New Age philosophy. . In the case of Lois Stahl, who owns the land she resides on, the preparation for the end involves the building of a sustainable community, which she has already begun with the completion of her rondoval. When I

asked her specifically whether the world would end, she replied, "The short answer is yes, the long answer is no".

# Chapter 6 – TerraPi



**Figure 23. The TerraPi „community". Photo taken from [www.terrapi.org](www.terrapi.org), 2009.**

TerraPi faces similar issues to those of the other farmers in the area, but the owners and especially the manager have their own particular way of handling the situation. TerraPi is a section 21 (or, non-profit) company located on the largest piece of privately owned land bordering the Baviaanskloof Mega-Reserve. Although an apocalyptic vision of the future makes up the worldview of this group, I characterise them as millenarian and therefore moderate in their approach to environmental issues. Their transformational ends are focused on changing the current perception of nature at all levels – local, national, and international – in order to achieve ―cultural reconciliation".

Their land, which is an amalgamation of 14 separate farms, is the site of both a WfW project and the *WaterNeutral* pilot project. This land, according to their leader is ―sending out a cry for help…being overrun by Black wattle that kills the indigenous plants and dries up river courses, creating wattle deserts". TerraPi claims to be ―pioneering a revolutionary approach" in regards to their restoration activity. Through marketing TerraPi as a site where water security is achieved through pro-poor restoration

of this kind they have successfully gained attention and funding through which they can create awareness about environmental issues – (again) locally, nationally, and globally.

Their motto is ‒healing the land, healing the people", a mission which they aspire to accomplish in a multi-faceted way. One of these facets is to promote ‒cultural reconciliation through restoration" by implementing their own ‒integrated weed control programme" and continuing the entrepreneurial development of people who have left the WfW programme (a short fall of the programme discussed in Chapter Two). Providing these people with a ‗certificate of competency' addresses the landowner's issue of ‒proper management". Another facet is by creating an ‗open market' for these entrepreneurs to solicit their skills which they will achieve through facilitating the shift in perception of alien plants from a problem to something which is an economic activity for landowners. And, yet another facet of ‒healing the land, healing the people" is achieved through their educational tourism aspect which they hope will provide a platform to shift perceptions of humans place in the environment, offering their tourists meaning through revitalization. All of the potential benefits of the programme including entrepreneurial development, market environmentalism, transformation and redemption hinge on alien plant eradication.

TerraPi has internalized a specific ‗struggle' which is at the core of their organisational culture. The charismatic leader of this moral community, while believing that the future is bleak and who expects massive social and political upheaval in terms of an all out water crisis knows there are things that can be done in the present to mitigate these effects and he is privy to special knowledge that will make this possible. Just as the *WaterNetural* pilot project is the ‗flag ship' for a project that will be expanded all over South Africa, TerraPi is also a model which is hoped to be expanded beyond the farm, amongst other environmental NGOs in South Africa. Globally TerraPi demonstrates the local realities of a ‗payments for ecosystem services' approach to ecological restoration.

Their link to water management is clear and they claim specific functions in the CMA. Firstly, because they are located at the top of the catchment any land use practices they

implement will directly benefit the downstream users which include not only the citrus industry but also the ―nearly one million people living in the Nelson Mandela Metropole of Port Elizabeth and Uitenhage".   Secondly, by claiming to be a ―borderline conservation area" TerraPi has positioned themselves on the front line between the invasion and the Baviaanskloof Mega-Reserve (which has not yet been invaded) which reinforces their moral duty to protect this ‗natural heritage'.

All of these aspirations were symbolically illustrated with the building of the ‗operation centre' (a clear military reference) which would function not only as a conference centre but also a platform where skills development and awareness can be accomplished.  The operation centre is a sacred site in terms of being the space where this ―cultural reconciliation" would happen.  The military idiom is consistent with the culturally dominant metaphor of militancy as the major response to the imagined other in South Africa (see Chapter Two).  This militancy manifests itself in regards to alien plants through the recognition that ‗we' are in a ―war" with ―alien plants".  That ‗we' have a shared alliance against a common enemy.  It is no coincidence that TerraPi's leader is an ex-South African Army officer and so is his right hand man, Jay.  Their past experience also influences the way they organize their operation and thought in relation to their environment.

**Figure 24. The operation centre. Photo taken 2009.**

Through its participation TerraPi aspires to become a part of a more ‗inclusive' process for making decisions about the design, implementation, and management of this particular restoration project – both *Working for Water* and *WaterNeutral*. By ‗inclusive' I refer to Higgs (1997: 344) who defines it as ―a reasonable balance of people who are long-term stakeholders in a landscape: environmentalists, restoration scientists, restoration consultants, amateur naturalists, landholders, corporations with vested interest, local governments, etc. For such groups to work together they must be comprised of people who are committed to the restoration".

In adapting to the institutional ‗bricolage' (i.e. IWRM/CMA) and the needs of and constraints on private landowners, TerraPi has internalized several distinct and sometimes incompatible beliefs about how to make ―good restoration" – as defined by Higgs (1997) - possible. Because TerraPi is associated with an inherently apocalyptic paradigm (specifically the narrative of the water crisis) and markets itself accordingly in a charismatic way, I offer that considering them as millenarian is useful for their analysis. Again, as a group participating in resource management, TerraPi has emerged ostensibly

to test, monitor, and provide feedback on government tools aimed at managing the resource at the lowest possible level.

### *Nativists on the Net?*

In expanding upon their motto "healing the land, healing the people", TerraPi uses information technology to promote a network of a global society. Speaking to this "imagined community" (Anderson 1983) of likeminded environmentalists further facilitates the global reach of information, technology, finance, and values that are oriented around environmental ideas and practices. TerraPi accomplishes this though marketing themselves on sites such as YouTube to create awareness about environmental issues in South Africa, specifically "the impact of exotics on water retention and loss" and how their approach is a "revolutionary" one. Through this TerraPi can be considered not just as a small grouping united by a particular place but rather as a cause united by a shared belief and concern about particular issues within a global flow of ideas.

According to their site[8], the 'community' at TerraPi is comprised of a "diverse" range of "conservation enthusiasts" who drive "cultural reconciliation through land restoration initiatives". These 'conservation enthusiasts' are the "scientists, builders, local farmers, local families, enthusiastic volunteers from many nations and walks of life, people whom have lived close by and have been exploited and deprived together, to heal this to heal its people". All of these actors are unified around the "common intent of preserving and rehabilitating the environment" through which they "can overcome cultural, political and social difference and provide a platform for unity and education about respect for each other and the diversity of life that surrounds us". They aspire to "empower" those who have been "exploited and deprived" through the developmentalist cliché: "Give a man a fish and you will feed him for a day. Teach him how to fish and you will feed him for a lifetime". Through an "empowered community" the work TerraPi does in the present will "continue for generations", something which reinforces landowner sentiments that the management of aliens is a long-term goal and not "quick fix" through strictly technist models. Rather it is one that focuses on processes of 'ecosocietal restoration'.

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[8] www.terrapi.org

In my own experience of the TerraPi ‗community' I paid special attention to how the make-up of the core members reflects their vision of the ideal ecological community. Those making up the centre of Harry's team are all native to the area. These five people are in a close relationship to each other, all coming from the nearby town of Jeffery's Bay. All are male and Afrikaans speaking. Three live together in a house in Jeffrey's Bay when not staying at TerraPi. The other participants that I encountered at TerraPi, in a number that varied, were the WWOOF ―voluntourists" who came to TerraPi for an undefined amount of time. This group of participants, who were connected to TerraPi through the WWOOF website, were very much seasonal with the amount at TerraPi fluctuating accordingly. None of the voluntourists I spoke with had known each other prior to coming to TerraPi, excluding the couples that came together.

At one point there were 12 voluntourists working there, at another only three. The voluntourists that I met came from South Africa, the UK, America, Australia, Holland, and Germany. During their stay these WWOOFers have the opportunity to ‗integrate' into the community. I only witnessed one person having done this, a Dutch woman named Eva. She had been there prior to my stay in 2009. At the time of my research most of the voluntourists (as well as the staff members) were involved in building the ‗op-centre'. Harry has two primary consultants, Bob and Jay. Bob being a friend from Jeffrey's Bay and who runs the tourism aspect and Jay a friend from the Army who manages the construction.

Another notable observation of this core community was a strong Protestant work ethic. This behaviour was contagious and seemed to motivate the others, specifically the voluntourists. Hard work is the norm at TerraPi with a positive moral value placed on ‗doing a good job'. This bore some resemblance to the landowners' sentiments that ‗the land will work hard for you if you work hard on the land'. Through this the community took on a degree of unity, a sense of purpose and a shared notion of moral obligation.

Also, through their elaborate conceptualization of the landscape's ecological complexity, the work needed to maintain this was clearly defined. That is, the land which TerraPi is located on is regarded as sacred, as a Garden of Eden, which is elaborated by their conceptualization of the work needed to maintain its pristine beauty. But, instead of serving God through the work at TerraPi the participants are serving Sacred Earth. Further, it is important to note that not one job at TerraPi is superior to another and each person's function is dictated by their ―calling". It is through this calling that participants become part of the Elect and success in their endeavours was a sign of possible inclusion.

TerraPi is ―dedicated to healing the land through tourism, education and sustainable permaculture practices". Their conservation focus is to find ―long-term solutions to complex environmental and social issues facing South Africa" and they invite ―anyone whom has the desire to effectively contribute towards making our world a better place, to participate in this *revolutionary* concept". They are hinged on a specific type of tourism that offers ―a holistic education experience, hosted by a well-trained and educated multi-cultural team". Here ―Tourists will be increasingly accessing remote parts of the land to tackle wattle-infestation out of reach of the pilot projects". And, by exposing those who visit ―the potential for the spreading of this vitally important knowledge is endless". This is especially important for the young business leaders who come to TerraPi via ActiveEarth to learn ‗corporate social responsibility' and youth travellers in the back packing and global organic farming initiative (i.e. WOOFERS).

