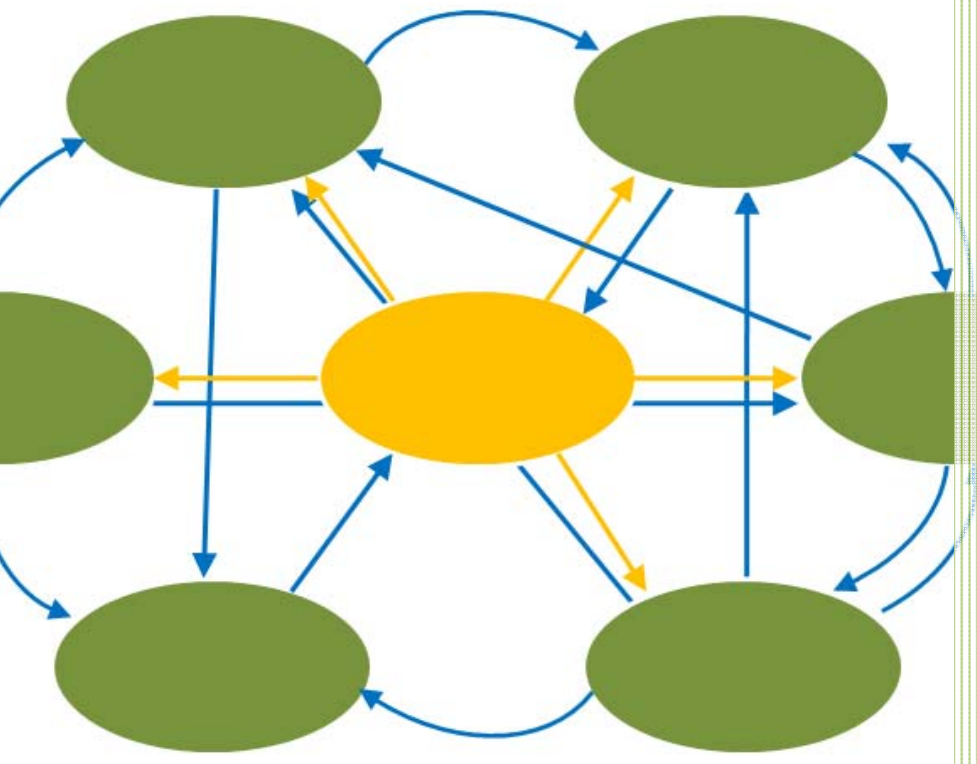
2009

Towards a PRESENCE learning network in restoring ecosystem services and natural capital



Arjan Hassing

MSc Thesis

Forest & Nature Conservation Policy

WAGENINGEN UNIVERSITEIT
WAGENINGEN UR

2009

Towards a PRESENCE learning network in restoring ecosystem services and natural capital

Arjan Hassing

Reg.nr.: 810507 311 120
MSc Forest and Nature Conservation
Specialisation: Policy

Supervisors:

Dr. Freerk Wiersum
Forest and Nature Conservation Group
Wageningen UR
PO Box 47, 6700 AA Wageningen
E-mail: freerk.wiersum@wur.nl

Matthew Zylstra (zylstra@earthcollective.net);
Dieter Van den Broeck (broeck@earthcollective.net)

A thesis submitted in partial fulfillment of the degree of Master of Science at Wageningen University and Research Centre, The Netherlands.

May, 2009
Wageningen, The Netherlands

Thesis code: FNP 80439
Wageningen University and Research Centre
(Forest and Nature Conservation Group)

Master thesis project assigned by

Living Lands (Secretariat of PRESENCE), South Africa.

Co-funded and supported by

Department of Water Affairs and Forestry – DWAF, South Africa and

Gamtoos Irrigation Board – GIB, South Africa and

Speerpunt Ecosysteem- en Landschappervices – SELS (WUR).

In collaboration with

Rhodes Restoration Research Group - R3G, South Africa and

Council For Scientific and Industrial Research – CSIR, South Africa and

ASSET Research, South Africa and

Rhodes University, South Africa and

Nelson Mandela Metropolitan University, South Africa

Wageningen University, The Netherlands and

Dienst Landelijk Gebied – DLG, The Netherlands.

Facilitated by

PRESENCE - Participatory Restoration of Ecosystem Services & Natural Capital (Eastern Cape) platform, and

EarthCollective

SUMMARY

PRESENCE (Participatory Restoration of Ecosystem Services and Natural Capital, Eastern Cape) was set up in early 2007 in the context of the Subtropical Thicket Restoration Programme (STRP) in order to support and catalyse the restoration of the severely impacted subtropical thicket biome. PRESENCE, as a collaborative effort and platform or network, was mainly aimed at building additional institutional and academic capacity and so build and disseminate knowledge on the complexities of restoration. PRESENCE initially started off as a research-oriented network, but during its research and development activities in Baviaanskloof over time more local stakeholders became involved. Consequently, the initiator of PRESENCE, EarthCollective, decided to strengthen the collaborative approach and to further evolve PRESENCE into a learning organisation or network with EarthCollective performing tasks such strengthening relationships, building new partnerships, facilitation and guidance.

Due to the complex and fluid natural, social and economic environment the features of such learning organisation or network require careful consideration. Therefore it was decided to perform a comprehensive analysis on the present performance of PRESENCE. The objective for thesis was formulated as: ***"to contribute to the further evolution of PRESENCE as a learning network by assessing its current performance in relation to the dimensions of such networks"***. This objective was operationalised in the following research questions:

(1) How is PRESENCE performing in relation to the main dimensions of learning networks/organisations?
(2) What conclusions can be drawn on the current performance and gaps therein concerning PRESENCE as a learning organisation/network?

To structure the research, a theoretical framework was developed by combining theories from learning organisations, interorganisational networks and participative management. Six major themes were identified: participative management, perceptions and attitudes, learning, leadership and facilitation, nineteen dimensions were identified, which were categorised into six major themes: stakeholder inclusion and participation, perceptions and attitudes, learning, leadership and facilitation, shared vision and approach, shared vision and approach and knowledge dissemination. These six themes were further detailed in nineteen specific dimensions. Data were collected by a combination of semi-structured interviews with (potential) network members and net brokers complimented by observations and document analysis. The data were analysed by systematic content analysis and related to the various dimensions of learning organisations and networks. The character of this research is broad in nature, and touches upon many details. Conclusions drawn here are to be read in conjunction with results, and with respective contextualisation for each conclusion. Since the network was initially academically oriented and has currently been unfolding to a local level, these conclusions should be considered as a snapshot in time of a process that is continuously developing. For each of the six major thematic characteristics of a learning network in this specific context the following specific features of PRESENCE were identified:

Performance on **perceptions and attitudes** varies per dimension. Generally, a lot of experimentation takes place, which is an important indicator for openness, however types of experimentation are not evenly distributed across different stakeholder groups. Openness between these different groups could be improved. Many respondents familiar with PRESENCE seem to be well aware of what interconnects such network, and mention a common goal and shared vision as the most important aspect. Respondents seem aware of their position when asked about issues measuring voluntary links between independent yet independent network members, since they are able to mention a large amount of and variety in benefits and contributions. Trust appears to be fairly good in the network, however some trust issues appear to exist often having a history that goes further back in time than the existence of PRESENCE.

Room for improvement appears to exist in the field of **stakeholder inclusion and participation**. This entails the further development of the nature and structure of the network(s) as a basis, raising awareness and understanding on these network(s), the application of empirically based identification and classification tools, and most importantly the realisation of higher levels of participation of local stakeholder groups.

Overall **learning** has greatly improved with the emergence of PRESENCE. However, it appears that this process is still in its early stages, especially with regard to individual learning. Although different respondents mention to have learned socially from PRESENCE it seems that no well-developed philosophy or plan on individual learning and capacity building has been applied, leading to a situation that local communities have not, or to a limited extent been able to learn. This has caused a learning gap between different communities, and although collaborative learning has occurred, this could be further developed. Scenario planning and evaluation meetings are examples of methods to achieve this and the development of a learning village within the Baviaanskloof seems of major importance, especially with the recent development of the interactive knowledge sharing portal. Continuous organisational learning seems to be realised, which is a positive indicator. Nevertheless, a more structural approach on single- and double loop learning should be applied, and a point of attention here is not to stick to certain terminologies and frameworks.

Performance on dimensions related to **leadership and facilitation** appears to be good. Generally, all sources point towards facilitative/coordinative leadership as being the most appropriate form for managing PRESENCE as a learning network. Currently, no single group or organisation appears to be acting exceedingly dominant, and in order to avoid this from happening it seems salient to (more) structurally keep track of power and interests of the different network members. EarthCollective appears to be operating properly regarding the most important basic tasks a net broker is expected to fulfil. The net broker appears to be doing well on stimulating debate and leading the dialogue, although sometimes more time could be available for actually realising this and attention could be paid to certain decision-making processes during debate. The net brokers also appear to have built deep relationships and trust with members from most groups and organisation, which seems to be a particularly respectable achievement considering the short period of actually being operational. Simultaneously, this brings with new challenges on future facilitation of the network, when tasks will be handed over. EarthCollective has been performing well in building partnerships and improving collaboration, a process that should be continued and further deepened.

Shared vision and approach appeared to be a particularly relevant issue, since respondents and net brokers specifically mention that this is the major factor interconnecting PRESENCE. However, it is concluded that is this currently one of the weaker points. The vision and strategies are known and/or understood by only a small amount of respondents, and only few have actually made suggestions or delivered ideas on either of both. It is recommended and deemed very important to further develop, clarify and possibly revise vision and strategies through a joint process in which all stakeholders are involved when evolving further into a learning network.