Thus, TerraPi attempts to create awareness from a ―tourism interaction point of view". Its owner, Harry states that:

> People want to access this isolated area because it gives them an adventurous tourism aspect. When they are there and an area has been initially cleared by volunteers from all over the world, they can then follow up these areas by weeding out the reoccurring wattle. Through this we are showing  indirectly a resource utilization approach and we are also creating a need for people to go to the site and then notice that there is re-growth and then pull it out…what we are saying, ‗you can come here and

you can learn how to identify impacted land, how to identify mismanagement of specific areas in terms of the capacity of which it is utilized, how to redirect the focus so that it aligns itself with networking into specific organizations that promote conservation and how to access funding.

*Happy Harry*



**Figure 25. Harry Bateman. Photo taken from [www.terrapi.org](http://www.terrapi.org), 2008.**

On one occasion I met with Harry after he had just arrived back from an International Union for the Conservation of Nature (ICUN) conference in Barcelona. He claimed that the people there treated him as some sort of prophet and visionary leader, to which he so humbly responded: ―I am not some type of prophet I told them. I am just a landowner in South Africa‖. Recounting his experience Harry acknowledged the public perception of his own charisma, that he is privy to ―special kinds of knowledge‖ and that he has a ―revolutionary‖ agenda. As such, Harry is aware that the solutions he offers involve a radical alteration to the current system of perceptions and attitudes of the problems of the world and the environment (see Appendix C). The new orientation toward the problems and structures of the world which Harry preaches directs his action with his obvious passion legitimizing this agency. It is also from his philosophy that the ‗community‘ at TerraPi take their form.

Harry constantly reaffirms that what he and the community at TerraPi are doing is truly ―groundbreaking stuff‖. There is a clear moral imperative to this which is defined as

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protecting people from a coming disaster, catastrophe, and even apocalypse. In many ways Harry's rhetoric is much like that of another seemingly millenarian charismatic leader, Al Gore (2006), who argues that:

> The environmental crisis also offers us the chance to experience what very few generations in history have had the privilege of knowing: a generational mission; the exhilaration of a compelling moral purpose; a shared and unifying cause; the thrill of being forced by circumstances to put aside the pettiness and conflict that so often stifle the restless human need for transcendence; the opportunity to rise…When we rise, we will experience an epiphany as we discover that the crisis is not really about politics at all.  It is a moral and spiritual challenge.

In this vision Harry offers his own specific justification for activities that will ensure the survival of his followers (which are of course extended toward generations of the future). Harry believes that ―if we don't do something to stop the invasion of exotics on this isolated catchment area a million people will face a serious water crisis in a very short space of time.  We are talking about under a decade.  We will have a humanitarian crisis just because there is not enough awareness about the problem".  This million or so people he is referring to are not only the immediate downstream agro-industry where the landowners are located but also the inhabitants of the Nelson Mandela Metropole which includes the cities of Port Elizabeth and Uitenhage. This is Harry's personal image of the future, which (again) provides the moral justification of his actions.

His vision of a resulting water crisis in this metropolitan area is much like the imagery supplied by Turton (2008) of widespread ―anarchy and chaos".  Harry's apocalyptic vision involved slashed economic growth, millions of people becoming displaced, and the poor becoming poorer.  This drought, flooding, famines, and extinction of biodiversity are all the result of a continued invasion of alien plants, specifically Black wattle.  Recall from Chapter Two (p.23) where Theodoropoulos (2003: 83), argues, ―Fear is a major element of the opposition to introduced species, and is relentlessly exploited by the architects of invasion biology, and the organizers of its cults".

The landowners whom I spoke with that were privy to Harry's aspirations (six in total) are weary of his cures. As one landowner stated ―Harry likes to talk a lot, but I don't see any results. Talk is cheap". Indeed, Harry believes the problem is massive and understands that there are many who in fact believe that it is insurmountable stating that, ―The problem is so big and those who know about it throw their hands up into the air and say ‗oh, there is not much we can do about it' and those who do believe something can be done say ‗oh man, why don't you help us?'. Proving that something can be done is the organisational rational of TerraPi. And through this model, which Harry believes can be expanded all over South Africa, it can be proven specifically to landowners that ―the benefits [of alien plant management] far outweigh the capital investment".

Harry's interest in environmentalism and his immediate landscape has been a lifelong journey. He was born and raised in the nearby Jeffery's Bay area (world famous for its surfing which is featured in the cult-classic film *Endless Summer*). After leaving the South African Army, Harry applied to be a WfW manager. However, according to him, being white and Afrikaans-speaking prevented him from the BEE requirements of the programme and so instead he became involved in other environmental campaigns in the area. After he met his wife Saskia (not to be confused with Saskia Fourie, the project leader of *WaterNetural*), they spent about ten years ―travelling quite extensively". After they had their daughter they settled down.

Harry came to focus his efforts on this specific area bordering the Baviaanskloof Mega-Reserve about four years ago and within the past two has been ―pioneering various environmental awareness campaigns". Through these awareness campaigns Harry attracted an investor who was ―sympathetic to the conservation causes" and so was motivated to purchase the TerraPi land. This investor, a chartered accountant who also participates with the ‗corporate social responsibility market'[9], has already put R2.5 million into the project above the sale purchase cost of the land. The company (or NGO) is called ActiveEarth.

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[9] http://www.activeearth.org.uk/projects.html.

ActiveEarth has their own vision of the problems and the cures necessary to solve them. According to their website, ―Our behaviour is rapidly destroying the environment upon which we all depend. The ActiveEarth Foundation is meeting the urgent need to motivate people to live in more sustainable ways". This group ―supports projects that use experiences of nature to change the way people feel, think and act towards each other and the environment. Changing the way our society treats the environment begins with each of us personally. Experiences of the natural world combined with expert facilitation, adventure activities, discussion and team work are an effective way to help people realize that their own wellbeing depends on looking after each other and the environment. This awareness catalyses the individual changes that lead to long-term social change".

ActiveEarth sends their clients to TerraPi, which is one of four locations worldwide including Lebanon, Spain, and Chile, which are all sites aimed at spreading social, cultural, and environment awareness. The goal is to teach these people (mostly young future business leaders) environmental awareness which they can then bring to bear on their corporate strategies. At TerraPi this is focused specifically on the ―revolutionary" approach to ‗sustainable development' under the paradigm of ‗payments for ecosystem services' that links restoration and job creation through alien plant eradication. ActiveEarth calls Harry the ―visionary founder and energy behind the South African TerraPi project". Harry is thus their prophet in a sense and is funded by their ‗donations' or ‗gifts' (a qualification that Weber notes is characteristic of the ‗charismatic authority' mentioned in Chapter One until Charismatic leadership, p.13-14).

The Figure 15 below, illustrated by Harry, further details the networks of organizations and aspirations associated with TerraPi. Shown are the networks and affiliations of TerraPi and their parent company ActiveEarth in operation and specifically what the role of TerraPi is in providing a ―holistic approach to resource management", gaining awareness through tourism, education through premaculture practices, and credibility through their participation with the WWF.
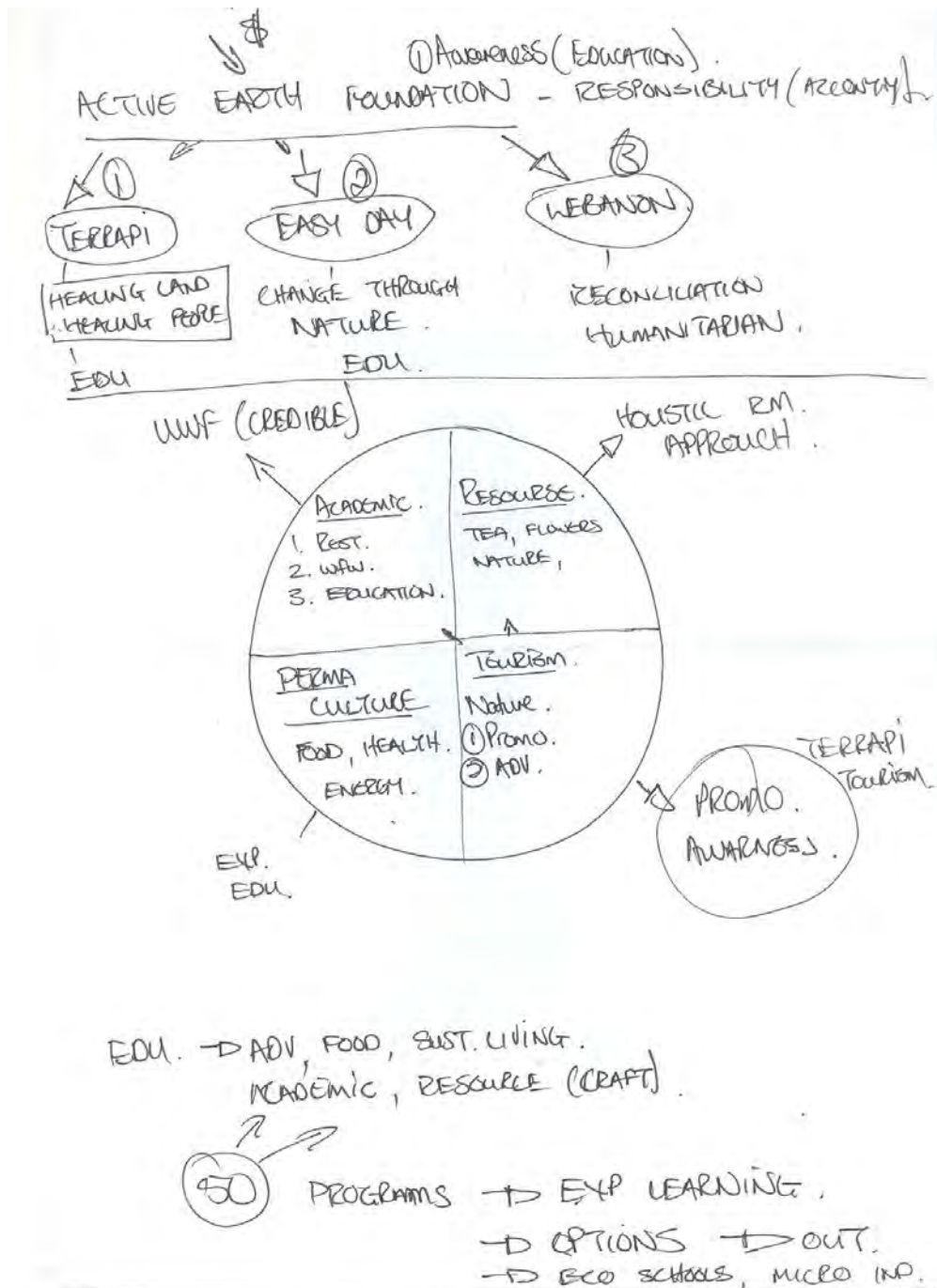
**Figure 26. Mind map of TerraPi's aspirations and affiliations. Drawn by Harry Bateman, November 2008**

On the ground, Harry claims a specific role. He feels that one of his unique capacities is being able to understand various land uses and determine the best way to manage it. As such he aspires to be a broker and a local champion, sympathetic to the needs of

landowners, and with a successful record he has the ability to work with private and government agencies. Harry states that:

> Certain people are good at analyzing costs and analysis on capital expenditure; I'm not one of those guys. I am a passionate conservationist, I look at a specific resource and I let the land speak to me, _what do you want to do, what can you facilitate, how can I help facilitate that?' And then I go and I do almost like a resource utilization plan, where I say _this area of the farm is zoned remote and adventurous experiences can be had, those areas are zoned rehabilitation and it is good for educational platforms, those are considered conservation, etc.

Harry claims to understand the ―grey area" in which landowners find themselves, mostly because he himself is a landowner and faces similar challenges. He says:

> You must remember government brought Black wattle to South Africa, not the people. So now government says _no, wait a minute, you've got wattle here to take out and so now we are going to tax you'. Now the guy [landowner] turns around and says _no, it wasn't us who brought this stuff here. You gave us this problem and now you are taxing us for the problem as well, what are you doing to fix it?' So, instead of throwing stones at each other, on either sides of the line, and saying _it's your fault, it's your fault' we go with the approach that there is nothing you can do about naming who's who. The farmer who brought this stuff here is long dead, you can't blame him for bringing wattle in anymore, but what we can do is try and fix the problem, and the only way in which we can fix the problem is if we give the landowner an option and those options need to be economic.

Harry argues that the landowners simply ―don't have the resources to manage the problem on their own". Harry believes that, given the resources, landowners will be willing to participate, stating ―that the people living in the area value the resource and don't want to see it deteriorate, so, they will take up the obligation in terms of securing

that resource holistically and sustainably if they are equipped, educated, and encouraged to do so". This ‗encouragement' will follow from a change in the perception of alien plants from something that negatively affect landowners to something that has economic value and is in fact an opportunity for landowners. This is nothing short of an attempt to radically alter how the natural world is perceived. Harry claims to be able to motivate them by saying, ―hey listen, you don't have to pump money out of your own back pocket that you don't have into ecosystem services, and you can actually do it on a level where it carries itself". However, most of the landowners I spoke with were entirely unaware of the finer details of Harry's aspirations; with six realizing that wattle can be used for charcoal production and nothing more. However, as shown in Figures 10 and 11 (on p. 75), wattle is also being used for fencing and local crafts.

Therefore, according to Harry:

> The idea is that we can encourage landowners to take on the conservation philosophy for the benefit of supplementing their already existing economies. So by utilizing a strategy for by-product utilization or secondary produce, we are actually encouraging people to take out a threatening invader and also create a skills development platforms where they can learn how to use local craft where they can extract certain by-product like composting, like mushrooms, like thatch construction timber, all these kinds of things. In this way we can create an economic and sustainable approach to wattle in general and then present this to landowners.

Such aspiration is uncanny when compared back to the charismatic Al Gore who states, ―I believe there is a hunger in the country to be part of a larger vision that changes the way we relate to the environment and the economy" (2006).

Harry continues upon his vision stating that:

> If you have a craft market development where you are using wattle by-product, you'll have various chains of supply, you'll have the harvesting

and control of exotic species as a module which is in itself an economic entity. Then you will have the supply of wattle-by product to the craft market as another economic entity. Then you will have this production of this local craft into secondary produce as another economy. So, those all kind of augment each other, so each one supplies the demand and in such a way you find you create a need to eradicate exotic because you already have the markets for the produce...We are transferring that approach toward sustainable resource management to the community so that they can actually understand the value of a resource that others would consider useless.

Harry stresses that motivating landowners in the short term will have to be done on monetary terms: ―when you are dealing with landowners you have to work on a completely economic level". If you tell a landowners ―listen, overgrazing that piece of land is bad land practice" or ―not managing your invasion problem is soaking up all your water. You have to give an alternative". Harry further claims,

> You actually have to go to them with an answer and say ―hey listen, over grazing is making your land susceptible to more invasion, in order to minimize the impact you need to move your livestock from there, you cant have your livestock there anyway because you are conflicting with leopards, all these kinds of things, you are having predator problems. Instead of issuing permits to shoot the leopards, move your livestock to an area where they are not conflicting with the predators and use that area in conjunction with the authorities that control the conservation areas and create synergies and partnerships, where you can now say ‗uh now not only do I have 400 hectares available for my tourists but I have 300,000ha available for my tourists because I am doing conservation'". And so you are opening up a far greater resource because of your intent.

**TerraPi revisited**

Environmentalism can be viewed as a social movement and cultural phenomenon characterized by a spread and exchange of ideas on a world-wide scale (Milton 1993; Milton 1996). It is inherently future oriented often resting on apocalyptic imagery. While it began as a fringe interest, it has now come to the fore of contemporary public discourse. With it, the rhetorical use of environmentalism is now a potent discursive field. Lee (1994) notes that a political movement may have religious overtones when adherents posses a moral justification for committing any actions that they perceive as necessary to achieve their ends.

Being a part of a worldwide discourse informed by both politics and science, TerraPi has internalized various imperatives of the ideological paradigm of ‗sustainable development‗, which as suggested by the Intergovernmental Panel on Climate Change, openly embraces that we have to remodel our world, and find more so-called ‗appropriate lifestyles‗, values and identities (Lomborg 2010). Acts transform people and TerraPi hopes to facilitate the transformation of perceptions and peoples place in the environment through the act of restoration – specifically the ritualized extermination of alien plants. Through this performative act a connection between humans and nature is ―re-established‖ furthering TerraPi‗s motto of ―healing the land, healing the people‖. TerraPi claims that this ritual activity renews and revitalizes the person‗s connection with nature and such a tradition will ultimately help bring about the messianic end they envision.

The institutional landscape (i.e. ‗catchment management agency‗) in which TerraPi is situated accommodates these beliefs in distinct ways. The ‗ecosocietal‗ restoration that TerraPi performs contributes that what Higgs (1997: 393) calls ‗good ecological restoration‗ which includes both technist outcomes (i.e. biophysical evaluations) as well as societal processes (i.e. lifestyle changes and cultural reconciliation). It includes projects that hold firm to both ecological fidelity as well as social and cultural goods. It is in this way that restoration, like any other human activity, is adjudicated in cultural, moral, and spiritual aspects.

How TerraPi goes about this exposes the plurality of moral perspectives of the environment, namely the moderate and radical approaches. While on one hand TerraPi appears moderate in their underlying belief that through technist models and the current socioeconomic and political framework they can achieve their transformational goals, specifically in regards to poverty alleviation. On the other hand, TerraPi's end involves a radical restructuring in the ways of life and thinking about the natural world (and each other, especially those inhabiting the future) which is geared towards the tourists they attract.

As such TerraPi expands upon the existing institutional landscape of mainstream values and behaviours upon which outside institutions (like WfW) are based, which fall generally under the ethos (or guiding belief) of ‗sustainable development'. While not the formal way of thinking and behaving, TerraPi is very much the ‗rules in use' which denote the customs and practices with which outside agencies are based. This, according to Nyambe *et al* (2001), can have a positive influence on the thinking and behaviour of these other groups in the CMA.

Vatn (2005: 215) emphasizes that ―people apply different behaviours in different institutional settings‖. TerraPi's distinct behaviour is a reflection of their organizational culture which exposes their own distinctive history and the people who have been in it. In general, their organizational culture conforms to what Sutton (2005: 138) calls the New Age vision: ―a worldview that is supported by modern science but is rooted in a perception of reality that goes beyond the scientific framework to a subtle awareness of the oneness of all life, the interdependence of its multiple manifestations, and its cycles of change and transformation‖.

Going back to the religious metaphor, TerraPi strives to address the root of the current evils, which has been called a ‗crisis of character' or adversarial relationship to nature. In the broader political arena of beliefs about the root cause of the environmental crisis this addresses the issue about lifestyle changes necessary in building a ‗sustainable future'. This is one meaning of ―healing the land, healing the people‖, where TerraPi believes that

the restorative act creates meaning in the participants lives, restoring nature while at the same time restoring the cultural and natural in a moral bond. Restoration as TerraPi sees it thus offers tourists (and voluntourists) a redemption opportunity (Van Wieren 2010). In many ways then, ―healing the land, healing the people‖ is about guilt, where through restoration there is a possibility of absolution. As such the redemptive aspect of restoration implies that human action can compensate for a prior misdeed (Higgs 1997).

The kind of restoration work that TerraPi engenders is a spiritual and moral one. The participants experience this largely through the ritual activity of repairing degraded land through alien plant removal. Through this they gain ―a metaphysical understanding of the fundamental connection between culture and nature and through this restoration a promising ethical model of humans living with the land is achieved‖ (Wan Wieren 2008: 254). Catherine Bell (1997: 44) argues that ritualization is ―a way of acting that is designed and orchestrated to privilege what is being done in comparison to other, more quotidian activities… [It is] a matter of variously culturally specific strategies for setting some activities off from others, for creating and privileging a qualitative distinction between the ‗sacred‘ and the ‗profane‘‖. Through the act of restoration a meaningful connection is made where the participant touches the ‗sacred‘ with their hands.