At first sight, **knowledge dissemination** appears to be very good, however when zooming into details it appears that sometimes it is unbalanced: exchange between science/government and local communities is limited, some local groups only do receive knowledge without conveying it and biophysical knowledge appears to be significantly more conveyed than social knowledge. It seems important that a declaration is formally adopted wherein clear agreements are established with regard to intellectual property rights. The creation of an interactive knowledge sharing portal appears to be a major step forward in enhancing knowledge dissemination, however a potential danger lies in exacerbating the digital divide. The development of standard procedures and mechanisms for knowledge dissemination seems important, as well as the further utilisation of GIS and graphical mapping systems. External focus of the network appears to be in order, however again an imbalance exists in the types of knowledge flowing in and out the network: whereas sufficient knowledge on ecosystem management and technological trends are being transferred, this is not the case for knowledge on social trends and issues. Again an imbalance in knowledge exchange of certain local communities appears to occur, who are receiving a great deal of aid and knowledge without conveying it, which is in line with earlier identified trends.

Taking into account the short time of existence of PRESENCE and operational activity of the net brokers, overall a lot seems to be achieved and this is highly appreciated by many of the network members. Regarding the fact that performance on leadership and facilitation is generally standing out, it is probably a matter of time before those dimensions requiring improvement will be enhanced. The current research has shown that besides the current accomplishments and despite the shortcomings, a thorough basis and a lot of potential exists to further develop PRESENCE into a learning network and collectively realise restoration of natural capital in the Eastern Cape.

ACKNOWLEDGEMENTS

The current thesis is the result of an exciting period of meeting interesting and inspiring people with various different backgrounds, of getting acquainted with new theories and exploring new environments. On a personal level, this has been one of the most important learning experiences so far, in many different respects. All this would have never been possible without the wonderful people around me who have joined me, guided me and/or assisted me in many different ways (but always generous) through this process.

First of all I would like to thank Dr. Freerk Wiersum for his supervision and the valuable advice and comments on thesis structure and contents. My gratitude also goes to Matthew Zylstra, Dieter Van den Broeck and Silvia Weel for making me feel so welcome, for their facilitation and everything that comes with it, for the good times together but also for being so open and sincere on their activities and thoughts. Without you this research would have never been possible (and naturally not executed).

I would also like say thank you to those who shared their professional input and expertise with me, especially content-wise: Dr. Susan Manring, for sharing her views on aspects of interorganisational learning networks; Andrew Knight for sharing his thoughts and literature on stakeholder negotiation processes; Prof. Cees Leeuwis and Dr. Annemarie van Paassen for providing recommendations on learning and learning organisations.

Expressing my gratitude to Pierre Joubert, Edwill Moore and Reinette Coleski at GIB is unfortunately the least I can do now in return for all their unconditional assistance on a personal level as well as on a facilitative level. I would also like to thank Christo Marais at DWAF and Wayne Erlank at ECPB for their support, again without all of you this research would simply not have taken place.

I would like to say big thank you to Yolande Vermaak for translating large amounts of text necessary for the interviews, the nice laughs and the good times at the country club. The entire Kruger family has also been extremely supportive and caring, so I would like to express my gratefulness to Pieter, Magriet, Abri, Johan and Maretha for the fantastic times. I would have loved to spend more time with you. Oom Boetie and Henriette, thank you as well for your hospitality, generosity, the fantastic braai and the interesting discussions. Thank you Noel for your aid in operating as a translator in an extraordinary way. I would furthermore like to thank all those interviewed, including farmers, Geon and Lois, all the people I spoke with at Sewefontein, Zaaimanshoek and other places in the Baviaankloof. Baie dankie for sharing your life and concerns with us and for your hospitality, for your time and your patience. Gareth and Lindy, thank you as well for the times together, introducing us into interesting aspects of the local culture and trusting me in your private settings.

A big thank you of course also to the people I spent such an awesome time with at thé Dam. First of all thank you so much Vicky and Damian, having you around and sharing thoughts on very small and immensely huge things around a fire was such a pleasure. Thank you Wietske, Gloria, Marco, Lucie and Ntabiseng Khena (Dudu) for the fantastic times, the good conversations and of course the good laughs that gave so much colour to my, and I sincerely hope also your experiences. My gratitude goes also to all the workers at the Kouga Nursery, who taught me so much about how to live life by expressing their permanent joy through smiles, singing and dancing. In this respect I would especially like to mention Michael and Henry, two wonderful people who were just always there, literally and figuratively – which was a great feeling.

Last but not least are the people who always supported me throughout the process: Ton, Marry and of course Thomas. Thank you Natalya as well for the moral support while going through the different periods and states of mind that are so common when executing a work such as this.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

LIST OF ACRONYMS

ASSET	Asset Research
CAPE	Cape Action for People and Environment
CDM	Clean Development Mechanism
CSIR	Council for Scientific and Industrial Research
DEAT	Department of Environmental Affairs and Tourism
DWAF	Department of Water Affairs and Forestry
DLG / LNV	Dienst Landelijk Gebied / Ministerie van Landbouw, Natuur en Voedselkwaliteit
DLR	Deutsches Zentrum für Luft- und Raumfahrt
ECPB	Eastern Cape Parks Board
GIB	Gamtoos Irrigation Board
NNMU	Nelson Mandela Metropolitan University
PMU	Wilderness Foundation Project Management Unit
PRESENCE	Participatory Restoration of Ecosystem Services and Natural Capital, Eastern Cape
R3G	Rhodes Restoration Research Group
SELS	Speerpunt Ecosysteem- en Landschap Services
STRP	Subtropical Thicket Restoration (or Rehabilitation) Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WUR	Wageningen University and Research Centre
WWF	World Wide Fund for Nature

1. INTRODUCTION

1.1 THICKET RESTORATION IN THE BAVIAANSKLOOF

The biologically diverse subtropical thicket biome has been severely impacted through human activity - mainly due to overgrazing from goats and other livestock and rural overcrowding (Milton *et al.,* 2003; Mills *et al.*, 2005 in EarthCollective 2008a). In response, the South African Government and institutional partners are developing programmes such as Working for Woodlands/Wetlands/Water to investigate options for restoring the region's valuable and globally significant biomes and hotspots to meet both socio-economic needs and ecological objectives (EarthCollective, 2008a). A key component of the Working for Woodlands is the Subtropical Thicket Restoration Programme (STRP), which, as its name suggests, has focused on the restoration of the globally significant subtropical thicket biome (EarthCollective, 2008a), including the Baviaanskloof. STRP's primary role is to evaluate the feasibility of restoration […] (EarthCollective, 2008a). The programme aims to provide several key deliverables, namely improved water retention and quality, restoration of biodiversity, sequestration of carbon, containment of cactus […] and reversal of desertification, with the ultimate aim of kickstarting a larger restoration project across the entire biome (Powell *et al.*, 2006). The authors furthermore set out how restoration of degraded subtropical thicket would achieve the combined aims of improving rural livelihoods, restoring biodiversity, and replenishing natural capital and ecosystem services. During an STRP annual review meeting in 2006 it was decided that, to achieve these ambitious aims, additional institutional and academic capacity and research was required in order to improve best management practice by building knowledge on the dynamics of restoration and effectively communicating and disseminating new insights (EarthCollective, 2008a). In that context, PRESENCE (Participatory Restoration of Ecosystem Services and Natural Capital, Eastern Cape) was proposed as a collaborative effort to identify opportunities for 'up-scaling' restoration through national and international research collaboration; and, for example, by creating opportunities for South African and international students to undertake their (post-) graduate studies in this field (EarthCollective, 2008a). In early 2007, PRESENCE was prepared by EarthCollective in collaboration with and jointly financed through different institutions (Wageningen University and Research Centre, Rhodes University and the South African Department of Water Affairs) (EarthCollective, 2008a).

The PRESENCE network is described as "an innovative transdisciplinary learning organisation which will function as an overarching platform to support existing – and catalyse new – programmes for restoring ecosystem services and natural capital in the Western Baviaanskloof" (EarthCollective, 2008a). The current vision of PRESENCE is: "The Restoration of Living Landscapes: Mainstreaming restoration as a socially desirable, economically feasible and ecologically acceptable multi-functional land-use" (EarthCollective, 2008a). It's mission statement is formulated as: "An adaptive and well-structured learning organisation which functions as an overarching platform to support and mainstream existing – and catalyse new – programmes for restoring ecosystem services and natural capital in the Western Baviaanskloof." (EarthCollective, 2008a). PRESENCE will provide institutional and academic capacity to mainstream and integrate ecological, cultural, economic and socio-political factors into restoration by: (1) initiating, enabling and facilitating rigorous transdisciplinary research programmes; (2) developing Best Management Practices (BMPs) for restoration of ecosystem services and natural capital; (3) capacity building through the mainstreaming of restoration processes, and (4) initiating, enabling and facilitating new holistic restoration programmes (EarthCollective, 2008a). The initiator of PRESENCE is EarthCollective, now acting as the net broker and "will continue to act as a catalyst and facilitator within PRESENCE and will be primarily responsible for fulfilling the roles within PRESENCE's facilitation and integration unit during the growth phases" (EarthCollective, 2008a). The role of EarthCollective – through PRESENCE – is to develop a restoration platform for strengthening existing relationships; building new partnerships; facilitating, enabling and providing guidance to researchers and

implementers; and informing and involving stakeholders throughout the process (EarthCollective, 2008b). Key objectives of this integration role are as follows: establish and manage the PRESENCE platform and related case studies as well as create Ecosystem Management And Restoration Knowledge Centres (nodes); engage governmental institutions through new forms of governance arrangements; engender pro-restoration/conservation behaviour across diverse stakeholder groups; empower local stakeholders and communities in restoration implementation; and extension to aid implementers with stakeholder outreach activities as required (EarthCollective, 2008b). EarthCollective aims at building local capacity, expertise and ownership so that the facilitation and integration unit will eventually be majority run by local South Africans (EarthCollective, 2008a). EarthCollective in its broadest sense is an international network, primarily active in Australia, Brazil, the Netherlands and South Africa. It utilises a growing integrated network of science, business and community "to help create an inspired future for all of us to look forward to" (EarthCollective, undated). It is "acting as a catalyst for network and partnership building between different organisations. Through this knowledge exchange, EarthCollective is facilitating initiatives which integrate people, planet and profit objectives" (EarthCollective, undated).

The main focus in the initiation phase ("seed phase") of PRESENCE was to provide a thorough basis for understanding the key knowledge gaps that exist in the current understanding. During this phase, PRESENCE started to develop closer collaboration with other institutes such as the Council for Scientific and Industrial Research (CSIR) in South Africa, Eastern Cape Parks (ECP) and Stellenbosch University. Also a partnership with other restoration projects such as the Kouga Restoration Programme was established, as well as with private landowners in the Baviaanskloof. Even though this collaboration had positive outcomes on the academic and implementation capacity within PRESENCE, additional challenges were faced such as funding restrictions, lack of research and implementation funding, institutional and academic capacity, overarching guidance and support, lack of capacity for building partnerships and institutional fixing and the need of extension services (EarthCollective, 2008a). **It was also realised that a need existed for PRESENCE to evolve into a learning organisation**, being able to support restoration programmes, landowners and stakeholders with the different challenges (EarthCollective, 2008a). In November 2007, a PRESENCE workshop was held to provide the opportunity for diverse partners – academics, scientists, implementers, experts, advisors, consultants and students – to strengthen interpersonal relationships, collectively pinpoint the research priorities and capacities needed to guide the broad-scale mainstreaming and implementation of restoration and provide input into the strategic direction of PRESENCE. During the workshop participants agreed that PRESENCE should **further expand as a programme into a learning organisation** which functions as a platform to mainstream restoration (EarthCollective, 2008a). PRESENCE aims at evolving into a learning organisation which is adaptive and strategically opportunistic in order to be able to respond to stakeholder preferences, respond to implementer's needs and constraints, and respond to improved scientific understanding (EarthCollective, 2008a).

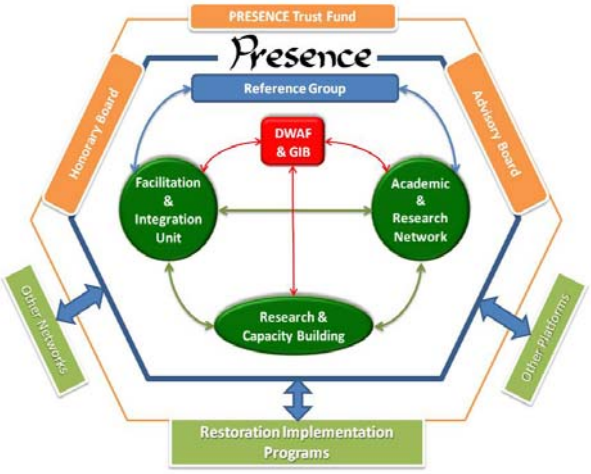


Figure 1: PRESENCE platform (EarthCollective, 2008a)

1.2 PROBLEM STATEMENT

Due to the complex and fluid natural, social and economic environment in which EarthCollective operates its members, being the net brokers of the platform expressed the need to proceed to a next level and evolve PRESENCE into a learning organisation or network. As was declared in the Zandvlakte Agreement strategic plan by Van den Broeck (2008), the most logical direction would be to evolve into a learning organisation/network, which would be flexible, swiftly adaptable to changes, and strategically opportunistic. While developing over time, EarthCollective started facing issues such as:

- How to optimise the structure of the network in order to effectively achieve the network's objectives?
- How far has EarthCollective proceeded in developing the network, and where does it want to go with it? – a matter of positioning
- Which parties should be regarded as network members?
- How do members perceive the PRESENCE network in its current form, how do these members consider their role in the network, and what are their expectations?
- How to effectively engage and involve the necessary parties for such networks?

These questions suggest that a thorough and comprehensive analysis on the performance of the entire PRESENCE network needs to be conducted. Not only to solve these questions, but also to understand related issues typical for a learning network in natural resource management. This should lead to an understanding of what strong points and performance gaps of the PRESENCE network are. Since there are many definitions and theories on learning organisations and networks, solid research is required in order to discover the essence of such network, and what crucial dimensions it constitutes. This should form the basis for an elaborate investigation on the performance of the PRESENCE network on the several dimensions of a learning network.

1.3 PRESENCE OPERATIONAL MODEL

Figure 2 shows the operational model which is forming the "guidebook", or fundament of the PRESENCE network. This model has been developed by Cowling *et al.* (2008); including some of the network members who have been closely involved from initial stages (Figure 2).

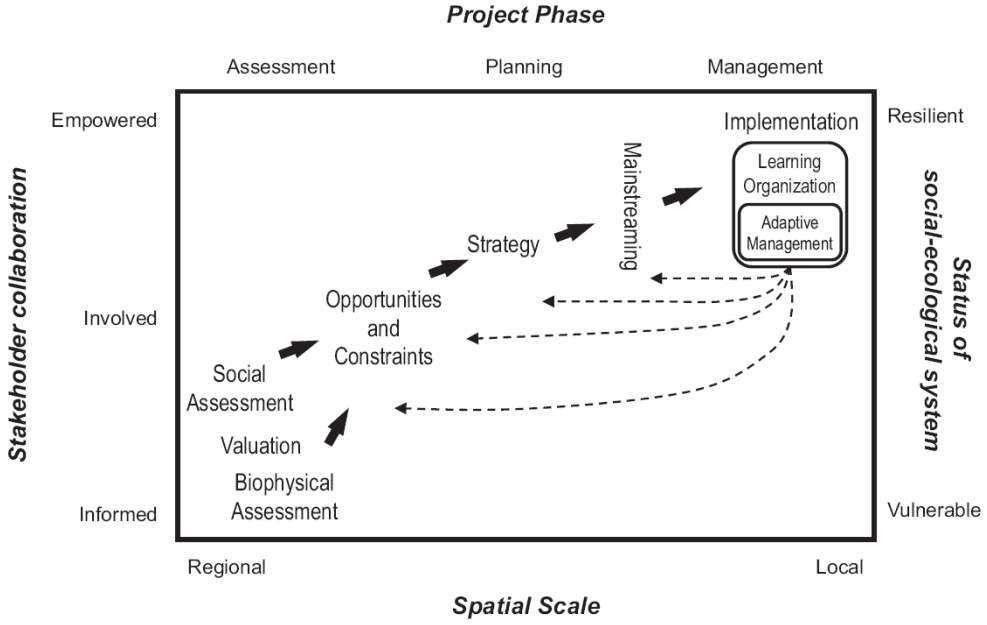


Figure 2: Operational model (Cowling *et al.*, 2008)

The model was created as a response to the fact that "it is unlikely that the outcomes of technically sophisticated assessments published in scientific journals will lead to implementation via a "trickle-down" effect" (Cowling *et al.,* 2008). The authors furthermore state that "as a mission-oriented, pragmatic discipline, ecosystem service research should be geared for implementation, and scientists should assist this process by responding to stakeholder needs from the outset and by becoming involved in the messy process of collaborating with and empowering stakeholders in strategy development and implementation (Cowling *et al.,* 2008). The framework shows how a learning organisation is required to achieve resilience in a rapidly changing world, socially as well as ecologically, so after going through stages of assessment and planning the aim is to arrive at a resilient form of management, illustrated at the right top end of the framework. This should be a dynamic and adaptive type of management, where a cyclic process of continuous learning should be realised. The framework furthermore suggests that over time, more stakeholders become involved with an increasingly higher level of participation. At this point, the project phase PRESENCE finds itself in lies between assessment and planning: some social and biophysical assessments and valuations have taken place (although it is unclear whether it is complete) and opportunities and constraints are being defined on these results. It is uncertain at this point whether the current strategy has yet been based on opportunities and constraints. The objective of mainstreaming in this context is explained as "internalising the goals for safeguarding resources into economic sectors and development models, policies and programmes, and therefore into all human behaviour"(Cowling *et al*., 2008).

2. BACKGROUND AND CONTEXT OF THE RESEARCH

2.1 APARTHEID

In the context of the type of social research conducted, it is important to also provide a background on the contemporary history of South Africa from a broader perspective. Several elements from this history are still resonating in society today, affecting the current situation and sentiment in the country. However, The history is a complex one and the scope of this thesis does not allow an extensive elaboration on it, therefore a brief overview is provided.