In regards to the staff at TerraPi (including Harry) who are from the area, Thayer (2003: 72) notes that where restoration is of a landed place that holds particular meaning for those attempting to restore it, persons gain a deepened sense of belonging to their ‗life place‘. Through restoration then these locals can ―attach to space, embrace the spirit, and find personal meaning within that reciprocal relationship‖. However, it is important to consider the negative aspects that this kind of restoration may have. Restoration manifests such social values. Since this type of restoration has an ambiguous meaning in South African (see Chapter Two) this redemptive process must be critically analysed.

Unlike their apocalyptic neighbours (Lois and her commune discussed in the previous Chapter) the group at TerraPi believe in real solutions and offers practical ways of going about this. Included in transformational process is a new ritualised activity through

which community building is accomplished. Relevant to the scope of this thesis is their mission of proving that alien eradication can be used as an economic activity for landowners, therefore transforming the perception of these plants towards a management paradigm that is a more inclusive way of practicing ‗good' ecological restoration (Higgs 1994). Adhering to a market approach they hope to secure not only natural capital but social and cultural capital as well, bolstering the intrinsic incentives of environmental ethics and stewardship needed to see realize the long-term sustainability of restoration activities, specifically the ‗payments for ecosystem services' approach. And so TerraPi's apocalyptic rhetoric is not in isolation to but in relation to a wider global movement of practices and ideas which they participate with to offer a new vision for South Africa.

## Chapter 7 – Rhetoric of the future

Caught in a frustrating battle with invasive alien vegetation the South African government has succeeded in making a water shortage (like the fires in the Western Cape) ―illuminate an implicit landscape of affect and anxiety, inclusion and intrusion [and] never before has the presence of aliens occasioned the same sort of alarm as it seems to nowadays‖ (Comaroff & Comaroff 2001: 628). Not only a threat to water, these aliens are also attacking the distinctive wealth of the postcolonial state, its ‗natural heritage' embodied in the *fynbos* – the value of which is quantified by every tourist it attracts. This ―national inspiration‖ has become, according to the Comaroffs (ibid: 630) ―the prime incarnation of the fragile, wealth producing beauties of the region; and, as it has, local environmentalists have become ever more convinced that it is caught up in a mortal struggle with alien interlopers that threaten to reduce its riches‖

The moral struggle has led the South African government - through its geopolitical and social engineering – to make the problem of alien plants a national emergency. Since most of the land in South Africa is privately owned, landowners have become the focus of blame for the spread of the invasion. In implementing a strategy to involve landowners, market based economics are applied to their management. It is TerraPi's approach to show how these perceptions can be reality by turning the problem into an economic opportunity for landowners. This vision of the natural world as something which can be marketed occurs in relation to a particular moment in the history of South Africa, one which is placed in the context of historical development of global capitalism. This is a force that forges transnational markets and the ―fashioning of subnational identities, cultures, and ecologies that appear endangered by the very forces that produce them‖ (ibid: 638).

In the wake of this there has emerged a characteristically millenarian group, TerraPi, who participates in the institutionalization of water management through a ‗payments for ecosystem services' project. This group adheres to one brand of ‗environmentalist' ideology, one that is inherently apocalyptic. As I argue, their organisation is

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charismatically marketed as a site where a transformation can occur, one which can facilitate a ―cultural reconciliation‖ through pioneering markets in alien plant eradication. TerraPi sanctions social and political aspirations through the way they go about engaging with their land. Also, what is even more telling of the organisational culture of TerraPi is that they are not the only apocalyptic group living on the fringes of this World Heritage Site. They are situated around a broader migration of people to the Baviaanskloof in preparation for the end of the world. What distinguishes the subject of my main empirical investigation, TerraPi, from others is that they offer specific practices to ensure that the post-apocalyptic world is abundant, when ever that happens.

The environmentalist James Lovelock (2006: xiv) writes, ―Before this century is over, billions of us will die and the few breeding pairs of people that survive will be in the arctic region where the climate remains tolerable‖. Today visions of a millennial utopia compete with increasingly plausible scenarios of global catastrophe. A world transformed for the better against a world transformed for the worse. Ideas of the end (at the hands of an ecological crisis) are the foundation of some ‗environmentalist‘ views of nature making nature itself the very conduit for materializing the immaterial human anxiety about the future – a perennial preoccupation of the human condition. The argumentative dimension of the global apocalypse (or millennium) has never been more pronounced than in the present.

This vision of nature, along with the evils it entails, cannot be separated from social, cultural, and political past. The apocalyptic tradition is one of community building where individuals and collectivities constitute their identity through shared mythic narratives used to confront the problem of evil in time and history (O‗Leary 2004). Through this discourse of time in the South African context, I have illustrated how a millenarian group has emerged with their own opinion of moral value and a new redemptive process through which to achieve their transformational ends.

In this Chapter I would like to contrast these facts, anxieties, fears, and possible misplaced faith against another millenarian movement that occurred about 160km from

my field site and 160 years prior, the ‗Great Xhosa Cattle-Killing‗. In making this comparison I hope to test a number of ideas or opinions, namely that ‗facts‗ are never neutral and transparent but are only given meaning through a particular framework. That is, ‗facts‗ only become manifest and relevant within certain social, political, cultural, and religious conditions.

In regards to the ‗environmental crisis‗ to claim ‗facts‗ about the environment is to reduce this to a question of scientific objectivity. According to Argyrou (2005: 45), ―The ‗environment‗ as it is perceived is not about truth or ideology, but is a part of the ―much more dense and difficult middle ground that constitutes the realm of culture‖. It is therefore these conditions that need to be explored if ―we are to gain a broader understanding of the ontological change that is currently upon us‖ (ibid). The main endeavour in the proceeding Chapter is then to question the cultural assumptions that make these facts real and relevant. This task involves not only what is observable, identifiable, and quantifiable but also what is ―valuable, charged with the kind of relevance, significance, gravity and urgency that distinguish the attitude of the activist and the converted from that of the passive observer, sceptic, or critic‖ (Argyrou 2005: ix).

**The Xhosa Cattle-Killing**

As the story goes, a young girl – Nongqawuse - was approached in a field one day by people who had long been deceased. She was ordered to tell the Xhosa people that if they slaughtered their cattle then their dead ancestors would arise and the British would be driven to the sea. As a result, during 1856-7 approximately 85% of the Xhosa killed 400,000 cattle leading to the death and starvation of 40,000 Xhosa in the Eastern Cape (Peires 1989). The enduring consequence this had on their lives and livelihoods made it the ―perpetual lament to generations‖ (*sisimbonono kwizizuklwana*) according to Yali-Manisi (2000: 24).

Wilson and Zarwan (1969) frame this movement in terms of a ‗traditional pattern‗ referring to the vague idea of ‗malevolent sorcery‗ (i.e. ‗witchcraft‗) as an explanatory

framework for the Cattle-Killing.  While not a full account of the movements form and function, witchcraft was very much a part of it, evident in Nongqawuse's very prescription that ―All those [cattle] now living must be slaughtered for they have been herded by defiled hands, for there are people about who are handling witchcraft" (Peires 1987: 49).  However, this does not explain the social, political, economic, and cultural context in which killing cattle was seen as a viable proposition for transformational action.

While witchcraft has characterized the belief system of the amaXhosa long before 1856 it did not ever result in the killing of cattle.  Generally, Peires (ibid) states that, ―Witchcraft was associated with any sort of morally wrong behaviour which, being evil, constituted a polluting and harmful force in the naturally good and harmonious universe".  Witchcraft was therefore only one facet of the movement, what Peires explains was an inward look that the amaXhosa took upon their own deficiencies and moral wrongs as the cause for the evils that were happening, namely a protracted war with the British and the lungsickness epidemic.

Peires, in his book *The Dead Will Arise* (1989), illustrates the broader context in which this movement took place.  Through it he shows that this millenarian movement was more than a ‗delusional, atavistic and irrational practice of self-destruction and cultural suicide'.  The movement had much to do about cultural beliefs as it did about the social and economic realities that culture is bound with.  As previously mentioned, it was a response to colonial pressure and over 80 years of war with the British (the Frontier War).  And, it was a pre-Christian (―traditional") belief system combined with Christian elements which allowed it to cut across ambiguous cultural interests.  It was the accumulation of these factors that made these actions ―necessary, credible and effective" to many Xhosa.

The movement occurred in the context of the lungsickness epidemic of 1854 which has much to do with explaining the form the movement took, namely the killing of cattle.  As Peires (1987: 44) argues, the lungsickness epidemic:

Was a necessary cause of the Xhosa Cattle-Killing: without it, the movement could never have occurred…this is not to say that lungsickness was a sufficient cause in itself, for it spread all over Africa without producing the same effect anywhere else…But at its very first stop, in Xhosaland, it encountered an exceptionally battered and divided society, demoralized by the frustration of a long series of military defeats; by the social insecurity of expulsion from Natal lands and pastures; by the material sufferings of migrant labour and of resettlement in cramped and ecologically deficient locations; by the new wealth of those who had climbed on the military commercial bandwagon of settler expansionism.

What appeared to be irrational to us in the present seemed logical to the amaXhosa at that time. According to Peires (1987: 62), ―By blaming the epidemic on witchcraft and proposing to cleanse the earth of its taint, Nongqawuse‗s prophecies provided an explanation for current circumstances and a rationale for future action. The ideology of the Cattle-Killing movement combined old and new ideas, both of which were equally necessary to its credibility". And, to note, while I use the epithet of the Cattle-Killing as a delusion which led to ―cultural suicide" this may be ―potentially misleading in conflating the movements outcomes with its motivation…no one suggests that the Xhosa nation *intended* to destroy itself" (Wetzel 2007).