Before the formation of the Union of South Africa in 1910, colonial settlers found themselves confronted with the choice of identity in the colony. While British and Dutch colonial subjects were to choose to be foreign or local, local Africans were denied the opportunity to identify themselves as a nation in South Africa by their white masters (Ramutsindela, 1997). The National Party was formed in 1913 to represent the interests of a distinct Afrikaner (white) region. A responsive attempt to develop a collective African identity led to the formation of the South African Native National Congress (the present African National Congress (ANC)) in 1912 (Ramutsindela, 1997). The foundation of a territorial home for Afrikaners was laid by the Native Land Act of 1913, which made it possible for 87% of the land to be occupied by the white nation and severely limited African ownership or rental of land to areas scheduled as African reserves (Lundahl, 1989), taking away these rights for over 75% of the population. During that period, the African people were still struggling to find a way to unite, reconcile and prioritise the common good of the Africans as a whole above the traditional tribe interests. In the years following, numerous new acts were introduced by the National Party. In 1923, the Urban Areas Act was passed, introducing residential segregation and providing cheap labour for the white mining and farming industry, leading to the creation of cramped African slumps, labelled by the government as “native areas” (Mandela, 1994). The Colour Bar Act (1926) prevented blacks from practicing skilled trades, while the Native Administration Act (1927) made the British Crown, rather than paramount chiefs, the supreme head over all African affairs. In 1936, the Trust and Land act further imposed limitations on the rights of African people on where to go and live. This act removed blacks from the Cape voters’ roll, “causing the illusion that whites would permit some degree of self-determination for Africans to disappear in smoke” (Mandela, 1994). In 1948, the National Party won the elections and a dualistic school system was set up whereby whites received high-quality and blacks low-quality education (Lundahl, 1989). The 1953 Bantu Education Act centralised the control of black schooling and tied expenditure to the amount of taxes paid by Africans while the Extension of University Act (1959) prohibited blacks from attending English universities (they had never been allowed in Afrikaner colleges), forcing them into tribal colleges (Lundahl, 1989). Lundahl (1989) in his article distinguishes several ways in which Africans were exploited by whites during that time for the sake of economic gains: (1) alienation of African land; (2) “civilised labour policy”, whereby a given proportion of all jobs are reserved for whites; (3) monopsonisation of the African labour market; (4) reservation of skilled jobs; (5) control of the influx of Africans; (6) increases of white wages; (7) decreases of black wages. Meanwhile, the African people advanced in their organisation within the ANC, resulting in the Freedom Charter which was adopted at the Congress of the People in 1955. The charter includes clauses such as “the people shall govern!”, “all national groups shall have equal rights!”, and “the people shall share in the countries wealth!” (African National Congress, 1955). In defining non-racialism as a principle of the ANC, Chief Albert Luthuli (1957) stated that the ANC believes in a society in which the white and non-white peoples of the Union will work and live together in harmony for the common good of all fatherland (Ramutsindela, 1997). Meanwhile, the United Nations supported the Freedom Charter, took steps to make it widely known around the world and established the United Nations Special Committee against Apartheid (Reddy, 1985). However, the idealist approach of the charter lead to disagreement within some parts of the African groups, which eventually led to the establishment of the Pan Africanist Congress (PAC), putting forward the view that land belonged to the

African people. Afrikaners did not accept any of the African nationalist versions of the South African nation, and when the National Party came to power in 1948, the multinational project was pursued with vigour (Ramutsindela, 1997), and the word apartheid was firstly introduced. Shortly after 1948, apartheid legislation filled statute books and the foundation for the envisaged 'African nations' was completed by *inter alia*, the Group Areas Act of 1950 and the Black Authorities Act of 1951 (Ramutsindela, 1997), aimed at establishing nation-states for Africans. This attempted partition of South Africa was a highly contentious issue involving the legalisation of racial discrimination with the international condemnation that went with it (Christopher, 1994). The apartheid government assumed that ethnically homogeneous homelands would gradually fuse into separate 'black nations'. In the 1960s, the attitudes within the Afrikaner society towards apartheid slowly appeared to show some slight changes – some people even started challenging the establishment of "Afrikanerdom". Also the political transformation of the continent [Africa] in the late 1950s and early 1960s radically changed the moral position of the white minority government in South Africa, as the majority of Africans gained their freedom from colonial rule (Christopher, 1994). At that moment, the South African government, however, was determined that even limited political freedom for the African population was not to infringe upon white dominance (Christopher, 1994). Consequently, it still took many years before the Democratic Party in 1977 advocated full citizenship rights for all South Africans without discrimination on the grounds of race and colour (Ramutsindela, 1997). In the same period, the early 1980s, the gap between conservative groups and the ruling National Party widened. In 1982, the National Party began to lay the foundation for the eventual reincorporation of the homelands into the South African state through its regional strategy (Ramutsindela, 1997). De Klerk's speech on Friday, 2nd February 1990 opened a new chapter in the history of South Africa. Beside the unbanning of liberation movements, De Klerk also acknowledged that the apartheid project had failed. The aim of his government was 'a totally new and just constitutional dispensation in which every inhabitant will enjoy equal rights, treatment and opportunity in every sphere of endeavour – constitutional, social and economic' (Ramutsindela, 1997). The reincorporation of nation-states into the 'new' South Africa by the interim constitution adopted in late 1993 represented another step in the search for a common nationhood in South Africa. In 1994, the first free democratic elections took place in South Africa.

Although in 1994 politically apartheid was officially discarded, until today the system still appears to resonate in the minds of people. One could state that this is not surprising after centuries of war, segregation between the different races and population groups and a discriminating social system, compared to only 15 years of democracy and equality for all. More concretely, this does not only mean that still (remnants of) racist beliefs may exist in some of the white inhabitants of today's South Africa, but also that the previously suppressed (today known as PDIs – Previously Disadvantaged Individuals) after all these years have to get used to their new role and freedom, learn how to take responsibility, act in an assertive manner and show leadership. It is particularly relevant to bear this in mind when conducting and reading the current study aimed at setting up a learning network. As will become clear in later sections, an important quality of such network is the equal involvement and participation of all members, which means that an assertive and active involvement of all is required in order to achieve an optimal performance of a learning network.

2.2 NATURAL RESOURCE MANAGEMENT IN SOUTH AFRICA

The apartheid framework also affected the nature of natural resources management policies, laws and strategies. Instances could be found where conservation agencies lobbied the state to evict local people from their ancestral grounds to make way for conservation (Holmes-Watts and Watts, 2008). The authors immediately note that much has changed in bridging the gap between biodiversity conservation and rural people's livelihood strategies. South Africa's previous natural resources management policies, laws and strategies had sufficient conservation attributes, which is reflected in the existing network of protected areas (Holmes-Watts and Watts, 2008). The minority government

during apartheid saw no role for rural natural resources-dependent people in conservation and in many cases adopted a deliberate policy of marginalisation and social engineering, which involved forced removal of black people from their ancestral grounds to make way for conservation or for white settlements, dismantling community social networks and livelihood strategies (Watts, 2006). The majority of South Africans were subjected to double exclusion from national parks under the apartheid government. First they were excluded as consumers of the park's recreational and educational opportunities and second, they were barred from decision-making conservation (Holmes-Watts and Watts, 2008). In line with what was previously written, it should be stressed again that this should be born in mind when analysing a network where decision-making processes are naturally more non-hierarchal and input from all members of a network is desired and stimulated. Based on this history, it would be rational to expect more obstacles on the road to higher levels of participation than in a society where equal rights for all citizens have been established for at least several generations. In the apartheid system, the decisions that dominated the political landscape of protected area management were those of conservationists. They were exclusively concerned with preserving biodiversity to the detriment of human needs and social issues (Cock and Fig, 2002 in Holmes-Watts and Watts, 2008). Civil input into higher decision-making only started being realised and is best illustrated in South Africa's National Forests Act 1998, which recruits members of the new National Forest Advisory Council through public advertisement; it formally provided for communities to apply to manage any forest by agreement (Wily, 2002). Yet, while communities may retrieve ownership of forests through the restitution programme, the state retained control over licensing and may manage the forest on the community's behalf (Wily, 2002). Benefit sharing and development projects tend to dominate the approaches (Wily, 2002). A participatory forest management strategy and support unit operate under the Department of Water Affairs and Forestry, operating through focus groups in various parts of the country. Privatisation procedures under way in South Africa have explicitly extended privatisation to include communities and not only companies (Wily, 2002). The author furthermore states that In South Africa, management agreements or contracts with the highest level of authority for communities are in place, in which jurisdiction is fully devolved and sometimes includes ownership of the estate. However, Cowling and Wilhelm-Rechmann (2007) mention that most conservation research in Africa is concerned with assessments of biological features, whereas social issues and contexts (values, norms, institutions, organisations and human well-being), which underpin almost all of the opportunities and constraints for implementation, are accorded much less priority, if addressed at all. The latter is an important proclamation that also needs to be bore in mind when conducting the current research and which needs some further attention here. It seems to be somewhat contradictory: how to achieve a high level of participation, while there appears to be a lack of research on social and issues? Perhaps this can be explained by Watts (2006) who declares that "the historic absence of institutional culture for community involvement in natural resource management has led to the misrepresentation of 'community participation' by both senior managers at the headquarters in Pretoria and at protected management offices. As a result, conservationists at the grassroots define the terms of reference for community participation based on guidelines developed by professionals at the headquarters who have *little* to *no* experience in managing community conservation programmes. Thus, there is no difference between community participation now and the variants practiced during the 1970s and 1980s where conservationists dictated roles for people who live at the margins of protected areas". Watts (2006) furthermore states that the many training courses and workshops organised to help forestry officials acquire skills needed to participatorily implement sustainable forest management in South Africa have not changed things on the ground, and that the preservationist approach to conservation still predominates because underlying assumptions about capacity building initiatives do not fully appreciate the effects of apartheid on conservation policy development. In a recent article Holmes-Watts and Watts (2008) furthermore state that South Africa has sufficient instruments that facilitate interactive participation of local communities in the management of natural resources, but that mismatches between legal framework and practices exist. According to the researchers, this culminates in the maintenance of the largely preservationist approach to natural resources conservation in SA where communities play passive roles. The mismatches include (1)

grassroots conservation officials **lacking understanding** of participatory processes; (2) street level conservation bureaucrats **misconceive active community participation** to mean mere attendance of conservation meetings by local communities (3) conservation officials **misunderstanding jobs to be the ultimate goal** of participatory conservation processes (locals employed as labourers in companies owned by outsiders instead of facilitating them to set up own business); (4) conservation officials **not treating rural communities with the same level of respect** that they provide to businesspeople; (5) conservation officials in SA inappropriately not **considering the sharing of benefits and management responsibilities as key components** of participatory conservation; (6) **local communities generally being unaware of the administrative and bureaucratic procedures** that they have to follow to derive material benefits from protected natural resources (7) the political drive for **blanket implementation** of participatory management where there are no willing communities being **counterproductive** (should be need driven); and (8) the **lack of diversification of participatory management products** limiting the scope of the management system. The conclusions the authors come up touch very difficult and deep-rooted issues apparently related to conflicts between the cognitive and affective domain of individuals, to which answers should be sought in a socio-psychological sphere. It suggests that research in these areas is not only required on communities on the ground, but on all those involved in the field of conservation. It furthermore indicates that there is still a lot to do in the field of capacity building, again not only on a local level but also on conservation officials on a higher management and political level. So where Cowling (2007) states that "given the actual and potential conflicts between biodiversity and the imperatives of socio-economic development in Africa, the need for incorporating social assessments into conservation projects is all more urgent", he seems to hit the nail on the head, however this social assessment should go further than the original meaning and application of the concept: in South Africa it should not only involve an assessment of local communities but an assessment of all those involved in conservation.