### The Nonqgwuse syndrome

In 2006 Moeletsi Mbeki, deputy chair of the South African Institute of International Relations and brother of the former president Thabo Mbeki made a comparison between the current situation in South Africa and the one which lead to the Cattle-Killing (Mbembe 2006). In this instance he was referring to ―betrayal that millions of South Africans feel more than a decade after the ‗liberation‗ that brought pandemic disease, violence, and deepening inequality". In addition there were massive ―delusions" coming from the South African government that included ―fake cures such as garlic and beetroot for HIV/AIDS" making it the ―modern day equivalent of Nongqawuse‗s fake cures"

(Mangcu 2007). This was compounded with "the post-apartheid fantasy" that elite blacks would treat other blacks better than whites did.

Mbembe (2006) argues that South Africa suffers from this "syndrome" during "times of demoralization and acute social and mental insecurity" which arises with a "false prophecy" in the context of "a certain level of mass hysteria" and a "millenarian form of politics" (ibid: 3). Mbembe argues further that there are "good reasons to believe that the current political disorder in South Africa closely follows the pattern" and thus develops the thesis of the "Nonqgwuse syndrome". Further, Mbembe argues that this is not isolated to South Africa and in fact characterizes the 'predicament' of many other post-colonial African societies including Rwanda, Liberia, Congo, and Sudan.

What is important here is that the desires expressed in Nongqawuse's unfulfilled prophecy were an attempt to re-imagine what South Africa could be - as a utopia achieved through certain redemptive processes by which a transformation can be achieved. It was a way of generating an alternative meaning of what the world might be, something which Mbembe fears South Africa can no longer do (Wenzel 2007). We have now come to a time where our own moral deficiencies are being viewed as the root cause of the current evils of society (e.g. anthropogenic causes of environmental damage, like the introduction of alien flora). In response to this TerraPi has emerged to generate an alternative meaning of our world might be through a redemptive process which is seen as a necessary, credible and effective way to ensure the survival of its members - through alien plant eradication.

### *The post-modern delusion?*

According to Argyrou (2005: 46), "that environmental danger is a matter of cultural perception has been pointed out often enough – most famously by Douglas and Wildavsky (1982) and Douglas (1994) – and there is really no need to labour this theoretical point". Within the cultural perceptions of environmental danger there is usually some type of monster defined as outside the 'true community' (Hoffman and

Oliver Smith 2002). Alien plants in South Africa are the feared terrorists who are consuming its driving force; the vital water resource and its ‚natural heritage'. This cannot be separated from the social, cultural, and political past.

As of 2010, alien plants have been attached to the grand narrative of ‚climate change'. The  South African National Biodiversity Institute (SAPA 2010b) claims with changes in temperatures  the ―root and shoot systems of some Acacia species could become stronger, which means that they will be able to access water deeper below the soil surface… This could make them more aggressive and increase the potential for invasions, leading to an even bigger threat to our natural resources and biodiversity". Climate change will feed the monster, causing it to continue to invade South Africa‘s ‚natural heritage' and consume the vital water resource and increase fire danger.

Also in 2010 a report completed by the Agricultural Research Council shocked officials at the South African Department of Water Affairs and Forestry, finding that the invasion of alien plants was actually double what they had previously estimated. Instead of 10 million hectares (ha) of land covered it is 20 million (ha), ―which poses massive threats to South Africa‘s water supply as well as the country‘s agricultural potential and biodiversity" (SAPA 2010a).

As Theodoropoulos (2003: 147-148) argues, the conceptual structure of invasion biology is found to be identical in all key points of a xenophobic, fascist, and authoritarian belief system and it is clearly a ―manifestation of this *common delusion*". This ―delusion", Theodoropoulos further argues, is being enforced globally via command-and-control legislation the imposition of which is an example of ―biological globalisation" being imposed on locals worldwide as a new sort of imperialism which ―increases governmental and multinational corporate powers, restricting the rights and freedoms of individuals and communities" (ibid).

There are some who argue that the current consensus about ‚global warming' is founded on a delusion. That global warming is real and man made and will have impacts on

humans and the environment toward the end of the century is accepted. But, that these changes will be catastrophic and lead to the ―end-of-civilization‖ is arguably a fantasy. Contrasted with the dominant understanding of ‗climate change‘, which projects a dismal future for humanity, Bjørn Lomborg (2001: 4) argues that:

> We‘re not running out of energy or natural resources. There will be more and more food per head of the world population…Global warming, though its size and future projections are rather unrealistically pessimistic, is almost certainly taking place, but the typical cure of early and radical fossil fuel cutbacks is way worse than the original affliction…Nor will we lose 25-50 percent of all species in our lifetime – in fact we are losing probably 0.7 percent. Acid rain does not kill rainforests, and the air and water around us are becoming less polluted.

What is important about Lomborg‘s idea of nature is not whether it is correct, but that it marks a very important dissent from other, very powerful, beliefs. Al Gore, in his movie *An Inconvenient Truth*, calls our culture a ‗dysfunctional civilization‘. However, Lomborg (2001: 328) argues, that this ―reveals both a scary idealization of our past and an abysmal arrogance toward the developing countries of the world‖. For Lomborg, the story of modernity is a story of success: ―we have more leisure time, greater security and fewer accidents, more education, more amenities, higher incomes, fewer starving, more food and a healthier and longer life. This is a fantastic story of humankind, and to call such a civilization ‗dysfunctional‘ is quite simply immoral‖ (ibid: 329).

In an attempt to ‗clear the air‘ Hulme (2008), Director of the Tyndall Centre for Climate Change Research, gives a historical account of the various views and discourses of climate change that have emerged up to the present. From the turn of the 20th century up until the 1950s there was a ―positive or benign‖ consequence of global warming projected for society (ibid: 6). The so-called father of climate science, Svante Arrhenius (1908: 61-3) wrote that global warming would allow future generations ―to enjoy ages with more equable and better climates, especially in regards the colder regions of the

earth, ages when the earth will bring forth much more abundant crops than at present for the benefit of rapidly propagating mankind".

In 1938 Guy Callander, who was the first to link global warming with rising carbon dioxide levels, noted that global warming ―is likely to prove beneficial to mankind in several ways; besides the provision of heat and power…it would allow for greater agricultural production and indefinitely delay the return of the deadly glaciers" (cited in Hulme 2008: 10).   In addition, popular magazines in the early 1950s contained illustrations of the social and environmental impacts of climate change through cartoons in which ―Russian farmers enjoyed new agricultural opportunity and American workers basked lazily in benign warmth" (Flemming 1998: 120).

This is sharply contrasted with the current consensus of modern science and public opinion.  Here the consequences of climate change are put in terms of catastrophe and danger (Lovelock 2006) and even apocalypse (Killingworth and Palmer 1996; Lee 1994). Generally this shift in perception can be traced back to the ‗environmental awakening' of the 1960s.  At first this kind of apocalyptic meteorology was attached to the Cold War anxiety of a nuclear winter.  But, following the dismemberment of Soviet Union in 1989, fear shifted to the converse; a warming planet.  Apocalyptic fears of drought and melting ice caps thus displaced the nuclear threat as the dominant monster.  Weingart *et al* (2000: 8) showed that the term ‗climate catastrophe' first appeared in 1986 in a German culture magazine *Der Spiegel*.  The anxiety of this was elevated in the US as a consequence of the 1988 ―greenhouse summer".

Ideas about nature in general -- and those specifically about climate change -- do not endure but transform, dissolve and appear in different wrapping.  In Chapter Three I discussed Argyrou's view of nature which has moved through three periods of ‗constructive cosmological thinking' which were situated geographically, historically and culturally.  We are now in the fourth ‗period of cosmological thinking' marked with environmentalism.  In a similar fashion, Hulme (2008: 6) illustrates the lineage of discourses on climate change throughout history, placing them into categories of pre-

modern, modern and post-modern; ‚climate as judgment' (fear of unknown causes), ‚climate as pathology' (fear of unknown places) and ‚climate as catastrophe' (fear of unknown futures), respectfully.

Hulme argues that during the pre-modern period (sixteenth and seventeenth centuries) a deficiency of naturalistic understanding of the natural world caused explanations of natural events (specifically climate change) to be formed through a cosmic anxiety of the forces of good and evil; through divine or satanic intervention. During this time the disasters that occurred during the ‚Little Ice Age' (c. 1500-1650) were given scapegoats. Even today, ‚climate scapegoats' are still prevalent in sub-Saharan Africa, where extreme climate (both droughts and floods) is strongly linked to the killing of "witches" – in just one district in Tanzania, "more than 170 women are killed each year" (Lomborg 2010: 184).

This led Bohringer's (1999) to link ideas of climate change to witch hunting in central Europe, arguing that there is evidence that "witches were on occasion burned as scapegoats for climate change" (Hulme 2008: 7-8). In 1484 the Pope claimed that witches "have blasted the produce of the Earth, the grapes of the vine, the fruits of the trees…vineyards, orchards, meadows, pasture-lands, corn, wheat and all other cereals" (Lomborg 2010: 182). As a result almost half a million individuals were executed between 1500 and 1700.

There is thus a strong correlation between environmental factors and increased incidence of witchcraft trials across the European continent. Likewise, during the Cattle-Killing in South Africa, according to Peires (1987: 44), "several people were executed as witches in the early attempts of the Xhosa to halt the spread of lungsickness". But, in both cases, "since executing witches failed to stop the disease, the amaXhosa were forced to look elsewhere for the sort of explanation which could serve as the basis for effective action" (ibid).

The new explanation of ‚natural' disasters in Western thought was transformed in the eighteenth century and framed in naturalistic explanations. Through this climate became ‚domesticated' (Rayner 2003) and through standardized meteorological measurements there emerged a separation between the ―causality due to the laws of God and causality due to the laws of Nature" (Hulme 2008: 8). This replaced the pre-Enlightenment narratives of fear through unknown causes. The idea of nature became one of a physical domain with a ‚natural history' that needs to be mastered by Men and their science. Indeed, the very mark of civilized Man during this period was his mastery over nature; the very measure of his humanity. As Argyrou (2005) argues, this had the consequence of legitimizing the colonialist and imperialist enterprise in that those ‚savage others' in the rest of the world who had not yet mastered nature were less human and deserving of subordination.

During the modern period of the 18th to the early 20th century another idea about climate change emerged, this time it was associated with pathology. After Europeans had sustained contact with the tropics this new mentality was promoted as a fear of unknown climactic places (ibid: 9). As such the associated danger had both physical and moral dimensions, specifically as this anxiety adhered to models of racial hierarchy. This period of racist ‚constructive cosmological thinking' was largely the result of pseudoscientific accounts, like that of Ellsworth Huntington's study ‚Civilization and Climate' (1915, 2001), which broadly argues that: ―We know that the denizens of the torrid zone are slow and backward, and we almost universally agree that this is connected with the damp, steady heat" (cited in Hulme 2008).

The ‚knowledge' produced about climate was therefore infused with nineteenth century imperial discourse and this outlook, combined with perceptions of the danger of climate, gave ‚proof' of the ―physical, mental and moral superiority of the settler race over the indigenous inhabitants" (Argyrou 2005: 9). It is interesting, according to Hulme (2008), to note how this discourse has changed (while ironically staying the same) under the current environmental paradigm. He cites the IPCC's Fourth Assessment Report (2007) which predicts that the tropics, and of the developing world in general, will be the

epicentre of danger and death. In sustainable development discourse, argues Argyrou (2005: 69), developing counties are in a ―double bind", they are ―forced to sacrifice their symbolic capital (living in tune with the land) for economic development in order to overcome their poverty, which the global community agrees is the main cause of environmental destruction".

In the late twentieth century, having lost faith in the scientism of modernity and its ideas of ‗progress' environmentalism emerged favouring a moral and sacred view of nature. Under this paradigm people become fully human to the degree in which they are part of the environment. This marks a shift in thinking from science to ethics; from reason to spirituality. Nature is now fragile, viewed as ‗Sacred Earth' rather than simply ‗Planet Earth'. At the same time nature becomes (again) the domain of danger, reintroducing fears of Man's impotence to control it.

In 21$^{st}$ century environmental discourse, the grand narrative of market economics has become infused into ‗moderate' environmental approaches which assume this kind of control. This new global enterprise of solving environmental problem involves variant forms of ‗engineering' such as geo-engineering, geopolitical engineering and social engineering (Hulme 2008: 12). The type of ‗geo-political engineering' that is happening at a global level is top down. Take for instance the ‗integrated water resource management' model and the way it has filtered into South Africa's regional water management developments and how this has affected public policy such as Conservation of Agricultural Resources Act and the National Environmental Management of Biodiversity Act. Ultimately this engineering has come to affect landowners and how they manage their land.

This is, according to Hulme (ibid: 13), a ―systematic attempt to align the institutions of international science, environmental management, governance and diplomacy to find rational alliances of interest". At the same time the social engineering goes from the bottom up through the ―purposeful manipulation of lifestyles". These social marketing campaigns are thus directed to ―change individual behaviour" (ibid). This approach is

what South Africa's *AlienBusters!* attempted to do in 2005. It is also the very core of TerraPi's institutional drive, to transform people's relationship to nature and to each other.

In light of this, O'Riordan and Jordan (1999) claim an alternative way of appreciating climactic fear, an ‗un-engineered' approach that reads climate through culture. Looking at how the pre-modern fears were remedied through ‗Enlightenment rationality' and the modern through the collapse of the Imperial project, then surely the current fear could be confronted through cultural change (Hulme 2008). Arriving at such an understanding would involve considerations, such as Ross (1991) who puts the idea of global warming in line with our post-1980 ‖globalized tendencies". That is, the very construction of the idea of global warming in the 1980s could be ‖measured and monitored" in relation to the wider globalization movement and its ideology. Generally speaking this means that, ‖Instead of feeling the weather as we have felt it historically, as part of a shared local or even national culture, we are encouraged to think of it globally" (Hulme 2008). Additionally, this globalisation of ideas has also affected the view of the apocalypse. No longer is the narrative of the apocalypse about one society ending, but of a global melt down. This is a move toward reading crisis through culture.

### *Branding crisis*

In reading crisis through contemporary public culture it is important to note that the new view of nature under the paradigm of ‗environmentalism' is, according to Argyrou (2005), the ‖latest Western construct". It is a view of nature that produces yet another objectifying and totalizing vision of the world which reaffirms the legitimacy of the West which continues to give meaning to the world, *yet again*. While under the modernist paradigm there was a (largely colonial) differentiation between the ‗civilized' and the ‗savage', under the ‗environmental' paradigm this terminology has been replaced with the ‗developed' and ‗underdeveloped'. Science and technology remain in the hands of ‗modern (European) man'. Argyrou therefore sees the paradigm of environmentalism using the same historical logic that has characterized western man's his(story).

Argyrou (ibid: 88) argues that environmentalism is nothing more than a hegemonic reflection of the logic of modernity itself, taking the modernist project to its logical extreme, through the ‚logic of the Same'.  Where the modernist paradigm disenchanted nature by taking Man out of it, environmentalism seeks to put Him back in.  This subsequently elevated the subject of European man who, once again, is giving meaning to the rest of the world thereby strengthening the position of the West as the ultimate source of all legitimate knowledge, bolstering the cultural logic and global hierarchy it upholds.

This process of ideology-in-the-making is clearly illustrated in the way large corporations have come to participate with environmentalism.  To use a concept from Boynton (2005), in the 21st century large corporations empower and legitimize themselves by ‚branding crises'.  I have tried to demonstrate in this thesis that the future, and specifically one in crisis, raises fear and is a potent weapon to direct public action.  This fear may lead people to sometimes make irrational decisions instead of ―sober requests for long-term decisions" as can be argued in the case of the Cattle-Killing by the amaXhosa in 1856 (p.128-130).  My question about this approach remains, and I ask whether it is morally justified against so much uncertainty for corporations to use fear as their ‚corporate social responsibility strategy' especially when one considers the highly ambiguous context in which the language of ‚invasion biology' is being used.

Take for instance SABLtd. (the South African subsidary of SABMiller) whose participation in *WaterNeutral* will be ―supported by an extensive communications and branding drive" (WWF 2007). SABMiller's (2007) publication ―Water – the challenges for the future" notes the limitations South Africa will face in light of a water shortage. This corporation provides a massive source of funding for *WaterNetural,* ‚donating' approximately R1,633,396 in the first year and R2,857,026 over the next 18 years in order to remain ‚water neutral' (WWF 2007).  SABMiller notes that ―water neutrality is a tangible, pragmatic response to a *grave environmental and social concern*" (WWF 2007 my italics).  The corporation is branding the crisis (apocalyptic drought due to alien invaders) to market their drinks and they offer transformational solutions to the current

problems through their ‚value added' approach.  Interestingly, other large transnational corporations pitch the same ‚value added approach'.  Take as one other example, Nestle S.A., who's ‚Creating Shared Value' (2009) offers the same ‚value added' solutions. These are related specifically to the water crisis which is outlined in their publication ‚Tackling the World Water Crisis: Reshaping the future of foreign policy' (2010).

The idea of water neutrality is not isolated to SABMiller and other large corporations like Coke-a-Cola also have their own programmes aimed at offsetting water consumption. However, these programmes are not without criticism.  In an article written in the Harvard Business Review, ―Claiming You're ‚Water Neutral' Can Damage Your Brand", Sarni (2009) argues that the concept of water neutrality is actually an evasive one.  He argues that ―it is in fact impossible to be water neutral in the strictest sense…The danger with claiming carbon or water neutrality is that it's misleading, and risks violating consumers' (or other stakeholders') trust".

Sarni continues,

> While the definition and framework is a useful tool for companies to think
> about water, claiming water neutrality according to this definition only
> confuses consumers and is likely to generate scepticism, not support.
> They don't care about (or really understand) a definition agreed upon by a
> group of non-governmental organizations (NGOs) and companies.  If a
> company claims water neutrality, they expect to see just that – a gallon of
> fresh water returned to the source from which it is taken.  And that's
> unlikely to happen…Don't get me wrong — companies that are trying to
> reduce their water use and invest in water basin conservation projects have
> the right goals. But don't run the risk of distracting from real progress in
> reducing your water footprint by stating goals that are difficult to
> understand and impossible to accomplish. Rather, you should reduce water
> use, invest in local, community-based watershed projects, and tout those
> accomplishments. That way, you can take credit for credible actions

While these sentiments should be left to healthy debate, what is important to note here is that the approach taken by South African Breweries Limited (through SABMiller) adheres to the values outlined in a ‗sustainable development' discourse specific to South Africa, and does to their merit facilitate local watershed projects. This is similar to the global corporate focus on water consumption and reduction which, through organizations such as the World Business Council for Sustainable Development (WBCSD), are being urged to address water issues and poverty in tandem through ‗shared values added approaches'. SABMiller aspires to work with NGOs (like TerraPi) who they note are ―often closer to the ground in terms of understanding the critical issues and lend third-party independent verification to corporate investment" (SABMiller 2007: 11). This ultimately gives groups like TerraPi room to market and legitimize their own aspirations based on this environmental rhetoric which they shape to the local circumstance by addressing the needs and constraints of locals stakeholder (i.e. private landowners).

Corporate social responsibility is a global force that piggybacks on the concept of ‗sustainable development'. Corporations are increasingly adhering to these global norms and standards which funnel down to local situations. Multinational corporations are applying these standards in different parts of the world. South Africa's history and socioeconomic challenges define how corporations participate. In discussing the South African peculiarities and complexities and illustrating the national and local circumstances in which they are set a model can be created through which these aspirations can be critically examined, for instance, how sustainable development has taken the form of alien plant eradication which exists in a highly ambiguous context of violence to non-natives in South Africa.