2.3 THE WESTERN BAVIAANSKLOOF

The area in which the current focal network (PRESENCE) operates is the Western Baviaanskloof ("Valley of Baboons"), located in the western regions of the Eastern Cape Province, South Africa. The Baviaanskloof is blessed with a high biodiversity, a variety of pre-historical and historical sites and artefacts, and has been assigned the status of World Heritage Site. The entire Baviaanskloof area includes a cluster of formal protected areas managed by Eastern Cape Parks Board, of which the most well-known is the 184 385 ha Baviaanskloof Nature Reserve – the third largest protected area in South Africa, and land that is used almost exclusively for stock farming (Boshoff, 2005). The main vegetation type in the area is semi-arid subtropical thicket. The subtropical thicket biome covers approximately 17% of the surface area of the Eastern Cape province (Powell *et al.,* 2006). Undegraded thicket forms an impenetrable, spiny thicket up to 3 m high consisting of a wealth of growth forms, including evergreen plants, succulent and deciduous shrubs, lianas, grasses, and geophytes (Kerley *et al.*, 1995). A substantial percentage of the 122 subtropical thicket types has *Portulacaria afra* (Spekboom) as a canopy dominant, or major constituent of the aerial plant biomass (Powell *et al.*, 2006). However, overgrazing has extensively degraded vegetation, resulting in the loss of phytomass and plant species (Kerley *et al.*, 1995). Excessive grazing by livestock results in its transformation to a pseudosavanna comprising isolated and highly stressed tree remnants, in a matrix of ephemerals and dwarf shrubs (Hoffman and Cowling 1990 in Cowling, 2005). This rangeland degradation has largely been attributed to pastoralism with domestic herbivores in relation to injudicious stock management practices (Kerley *et al.,* 1995; Powell *et al.,* 2006).

In the Western Baviaanskloof, a large part of the thicket biome area is in private hands. These landowners form an ensemble living in a valley stretching from Nuwerkloof to Zandvlakte, from which the actual protected area starts. Although these people share a sense of collectiveness, it is a diverse group including farmers, tourism entrepreneurs and (coloured) communities. The farmers and tourism

entrepreneurs are mostly white Afrikaans, often "originally" from the region (however loaded and complex the term "original" may be in a country such as South Africa). There are four distinct communities in the area: Sewefontein, a coloured farming community; Zaaimanshoek, a coloured church community; Coleskeeplaas, a coloured community on the edge of the area and subject to negotiations for relocation with relevant provincial organisations (Noirtin, 2008); and Tchnuganoo, a alternative community. Furthermore, many coloured inhabitants are living scattered over the different farm lands. These people, often offspring from farm workers under the apartheid are known as 'farm dwellers', often still employed at the estates of white land owners, now officially with more rights but often still operating under a similar role model. Tourism plays an increasingly important role in the area. Previously, the area was relatively unknown by domestic as well as international visitors due to what seems a lack in marketing activities. However, due to the fact that since two years the Baviaanskloof has gained the status of UNESCO World Heritage Area, tourism is picking up rapidly. Today, farmers (some more than others) show a tendency in making a shift towards tourism, also due to increasing difficulties in keeping the farming business running. Reasons for this are unpredictably fluctuating prices of oil related products (petrol, fertiliser), the introduction of land tax and the relatively isolated location of the area, resulting in a competitive disadvantage.

The thicket biome provides numerous important ecosystem functions and services for the different inhabitants of the area. These include food (wild fruits, natural vegetation as food for livestock, facilitator to cultivate crops), medicinal resources (medicinal plants, restorative/regenerative effects) and water supply (domestic and agricultural uses) (Janssen, 2008). Other functions of significance are carbon sequestration (air quality/influence on climate), refugium (maintenance of biodiversity), aesthetics, recreation, cultural heritage, spirituality/religion, science and education, and peace and reconciliation (Janssen, 2008). In her study on socio-cultural values of local communities in the western Baviaanskloof, Janssen concludes that for all inhabitants the feeling of 'sense of place' is an important service. Farmers express a high importance in the possibilities for scientific research, restorative and regenerative effects, and presence of scenic routes. Coloured communities regard services such as traditional resource use, the use of the natural system to cultivate crops, and suitability/capacity of the natural system to provide health service as important (Janssen, 2008). Janssen furthermore specifically investigated what the effects of the implementation of carbon marketing on socio-cultural values would be, and concluded that a resulting change in user rights would result in negative consequences for all inhabitants, a change in daily activities and land-use would result in a positive as well as a negative spin-off, while the enhanced state of the natural vegetation due to restoration would generate positive effects for all (Janssen, 2008).

Currently, different organisations and programmes assess the possibilities for restoring the area through generating funding by utilising funding mechanisms such as payment for watershed services and/or carbon marketing, generally known as Payment for Ecosystem Services (PES). Ecosystem carbon storage in intact thicket in the Eastern Cape exceeds 20 kg/m², which is an unusually high amount for a semi-arid ecosystem (Mills and Cowling, 2006). Restoration of thicket using cuttings of the Spekboom could return biodiversity to the transformed landscape, earn carbon credits on international markets, reduce soil erosion, increase wildlife carrying capacity, improve water infiltration, and provide employment to local communities (Mills and Cowling, 2006). Lorencová (2008) conducted research on this topic in the Western Baviaanskloof and concluded that the bundling of multiple objectives is a typical characteristic of the forestry carbon sequestration projects. She confirms the proclamation by Mills and Cowling (2006) when she states that in the case of Baviaanskloof thicket restoration has the potential to deliver, apart from the actual carbon offsets, several environmental and social co-benefits, such as biodiversity, soil improvements as well as poverty alleviation and sustainable livelihood developments (Lorencová, 2008). She furthermore concludes that small-scale Afforestation/Reforestation (A/R) approval for the Clean Development Mechanism (CDM) would be unfeasible in the case of the Baviaanskloof, and that the focus should consequently lie on application for voluntary carbon offset schemes (Lorencová, 2008). It is important

again to emphasise here that the actual implementation of any carbon credit mechanism could have major impacts on the user-rights and land-use of local inhabitants, as demonstrated in the work of Janssen (2008). This once again emphasises the urge for participation of local inhabitants: not only in order to increase the chances of being successfully approved for any carbon offset scheme (of which especially the voluntary ones have a strong social component), but moreover because the inhabitants will be (sometimes strongly) affected in different ways when such schemes are actually implemented.

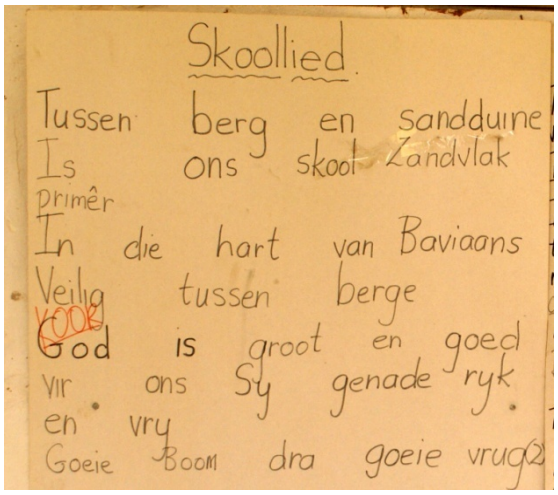


Figure 3: Sense of place

Picture: Arjan Hassing

School song on a sheet found hanging on the wall of the remnants of a primary school (now closed due to social problems):

"Between mountain and sand dunes
Lies our school Zandvlak
In the heart of Baviaans
Safe between mountains
God is great and good for us
His mercy rich and free
A good tree carries good fruits"

3. THEORETICAL FRAMEWORK

The challenge faced in this research is finding salient answers and providing recommendations to EarthCollective on how to proceed in developing the PRESENCE network. Within this network, the organisation aims at acting as a spider in the web – or what is referred to in the literature as a 'net broker'. It operates in a complex multi-stakeholder environment, where several projects aimed at restoration are operationalised, initiated by different parties. In this theoretical framework it will become clear that it is important to not only analyse the role of EarthCollective as a net broker, but also assess the performance of the network it is operating in as a whole. The different theories analysed will show that the most ideal and suitable form of such network would engage qualities from the learning organisation, the interorganisational network and participative management. In this framework first an attempt has been made to gain understanding of the history and meaning of the **learning organisation** and different types of learning. Since EarthCollective is not an independently operating, internally oriented organisation it is furthermore required to subsequently explore the concept and field of **interorganisational learning networks**. For this, synergies and relations between the learning organisation and learning network are analysed and the different dimensions that constitute them distilled. Finally, because EarthCollective is operating in a multi-stakeholder environment in the field of conservation and development the issue of **participative management** is analysed and connected to the theory of the learning network, including an overview of different levels of participation. This is important in order to identify which stakeholders are expected to be part of the network. Different concepts and theories are evaluated and where necessary combined in order to create an in depth and thorough fundament aimed at developing a method to analyse the performance of the current network and consequently provide recommendations (Figure 4).

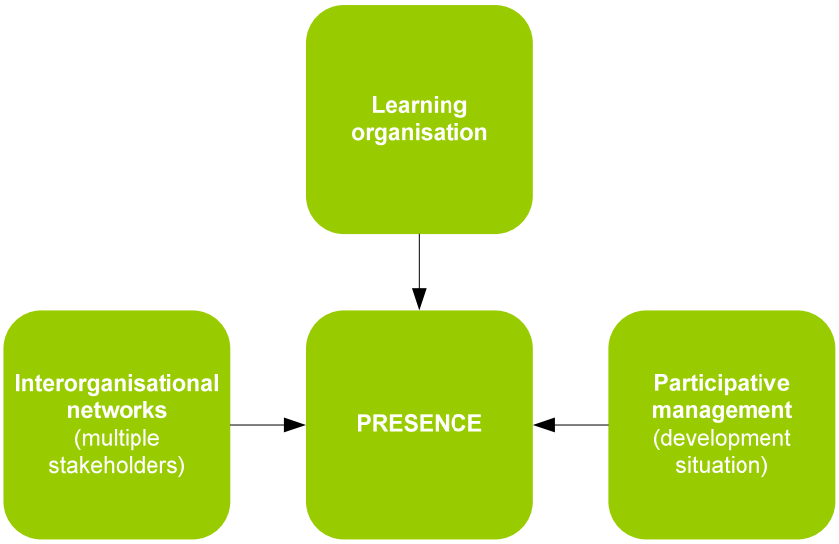


Figure 4: combination of theories

3.1 THE LEARNING ORGANISATION

3.1.1 CONCEPT, BACKGROUND AND HISTORY

Regardless of how inviting it may sound, the concept of *learning organisation* has proven to be highly contested and complex, and has been explored by many scholars over the previous decades. The concept gained massive popularity in the nineties, while it seemed that actually no one exactly knew what it contained and precisely meant. Consequently, until today a lot of debate has occurred and countless articles have been written in the strategic, organisational and management literature, which however has not lead to real consensus – conceptual ambiguity still remains. The increased interest in the concept was in line with the changes in society and technology occurring on a world wide scale. As Jamali and Sidani (2008) state: burgeoning interest in the learning organisation paradigm has stemmed from the advent of globalisation and technological innovation, rendering firms and organisations increasingly vulnerable to change. Rebelo and Gomes (2008), reviewing the evolution of the concept state here that "although learning as a relevant organisational process was proposed about 40 years ago and the book by Argyris and Schön, *Organisational Learning: A Theory of Action Perspective* which contributed greatly to the emergence of the theme appeared in 1978, it was only in the 1990s that the concepts of organisational learning and the learning organisation started to be emphasised and gained real importance, capturing the interest of the academic world and becoming buzzwords in management discourse". In 1990, Peter Senge issued his book "*The Fifth Discipline: the Art and Practice of the Learning Organization*", in which he presents a system of thinking and acting that aimed at forming the basis for reducing the 'learning disabilities' in any organisation. This was an extremely influential work and was regarded as an eye opener for many organisations to serve as an alternative to their usual management practices. It required a radical rethinking of corporate philosophy. In many cases this lead to organisational reform, where a more horizontal hierarchy was sought, so that employees on all levels were placed in a more central position in order to enhance knowledge sharing, based on experience and experimentation. From the perspective of organisational learning, the development of a sustainable learning ability of (key parts of) the organisation is prerequisite to survive and succeed in increasingly dynamic and complex environments (Georges *et al.*, 1999). Managers started to look at this new way of developing their organisations as a sort of recipe or "magical formula" to maintain and even improve performance (Rebelo and Gomes, 2008). Organisations usually seek enhanced learning for two distinct reasons. Firstly, they may wish to maintain flexibility and competence in the face of rapid change and profound uncertainty in their environment. Rather than implementing fixed responses to change, learning organisations seek to develop structures and human resources that are flexible, adaptive and responsive. Secondly, organizations need to learn in order to improve their capacity to innovate and hence to compete (Davies and Nutley, 2000). Back to Senge's book: it presents five core disciplines, and builds upon 11 laws as illustrated in box 1 (Senge, 1990). These disciplines will be further explained in a later part of this section. Another dominant book released in this period was "*The Learning Company, A Strategy for Sustainable Development*", by Pedler *et al.* They describe the dream of the learning organisation as "[to] … design and create organisations which are capable of adapting, changing, developing and transforming themselves in response to the needs, wishes and aspirations of people, inside and outside" (Pedler *et al.,* 1991). This statement illustrates well the line of thought around the concept in these years. A compelling vision of an organisation made up of employees skilled at creating, acquiring and transferring knowledge existed (Garvin *et al.*, 2007). These people could help their firms cultivate tolerance, foster open discussion, and think holistically and systematically. Such learning organisations would be able to adapt to the unpredictable more quickly than their competitors could (Garvin *et al.*, 2007).

The laws of the Fifth Discipline (Senge, 1990):

1. Today's problems come from yesterday's "solutions"
2. The harder you push, the harder the system pushes back
3. Behavior grows better before it grows worse
4. The easy way out usually leads back in
5. The cure can be worse than the disease
6. Faster is slower
7. Cause and effect are not closely related in time and space
8. Small changes can produce big results – but the areas of highest leverage are often the least obvious
9. You can have your cake and eat it too – but not at once
10. Dividing an elephant in half does not produce two small elephants
11. There is no blame

Nowadays, the glamour of the 1990s has vanished, but in a more discreet manner, learning continues to appear as a keyword in some organisational publications and is now a common word in the lexicon of a large number of organisations (Rebelo and Gomes 2008). The processual nature is more acknowledged, and it appeared that no quick fix existed that could simply create a learning organisation that is then ready to be used in the way a castle is built from stones. Or, as Jamali and Sidani (2008) state: "progress towards the learning organisation paradigm is incremental and long-term, rather than an overnight metamorphosis". In their article, they further elaborate that while learning should not be left to chance or overlooked, but rather valued and integrated into the organisation and the work life of the employee, the process has to be constantly reinvigorated and reinforced with respect to different learning organisation dimensions and considered more of a **journey, or consistent quest** [bold emphasis added] for continual improvement and adaptation (Jamali and Sidani, 2008). One of the reasons why the general sentiment became more down to earth was the gap between the promising theories and discourse and reality which showed how hard it was to put it into practice. It appeared that no sufficient supply of concrete examples and tools existed that could help an organisation to transform in a completely different structure. Or, as Garvin *et al*. (2007) state: "Many of the early discussions about learning organisations were paeans to a better world rather than concrete prescriptions. They overemphasised the forest and paid little attention to the trees". The authors describe in their article how this lead to implementation difficulties, a misdirected focus on the wrong management levels and the lack of standards and tools for assessment. Critical voices raise that "the universal and uncritical acceptance of learning just shows how far the ideological move of appropriating and suturing a notion of society, organisation and self around learning has gone, which makes it difficult […] and at the same time important to argue 'against learning'" (Contu *et al.*, 2003). The authors find it "striking how learning discourse seems to have become constituted as truth: it is unproblematically assumed that learning, like vitamins and stopping smoking, is *a good thing*". It is therefore important to remain critical about the beliefs that lie at the core of the concept, which is especially relevant in the further course of this thesis. In order to further understand the phenomenon it is at this point useful to explore the several definitions that have been created over time by scholars in this field:

"A learning organisation is an organisation skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights" (Garvin, 1993)

"A learning organisation is a consciously managed organisation with learning as a vital component in its values, visions and goals as well as in its every operations and their assessment" (Moilanen, 2005)

"An L-form [learning organisation] engages everyone in the exploration, exploitation, and transfer of knowledge, increasing the collective learning throughout the organisation and the capacity to create its future" (James, 2003)

"A learning organisation is a place where people are continually discovering how they can create their reality. And how they can change it" (Senge, 1990)

"Learning in organisations means the continuous testing of experience, and the transformation of that experience into knowledge – accessible to the whole organisation, and relevant to its core purpose" (Senge et al., 1994)

"[The learning organisation is] an ideal type of action- and change-oriented enterprise in which learning is maximised" (Easterby-Smith in Porth & McCall, 1999)

"A learning organisation is an organisation which facilitates the development of all its members, while continually transforming itself" (Pedler et al., 1991)

"A learning organisation has appropriate cultural faces (visions, values, assumptions and behaviours) that support a learning environment; processes that foster people's learning and development by identifying their learning needs and facilitating learning; and structural facets that enable learning activities to be supported and implemented in the workplace" (Armstrong and Foley, 2003)

"The concept of organisational learning goes further than the interest in individual learning in organisations. It includes the proposal that organisations could learn through workers' learning and knowledge and sharing that knowledge, i.e. it includes the idea that organisations learn and that learning could take place at an organisational level" (Rebelo and Gomes, 2008)

"[A learning organisation is] an organisation that has woven a continuous and enhanced capacity to learn, adapt and change. Its values, policies, practices, systems and structures support and accelerate learning for all employees" (Nevis et al, 1996 in Jamali and Sidani, 2008)

"Organisations are seen as learning by encoding inferences from history into routines that guide behaviour" (March, 1988 in Garvin, 1993)

"Organizational learning is a process of detecting and correcting error" (Argyris, 1977 in Garvin, 1993)

Also worthwhile mentioning here is a statement from Senge in an interview eight years after releasing his book: "The key issue here is very simple and quite central. And it is one about which our work for the past 20 years has been silent. How do you organise for learning? What are the kinds of structural arrangements? What is the necessary distribution of power? Organisational structure is always about the distribution of power. What are the sort of governance processes that are conducive to building knowledge and creating new knowledge?" (Fulmer and Keys, 1998).