Žižek (2010) argues that this type of corporate aid actually demoralizes the people that it is directed toward (i.e. ‗the poor'). Under ‗post-modern capitalism' (or ‗culture capitalism') this type of charity actually involves a high level of hypocrisy. What Žižek calls ‗cultural capitalism' is defined as the economic, social, and moral belief which began after 1968 when people began to be increasingly concerned about ecology. Having incorporated these values into their modes of operation, large corporations have made the

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process of consumption *also a process of what the consumer can do for society and the environment*.  Consumerism under culture capitalism ―includes the price of its opposite".  The cure is therefore embedded in the process of consumerism itself.

Under this model of cultural capitalism, according to Žižek, charitable giving is no longer idiosyncratic of a small amount of individuals but rather the act of charitable giving forms the basic constituency of the economy.  That is, the charitable man no longer has to go to work and then after work give money to charity.  Nowadays, capitalism forges the process of consumerism and the process of redemption into the very same gesture.  Žižek states, ―when you buy something your anticonsumerist duty to do something for others, for environment, and so on, is already included into it".  This kind of capitalism according to Žižek ―builds with the left hand what it creates with the right".

As an example among many, Žižek chooses Starbucks whose campaign exposes the way many other corporations have institutionalized the social and ecological values of ‗sustainable development'.  The Starbucks brand claim is that ―it's not just what you are buying, it's what you are buying into".  To this Žižek explains, ―when you are buying Starbucks, whether you realize it or not you are buying into something bigger than a cup of coffee, you are buying into a coffee ethics".  Through the Starbucks ‗shared planet programme' they purchase ―more fair trade coffee than any other company in the world ensuring that the farmers who grow the beans receive a fair price for their hard work".  In short, ―it is a good coffee karma…Through your consumerist activity you buy your redemption from being only a consumerist". This is cultural capitalism at its purist according to Žižek.

And so, in the case of SAB Ltd, when you buy a beer you are also buying ethical duties.  It is a ‗good beer karma'.  It is a way of extending the gratuity on to the consumer that he is doing something in the name of ‗sustainable development'.  In South Africa, a consumer of beer is providing jobs for the marginalized to do ecological restoration through alien plant clearing, and subsequently paving the way for millennial aspiration.  When he/she buys a beer, he/she can feel good knowing that through buying this beer

he/she is buying cultural reconciliation because with this beer he/she is providing jobs for people to cut down alien plants – which as many people in South Africa know (thanks to *AlienBusters!*) contributes to a water crisis.

## Chapter 8 - Conclusion

Examples of corporate sponsored environmental programmes abound. What is worth pursuing in relation to this thesis is further analysis on the form and function that organisations take within a global spread and exchange of neoliberal environmental ideas and practices. On the fringes of a World Heritage Site in South Africa an apocalyptic and (biologically) xenophobic environmental agenda has created room for the emergence of a characteristically millenarian group who have their own opinion of the moral value and redemptive processes needed to realize a transformational end and a revitalization of their people. This transformational end is set against the backdrop of the narrative of a water crisis exacerbated by alien flora and a similar narrative is used by a corporation (SAB Ltd.) in South Africa as a social marketing strategy.

The anthropological view is holistic and considers social, economic, political, and historical factors as vectors of cultural change. Environmentalism can be seen as a social movement and cultural phenomenon (Milton 1996). There is a discourse of time at the centre of environmental rhetoric, ranging from scenario planning to eco-doom hypotheses. In my analysis I have tried to be theoretically sophisticated and historically sensitive by choosing ‗perceptions of the future‘ as an avenue for studying culture. Wallman (1993: 6) holds that collective beliefs of the future sustain culture and underpin the sense of self and survival that social organisation depends on. .

While there are people and organisations that have faith in the current socioeconomic and political state of affairs that are aimed at managing resources (e.g. the South African government and TerraPi), there are others who treat these environmental treatises as top-down ―command and control‖ models being imposed as a ―new sort of imperialism‖ worldwide (e.g. Theodoropoulos 2003). This latter group views environmental ideas and practices as another form of domination (Argyrou 2005) which, according to Theodoropoulos (2003: 79), ―increases governmental and multinational corporate powers, restricting the rights and freedoms of the individuals and communities‖. Groups that base themselves on specific environmental ideas, those advanced by the field of

invasion biology, are labelled ―nativist cults‖ (ibid). Adherence to this biological nativist discourse can be read as an attempt by white South Africans to turn themselves into ―natives‖. In the South African context, the programmes (or pogroms) and groups that arise in relation to them are examples of the continuing xenophobia in South African society and within state institutions (Comaroff & Comaroff 2001; Neocosmos 2006).

This is one facet of the story. Another belongs to TerraPi who have internalized the national aspiration of creating ‗values‘ for the poor through practical engagements with the environment; in their approach, cultural reconciliation through ecological restoration. In participating with ‗on the ground‘ disputes TerraPi has created a platform for a more inclusive process of making decisions about the management of natural resources, through their own interpretation of ‗ecosocial‘ restoration. In their engagement with other ‗stakeholders‘ (i.e. landowner) TerraPi provides an interface in the government-society-science ‗trialogue‘ necessary for achieving effective resource management (Turton 2008). Nyambe et al. (2005) maintain that ‗informal‘ groups like TerraPi serve a ―tactical function‖ in the development of public service agencies (e.g. the catchment management agency). And, while not being the formal way of going about things, these groups are particularly good at exposing (and reinforcing) the underlying values and assumptions upon which outside institutions are based.

Reinforcing the values and assumptions upon which public service agencies are based is much needed for South Africa, a fledgling democracy whose segregated past is meeting today‘s world of free trade and the privatisation of government owned enterprises and resources. There are many reasons to applaud the South African government for keeping a pro-poor environmental restoration project like WfW in operation since 1995. Its recent participation in ‗culture capitalism‘ (Žižek 2010) through the growing ‗corporate responsibility‘ markets show the kind of social ingenuity that South Africa is capable of, at its purest. I believe that this kind of revolutionary approach to social and ecological problems in South Africa will continue to provide momentum for public works programmes in the future. Nevertheless, the form that this has taken in South Africa further illustrates its problematic past in making indigeneity marketable and the basis of

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ethical consumption and making alien eradication the *raison d'être* for TerraPi's land-use practices.

There are still many challenges not-the-least in regards to achieving ‗sustainability' in market models for environmental protection, or the payments for ecosystem services approach. These markets need to be seen as just one facet of a holistic approach. That these models rely on a fragile funding apparatus need to be seriously evaluated and considered for their long-term strategy. On the ground, the practical limitations of the WfW programme include the failure of the ‗exit strategy' to provide ongoing benefits to the livelihoods of the poor. Workers who were once part of the programme fall back into poverty (Knipe 2004). Also, in 2010 the Agricultural Resource Council found that the invasion of alien plants is twice as bad as previously estimated. This calls into question the ecological benefits that this programme accomplishes, or whether these too are a fantasy.

Given the historical context of millenarian movements in the Eastern Cape, these shortfalls beg certain questions. Are the ―cures" which the South Africa government and TerraPi are offering - like Nonagquwuse's - ―fake"? Are these aspirations typical of the ―delusional" beliefs symptomatic of the ―Nongqawuse syndrome", and charismatic movements in general? What is to say that South Africa will not follow this logic into the future? Will the lack of moral and intellectual capacity fail to generate an alternative meaning of what South Africa might be? Will the political disorder, cultural dislocation, demoralization, and acute social and mental insecurity that South Africa is experiencing engulf the entire country, as Mbembe (2006) fears it will?

While I hesitate to argue further in this direction, I would go as far as stating that there is a level of ‗tempocentrism' (Textor 1998) in the politics that the South African government, and certain groups outside of it, use to legitimize their own social, economic, political, ecological and cultural agendas. Put against the backdrop of an Aegean Stable (or impossible task) - that is South Africa's ‗environmental' problems – millenarian groups have found fertile ground. And, where there is millennial dreaming

there is some variant form of nativist discourse used to define the true community. Within this group prophets use a ‗psychology of alarm‗ to motivate their aspirations which could result in what Bindé (2000) calls a ―tyranny of emergency‖, when rational debate ends (Lomborg 2010) and opportunists seize power (Boynton 2005).

In after 16 years of a post-racial South Africa, groups are finding creative ways of negotiating their belonging. Mbembe (2006) sees some Whites ―retreating into safe enclaves‖ or, leaving to Australia. Feeling politically powerless they forfeit their citizenship and the ability to negotiate the terms of their belonging to a new nation. TerraPi epitomizes a group of so-called White African Tribesmen who have settled on the border of Eden and who have constructed a kraal and a laager to protect their natural heritage from invading aliens. Ballard and Jones (2011: 132-3) argue that such groups, feeling a precarious hold in the new South Africa, use natural heritage as a route to their own sense of belonging, as a unique spatial strategy to deal with social change. This has the political implication of achieving racial reconciliation, promising existential comfort while at the same time ―geographical escapism‖ from the post-apartheid city.

Unlike their apocalyptic neighbours TerraPi pursues practical action in relationship to external institutional developments, and in doing so claim certain social and political aspirations to ensure the survival, security and control of its members. Still, a nativist revivalism is taking place amongst those at TerraPi, and elsewhere in South Africa. Mbembe (2006) argues that ―…the task of nativism is to create a common language of grievance. Because nativism is not attached to any concrete social or political programme of reform, it can never be a progressive force‖. However, I would contend that an institutionalisation of one kind of nativist ideology has been achieved. The re-culturalization of South Africa‗s landscape addresses common grievances associated with a past of segregation and racial domination and is according to TerraPi the driving force for cultural reconciliation.

As the social, historical, political and economic factors in 1856 gave the amaXhosa both form and function in their attempt to transform South Africa, so too are these factors

useful in explaining the form and function TerraPi takes in attempting to re-imagine what South Africa could be. However, to say that TerraPi will result in the same ‚irrational and atavistic cultural suicide' that happened to the amaXhosa would be misleading and would conflate the outcomes with its motivation. I would, however, remain cautious of the ‚tempocentrism' that characterises their assumptions, and would, along the lines of Lomborg (2010) argue that certain aspects of their rhetoric need to be ―cooled" in order to grasp tangible solutions.