"There is no such thing as a "Learning Organisation". […] It is a category that we create in language. Like every linguistic creation, this category is a double-edged sword that can be empowering or tranquilising. The difference lies in whether we see language as a set of labels that describe a pre-existing reality, or as a medium in which we can articulate new models for living together. When we speak of a "learning organisation", we are not describing an external phenomenon or labelling an independent reality. We are articulating a view that involves us – the observers – as much as the observed in a common system. We are taking a stand for a vision, for creating a type of organisation we would truly like to work within and which can thrive in a world of increasing interdependency and change. It is not what the vision is, but what the vision does that matters" (Kofman & Senge, 1993).

An overview of the several definitions already provides some good hints to grasp the essence of the learning organisation. A first attempt of combining and comparing them provides us with the following core qualities: **conscious management and leadership; learning incorporated in corporate culture; values, policies, active inclusion and development of all members; experience is leading to knowledge, leading to learning; knowledge transfer throughout the entire organisation; learning of the individual ánd organisation; new insights have the potential to change corporate strategies / direction; constant process of evaluation, monitoring and feedback** and **continuous cycle of learning leading to transformation**. Although the torch has been lit in the darkness around the concept of the learning organisation in order to have a good glimpse of it, it is now necessary to further explore what exactly shapes such organisation in a more practical way. What follows here is an overview of what some of the aforementioned and other scholars belief are these components, building blocks or features. In case of ambiguous terms, an elaboration of what the scholar meant is provided between brackets. The first to mention is Senge (1990), who describes the five core disciplines as **personal mastery** (it all starts with the individual), **mental models** (surfacing, testing and improving internal pictures of how the world works), **shared vision**, **team learning** and **systems thinking** (the disciplines should be fused into a coherent body of theory and practice). According to Strichman *et al.* (2007), five key dimensions exist that make an organisation ready to engage in the ongoing process of adaptive capacity building: **shared vision**, **inquisitiveness/openness**, **evaluative/systems thinking** (understanding different parts of organisation, recognising patterns of change), **social capital** (creating an environment of trust among staff, encouraging group dialogue and communication), **external focus**. Garvin *et al.* (2007) describe three broad factors that are essential for organisational learning and adaptability, referred to as the building blocks of the learning organisation: **a supportive learning environment** (psychological safety, openness to new ideas), **concrete learning processes and practices** (experimentation, information collection, information transfer) and **leadership behaviour that provides reinforcement** (actively question and listen to employees, prompt dialogue and debate). The components of the learning organisation on the word of James (2003) are: **transformational leadership** (leadership found at many levels, leadership more transformational and visionary than transactional), **knowledge workers** (employees as knowledge workers, disseminating important information)**, horizontal structures** (loosely structured federations, emphasis on horizontal linkages and teamwork), **egalitarian culture** (facilitates continuous improvement and adaptation at all levels, through recognition and rewards), **an integrating mechanism** (link the organisation both horizontally and vertically, include people, systems and processes that link the organisation) and **dispersed strategies** (strategies can emerge from anywhere in the organisation, planning not only participatory, but also somewhat chaotic as new ideas are explored and implemented). Jerez-Gómez *et al.* (2005) in their article set out four organisational learning capacity dimensions/constructs, which include **management commitment** (support and commitment to shared vision, involved and facilitative leadership), **systems perspective** (viewing the organisation as a whole system), **openness and experimentation** and **knowledge transfer and integration**. Moilanen (2005) developed what he has termed the "Diamond Model". In his article he refers to the core of an instrument presented with the following dimensions (Yang *et al.*, 1998 in Moilanen, 2005): **continuous learning**, **dialogue and inquiry**, **team learning**, **embedded system**, **system connection**, **empowerment**, **provide leadership**, **financial performance** and **knowledge performance**. Snell (2001) investigated the moral foundations of learning organisations and identified the following characteristics: **free exchange in, across and between communities of practice** (as being the building blocks of society), **networked knowledge and experience**, **continual improvement**, **learning leadership**, **open dialogue**, **continual transformation**, **'protean' psychological contracts** (employees growth and competence enhancement supported, giving access to environments rich in know-how, learning support). In their book, Pedler *et al.* (1991) distinguish between a set of core dimensions of a learning company: **The learning approach to strategy** (company policy and strategy formation, together with implementation, evaluation and improvement, are consciously structured as a learning process), **participative policy-making**, **informating** (information technology to inform and empower people), **formative accounting and control** (systems of accounting, budgeting and reporting are structured to assist in learning), **internal**

exchange (of information on expectations, negotiating, contracting and feedback), **reward flexibility** (reward learning, but not only financially), **enabling structures** (roles loosely structured to allow for personal growth and development), **boundary workers as environmental scanners** (all members in contact with external customers, clients, suppliers etc. collect data and disseminate it), **inter-company learning** (joint training, sharing in investment, research and development – benchmarking), **learning climate** and **self-development opportunities for all**. Jamali and Sidani (2008) recently created an overview of frequently mentioned qualities for effective learning organisations, based on 12 post-1995 studies, these being: **leadership**, **strategy**, **participative policy making**, **teamwork**, **self-development opportunities**, **information flow**, **structural considerations**, **learning climate**, **experimentation opportunities**, **learning reward availability**. It becomes apparent that a large deal of components exist, of which many are overlapping and/or mutually exchangeable. It must be noted that the works of the different scholars stem from different years and that the earlier works have been referred to in later works, which in turn could have been influenced. Table 1 presents an overview of the several scholars and their theories, the colours indicate which components are united to form a theme. A major difficulty in comparing the components is that they often consist of subcomponents, which are sometimes also mentioned as being main components. Still, as set out in Table 2 an attempt has been made to merge the components of into a set of 10 themes. The components 'financial performance', 'formative accounting and control' and 'structural considerations' have not been included in any of the themes, since they have only been mentioned once and do not seem particularly relevant for the current research. The themes have been elaborated upon in Table 3, and will serve as one of the fundaments for the interview that is to be used for generating information from different stakeholders.

Table 1: Overview of components learning organisation per scholar

Senge (1990)	**Strichman *et al.* (2007)**	**Garvin *et al.* (2007)**	**James (2003)**	**Jerez-Gómez *et al.* (2005)**	**Moilanen (2005)**	**Snell (2001)**	**Pedler *et al.* (1991)**	**Jamali and Sidani (2008)**
Personal mastery	Shared vision	A supportive learning environment	Transfor-mational leadership	Management commitment	Continuous learning	Free exchange	The learning approach to strategy	Leadership
Mental models	Inquisitiveness / openness	Concrete learning proc. And practices	Knowledge workers	Systems perspective	Dialogue and inquiry	Networked knowledge and exper.	Participative policy making	Participative policy making
Shared vision	Evaluative / systems thinking	Leadership that provides reinforcement	Horizontal structures	Openness and experi-mentation	Team learning	Continual improvement	Informating	Teamwork
Team learning	Social capital		Egalitarian culture	Knowledge transfer and integration	Embedded system	Learning leadership	Formative accounting and control	Self-dev. Opportunities
Systems thinking	External focus		An integrating mechanism		System connection	Open dialogue	Internal exchange	Information flow
			Dispersed strategies		Empowerment	Continual transformation	Reward flexibility	Structural considerations
					Provide leadership	Protean psychological contracts	Enabling structures	Learning climate
					Financial performance		Boundary workers as env scanners	Experiment. Opportunities
					Knowledge performance		Inter-company learning	Learning reward availability
							Learning climate	
							Self-dev. opp. for all	

Table 2: Components categorised to themes

Individual / stakeholder learning	**Openness and experimentation**	**Collaborative learning and communication**	**System interconnectedness**	**Networked knowledge dissemination**	**Learning leadership**	**Interactive participation**	**Continuous organisational learning**	**External focus**	**Shared vision**
Personal mastery	Mental models	Team learning	Systems thinking	An integrating mechanism	Leadership that provides reinforcement	Horizontal structures	Continuous learning	External focus	Shared vision
A supportive learning environment	Inquisitiveness / openness	Social capital	Evaluative / systems thinking	Knowledge transfer and integration	Transformational leadership	Dispersed strategies	Continual improvement	Boundary workers as env. scanners	
Protean psychological contracts	Concrete learning proc. And practices	Knowledge workers	Systems perspective	System connection	Management commitment	Empowerment	The learning approach to strategy	Inter-company learning	
Self development opp. for all	Egalitarian culture	Dialogue and inquiry		Knowledge performance	Provide leadership	Participative policy making	Learning climate		
Informating	Openness and experi-mentation	Free exchange		Networked knowledge and exper.	Learning leadership		Continual transformation		
Enabling structures	Open dialogue	Teamwork		Internal exchange					
	Reward flexibility			Information flow					
	Experiment. opportunities								
	Learning reward availability								

Table 3: Learning organisation themes

Theme	Characteristics	Elaboration
1. Individual / stakeholder learning	Personal mastery A supportive learning environment Protean psychological contracts Self development opportunities Informating	Emphasis on individual development so that all those involved are able to use the shared knowledge. Capacity building is essential.
2. Openness and experimentation	Mental models Inquisitiveness / openness / experiment. Concrete learning processes and practice Egalitarian culture Open dialogue Reward flexibility / learning rewards Experimental opportunities	Openness to new ideas from all members and stakeholders, who are encouraged and stimulated to experiment in order to generate new knowledge and insights. Learning is rewarded.
3. Collaborative learning and communication	Team learning Social capital Knowledge workers Dialogue and inquiry Free exchange Teamwork	Learning together in a physical manner, so that direct interaction and communication takes place, ideas, experiences and knowledge are openly exchanged, questioned and debated.
4. System interconnectedness	Systems thinking Evaluative / systems thinking Systems perspective	An organisational and cultural approach of regarding the organisation and/or stakeholder environment as a whole system, in which synergy plays an important role: altering one element may affect the entire system.
5. Networked knowledge dissemination	An integrating mechanism Knowledge transfer + integration Embedded system System connection Knowledge performance Networked knowledge and experience Internal exchange, information flow	The technical infrastructure and actual sharing of knowledge from and to all points within the organisation or stakeholder network, making it accessible for every individual.
6. Learning leadership	Leadership that provides reinforcement Transformational leadership Management commitment Provide leadership Learning leadership	Leadership / management is stimulating learning within the organisation, willing to change its course on every management / strategic level.
7. Interactive participation	Horizontal structures Dispersed strategies Empowerment Participative policy making	Making sure that members / stakeholders at all levels are heard and their opinions and ideas taken seriously.
8. Continuous organisational learning	Continuous learning Continual improvement The learning approach to strategy Learning climate Continual transformation	New knowledge and insights are used and applied continuously at all levels or the organisation in order to quickly adapt to new insights or a changing environment
9. External focus	External focus Boundary workers as environm. scanners Inter-company learning	Strong cooperation with external organisations, actors and stakeholders. Knowledge shared with and received from ext. parties
10. Shared vision	Shared vision	The vision, strategies and policies as set out by the organisation are shared by all members and parties involved.