In closing, I turn once again to Jean and John Comaroff (2001: 648), whose own perspective on the South African current predicament, like my own is:

> …not meant to cast doubt on the danger actually posed by [the plants]; nor on the effort to explain and manage them with reference to the effects of foreign flora. It is precisely because these matters are so real and urgent that they carry the charge that they do. But the extent to which aliens of all kinds became a public preoccupation in South Africa just after the millennium went far beyond the bounds of botany, far beyond the concerns of the environmental sciences, beyond even the imperatives of disaster control. It is with this excess that we are concerned here.

**Appendices**

*Appendix A*

**Personal history**

Upon being accepted as a Master's student into the Anthropology Department at Rhodes University, my soon to be supervisor, Prof. Robin Palmer cited the Italian proverb: "E bello il retorno dove si nacque un giorno", literally meaning, "It is good to return where one was born one day".

Although not South African by nationality, I was born and lived the first decade of my life in Grahamstown, South Africa. My mother and father emigrated from the United States in the early 1980's largely due to my father's involvement in a fisheries project in the Okavango Delta, Botswana.

I was born in April 1985. Oddly enough, my mother's mid-wife became my co-supervisor, Dr. Penny Bernard. Five years later my sister, Kaitlin, was born. In 1995, we moved to the USA where my family has lived ever since.

In 2005 I returned to my birthplace where I spent one year studying at Rhodes University in Grahamstown as a third year undergraduate student. I continued my focus in Philosophy and chose Anthropology as a second focus area. In 2006 I returned to the USA, and in 2007 I finished my Bachelors of Arts.

During my final year of undergraduate work in the USA I worked with various environmental firms in Nevada and California. Here I would participate in the implementation of environmental projects. It was during this time that I became interested in how ‗local' people are affected by environmental ideas and practices mandated by state and federal agencies. This ‗stakeholder engagement' process has since

become the premise for my participation in over four environmental projects in South Africa since 2008.

Also in 2007, my father (Dr. Glenn S. Merron) and I made a film, *Fishing on the Phongolo*. The film documents his time directing a fisheries project in northern KwaZulu Natal, on the Phongolo floodplain between1993 and1995. The immediate value of this to me was sentimental, as it brought back vivid memories of my time spent on the floodplain as a child. As I watched the footage I could taste and smell the spicy Portuguese chicken from the local vendors, having a flash back of the time I fell into a fire scorching my right hand.

Soon after completing the video in 2007 my interests became academic. As a result of my father's research (which I detail below) I became interested in how dams affect downstream communities. My question in the case of the Phongolo is: how does the timing of floods from the dam affect the rate and frequency of artisanal fishing amongst subsistence fishers on the Phongolo floodplain? As can be seen in the video, these fishing activities (*fonyo* drives) serve important social functions for these communities (see www.inlandecosystems.com and click The Phongolo.

*Fishing on the Phongolo* documents a 1993-1995 project focused on determining the best time of year to release water from the Pongolapoort Dam in order to preserve the downstream ecology, specifically in terms of fish productivity. The research concluded that the natural spring and summer floods would fulfil the biological and ecological requirements for successful fish spawning and juvenile rearing habitat. However, releasing water from the dam during these seasons is in conflict with the demands of agriculture, namely cotton production, while floodplain fisheries have been downplayed.

Fish provide a primary source of protein for the downstream communities and a shift in the natural flood regime compromises fish spawning. Anthropologist Dr. Clive Poultney indicates that floodplain fisheries on the Phongolo have been down played where it has become expedient for the cotton industry to reject fisheries as a valuable source of nutrition. Flooding twice a year in the spring and summer to accommodate farming in terms of food security and to support ecological processes does not fit in with the cotton crop cycle and farmers prefer one flood a year during the cooler winter months at the expense of other floodplain users (personal communication 2007).

With this interest, I decided to send the video to Dr. Ted Scudder, former commissioner of the World Commission on Dams. As an anthropologist working within the field of large dams he was an ideal source of constructive criticism. Dr. Scudder gave me much encouragement and so I took the next step. I used *Fishing on the Phongolo* as a proposal for Masters Study at the Department of Anthropology at Rhodes University. And in 2008 I left the U.S. for South Africa once again.

**Motivation for the Current Study**

In the early days of researching my proposed project at Rhodes I was approached by an Honours student who was at that time focusing on both Anthropology and Environmental Sciences. Aware of the environmental slant of my research topic she suggested that I

investigate a project happening not too far from Grahamstown, in the Baviaanskloof Mega-Reserve.

Pursuing this project would be a great opportunity for me to get immediate hands-on experience of an environmental project in South Africa while forming the foundation of my Masters in Anthropology thesis. Following this lead I spoke with the scientists heading the project, Saskia Fourie and Mike Powell at the Rhodes Restoration and Rehabilitation Group (R³G). The task was simple: I would be hired on a contract basis to offer a ‗social analysis' of their project *WaterNeutral*. This project was a part of the Kouga Riparian Restoration Programme, a joint implementation of WWF South Africa and DWAF's Natural Resource Management Programmes. Through this Eastern Cape Restoration Programme was initiated aimed at enhancing the efforts of the WfW programme. The coordinator of the Kouga Riparian Restoration Programme is Saskia Fourie, a restoration ecologist who focuses on the rehabilitation of degraded areas following the clearing of alien invasive plants by WfW/DWAF.

I would speak with 22 landowners living on the eastern fringe of the Baviaanskloof Mega-Reserve in regards to their perceptions of alien plants. This was made relevant in light of recent legislation making it a legal duty to clear alien plants from their land. Noting the landowner's needs and constraints I moved to focus on one landowner and his unique way of dealing with things.

My first observation of the group of people living on the farm had no unqualified optimism about the future. They have an apocalyptic vision which bears similarities to New Age 2012 apocalyptic dreaming. More specifically, the group (Terra-Pi) focuses on how an eventual water crisis will result in the apocalypse, causing anarchy and chaos throughout South Africa. Alien invasive plants are the leading henchmen consuming as much water per year as the combined industrial use. The mission of TerraPi is to project the conservation of nature in a spiritual and moral sense, to stop the invasion of alien in the Baviaanskloof Mega-Reserve. In doing an institutional analysis of the *WaterNeutral*

project, I focused on how the assumptions at the core of their organizational culture functions to play a role in the development of a water management agency.

My findings were disseminated in various venues. Before conducting my fieldwork I presented a paper at an Anthropology Southern Africa conference in Cape Town in 2008. In 2009 I presented a paper at the Fynbos Forum in the Eastern Cape. In between conferences I presented at 3 different meetings, mostly to environmental scientists. I wrote my thesis in Switzerland while on a ‗research sojourn' at the Centre for African Studies at Basel University from August 2010 until January 2011. While here I presented my finding at a conference in Bern titled ―Swiss Researching Africa Days". In addition to this I presented a slide show in an environmental science course at Basel University.

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Date..................................

To whom it may concern

**Re: Letter of Introduction**

This is by way of introduction to the Kouga Riparian Restoration Programme, a joint implementation project of WWF SA (WWF) and the Department of Water Affairs & Forestry's (DWAF) Natural Resource Management Programmes (NRMP). DWAF NRMP has initiated a natural resource restoration programme, the Eastern Cape Restoration Programme (ECRP), which aims to restore the natural, social and financial capital of rural communities. The programme is aimed at enhancing the efforts of the well known Working for Water programme the biggest of the NRMP's in improving the recovery of degraded land after alien plant invasions and unsustainable land management practices within the Eastern Cape.

The Restoration Research Group (R³G), is based at the Department of Environmental Science at Rhodes University in Grahamstown and forms a collaboration with a number of institutions which include: the DWAF-NRMP's, Nelson Mandela Bay University (NMMU), The Eastern Cape Parks Board (ECPB), WWF-SA, the Gamtoos Irrigation Board (GIB), Wageningen University (WU), Earth Collective South Africa, Rhodes University and the PRESENCE Network. (R³G) has been awarded a 3-year contract to provide scientific advice to the ECRP, and to implement the above goals. A number of surveys are necessary for gathering data to provide the scientific advice to the ECRP, and we would value your assistance in this regard. This letter serves to introduce..............................................who is an intern of...............................................University with Prof./Dr.........................................as the supervisor. Should you have any queries please contact Saskia Fourie (restoration ecologist) at our office in Grahamstown (046 603 7005/7002) or speak to a regional manager at GIB offices in Patensie (042 283 0329).

For further information please refer to the following websites:

www.r3g.co.za    www.earthcollective.net    www.dwaf/gov.za/wfw

Yours sincerely

Prof. Charlie Shackleton
Head of Department

## Healing Land Healing People

TerraPi is a Section 21 Company (NPO – Not for Profit) that promotes cultural *reconciliation* through *sustainable community development* focussing on *education* and *environmental restoration* aiming to *replicate* it into the wider community.

- Cultural reconciliation
  - Lack of opportunities – *job creation, poverty relief, skills transfers*
  - Historical mistrust  - *community owned enterprise, dialogue*
  - Poverty, crime and alcoholism – *opportunity, work and health*
  - Volunteers worldwide – *cross-cultural pollination*
- Sustainable community
  - Permaculture design – *Energy conscious*
  - Natural resource use – *holistic resource management*
  - Micro industry – *resource utilization*
- Education
  - Experiential learning (out in field) – *Do orientated*
  - WESSA, AE Courses – *Accredited*
  - Schools and Students – *Environmental Education & Eco Psychology*
- Environmental restoration
  - Water neutral Initiative (WWF & SAB) – *national pilot project*
  - Kouga Restoration project (WWF & Green Trust) – *national pilot*
  - Rhodes 3G (restoration research group) – Sciences
- Replicate into the wider community
  - Promotions through exposure – *Tented Tipi Camp / Tourism*
  - Adventure tours – *High end facilitation / professionally guided*
  - Volunteers – *Wwoof'ing – World working on organic farms*
  - Media – facilitation vehicle to Project
  - Workshops – *Evaluation and refinement*
  - Courses – *Specialised, structured, expansive.*

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