3.1.2 LEARNING WITHIN ORGANISATIONS, HOW DOES IT WORK?

Now, what is meant exactly with learning within an organisation? What exactly is learning? Senge in an interview simply puts it as "human beings being able to do something they could not do before" (Fulmer and Keys, 1998). For this thesis, it was decided to use the following definition for learning on an individuation basis: "Learning is the process of linking, expanding, and improving data, information, knowledge and wisdom" (Bierly *et al.,* 2000 in Leeuwis, 2004). In his book, the author describes how we all act, and receive feedback from our environment, which in turn leads us to adapt our cognitions. When learning is approached from a social perspective, the definition by Wenger (2000) is an appropriate one: "Learning is an interplay between social competence and personal experience. It is a dynamic, two-way relationship between people and the social learning systems in which they participate. It combines personal transformation with the evolution of social structures". The concept of 'learning organisation' or 'learning by organisations' has in fact been taken from the psychological concept of 'individual learning' (Weick, 1991 in Romme and Dillen, 1997). The link between individual learning and collective learning is a complex one. An organisation consists of individuals, and individual learning is therefore an important, necessary condition of organisational learning (Romme and Dillen, 1997) however with a paradoxal nature. The organisation is capable of learning independently of each single individual, but not independently of all individuals (Argyris and Schön, 1978 in Romme and Dillen, 1997). The authors further state that it should therefore not come as a surprise that practically all theorising about learning organisations is based primarily on observations of learning individuals, particularly in experimental situations. It is worthwhile citing Davies and Nutley (2000) here, when they write that learning is something achieved by individuals, but learning organisations can configure themselves to maximise, mobilise and retain this learning potential. They furthermore state that an organisation is not simply a collection of individuals; the whole amounts to something greater than the sum of the parts. Similarly, the learning achieved by an organisation is not simply the sum of the learning achieved by individuals within that organisation. Individuals may come and go, but the organisation endures (Davies and Nutley, 2000). Organisations do not have 'brains', but they do have cognitive systems and memories at their disposal, through which certain modes of behaviour, mental models, norms and values are retained (Romme and Dillen, 1997). Therefore, organisations are not only influenced by individual learning processes, but organisations influence the learning of individual members and store what has been learned. This occurs, for instance, in the forms of manuals, procedures, symbols, rituals and myths (Romme, and Dillen, 1997). The authors furthermore helpfully compare organisations to performances, in which the roles are played by individual actors: the actors perform, but are directed by the norms, values and procedures of the organisation.

> *"The paradox of learning that is true at both the individual and organizational level:*
>
> *We claim that we want to learn, but when we realise we have to be open to being taught and to risk failure, learning doesn't always look so good." (Manring, 2007)*

So how should we translate this into a development situation, where many stakeholders are involved, all with different norms, values and procedures? Those stakeholders might have their own internal cultures, but there is no such thing as a 'system culture', which is shared by all – influencing the learning process of those individuals involved. The first most salient question here is: would that be necessary? According to the literature, some sort of collective feeling and/or aim is essential for continuity of the learning process – so in that case the answer would indeed be positive. Creating a sense of community is the only way to bridge the gap between individual, potentially isolated learning and collective learning. Although achieving this will probably be more difficult in a multi-stakeholder environment than within one company, it becomes obvious that it is essential to create a common feeling amongst stakeholders that everybody is seated in the same boat, heading towards the same destination. This is the only way to achieve that the whole amounts to something greater than the sum

of the parts, and by doing so maximise the learning potential. In the section below *'interorganisational learning networks'* I will further elaborate on how this should be achieved.

> *"Only with the support, insight, and fellowship of a community can we face the dangers of learning meaningful things" (Kofman & Senge, 1993).*

3.1.3 LEVELS OF LEARNING

Throughout the literature, a distinction between zero, single loop, double loop and triple loop learning within individuals and organisations is recognised, mainly based on the works of the influential scholars Argyris and Schön who developed the foundation of the concepts back in 1974. The line of thought in these theories is that human agents design action to achieve certain ends or consequences and they monitor ongoing action and its consequences to assess its effectiveness. By monitoring the relative effectiveness of action, therefore, human agents also monitor the adequacy of their constructions of the contexts in which such action takes place (Greenwood, 1998). Learning occurs at different levels: zero learning occurs in an organisational setting when fresh imperatives or problems arise, yet members fail to take corrective action (Georges *et al.*, 1999) – so there actually is no learning involved. Single loop learning is about incremental improvements to existing practice, "instrumental learning that leads to improvement in the performance of organisational tasks, that changes strategies of actions or assumptions underlying strategies in ways that leave the values of a theory unchanged" (Argyris and Schön, 1996 in Moynihan, 2005). Double loop learning occurs when organisations rethink basic goals, norms, and paradigms (Davies and Nutley, 2000), "learning that results in a change in the values of theory-in-use, as well as in its strategies and assumptions. […] Strategies and assumptions may change concurrently with, or as a consequence of, change in values" (Argyris and Schön 1996 in Moynihan, 2005). Put differently, as Leeuwis (2004) describes it: single loop learning involves learning 'how to do things better' within the basic cognitive assumptions and principles (e.g. norms, values, goals) that underlie current practices. When such basic assumptions and practices themselves become subject of learning, it is called 'double loop' learning. Leeuwis furthermore states that double loop learning is much more demanding (and sometimes threatening), because it involves questioning and perhaps letting go of the basic certainties, goals and values that one acted upon previously; or to reframe, seeing things in a completely different way (Georges *et al.,* 1999). The third level of learning is called triple loop learning, which involves learning about learning. It entails members developing new processes or methodologies for arriving at such re-framings (Georges *et al.,* 1999). The latter is also referred to as "meta-learning", for example by Davies an Nutley (2000) as they state that meta-learning reflects an organisation's attempts to learn about (and improve) its ability to learn, while another term used for the same phenomenon is "deutero-learning" (Bateson, 1973 in Georges *et al.,* 1999). Triple loop, deuteron- or meta-learning is about increasing the fullness and deepness of learning about the diversity of issues and dilemmas faced, by linking together all local units of learning in one overall learning infrastructure as well as developing the competences and skills to use this infrastructure (Flood and Romm, 1996 in Georges *et al.,* 1999). Now how is all this theory applied in practice by organisations attempting to learn, to enhance their adaptive capacity? Understandably, this is a complex question to find salient answers to. However, Moynihan (2005) conducted research in this field and concluded that from an organisational learning perspective, most results-based reforms target narrow process improvement (single-loop learning), rather than a broad understanding of policy choices and effectiveness (double-loop learning), even though the latter is more critical for long-term organisational success. '

3.2 INTERORGANISATIONAL NETWORKS

3.2.1 INTRAORGANISATIONAL VERSUS INTERORGANISATIONAL LEARNING

"Knowledge is an asset, just as capital is an asset. […] Knowledge assets are all about creating future growth and environmental, sanitary and social risks require the application of responsibility and precaution management because the consequences might be worldwide and irreversible" (Rikowski, 2007). As most of the learning organisation literature, the book by Rikowski is mainly concerned with and focused on corporate organisations, directed at improving performance and creating a competitive advantage. The literature usually speaks about employees, or company members, and the learning process is usually internally oriented, so within the company – one could therefore speak of *intra-organisational learning*. This is for example shown by the important role benchmarking plays within the literature when it comes to corporate learning. Benchmarking is a method allowing a company to measure its performance on the several learning components relative to other companies. Significantly fewer literature can be found on non-profit learning organisations, aiming at the management of natural resources and/or community development, often dealing with multi-stakeholder situations. Although the literature broadly sheds light on involvement of employees, and contains some hints on the relevance of an external focus, it does not provide many tools on how to realise collaboration and participation amongst stakeholders, which in this case may be other organisations, institutions or groups. This is a natural consequence occurring due to the major difference in organisational aims, which also have its effects on authority, management and hierarchal matters. For example, many different management layers are often not found and desirable in (often small-scale) non-profits and networks, which means that the organisational approach is rather different. Accordingly, It also results in differences in decision making processes. Still, the ideas and concepts as developed in the company oriented, intra-organisational literature on learning organisations contain numerous useful elements which can be relatively easily adapted and utilised for non-profits in order to develop a framework. Although Rikoswki's statement has a somewhat corporate touch when he speaks about future growth, it becomes obvious that knowledge (resulting from learning) is important for any organisation in the current global and interconnected world and that theories from both streams can and should be mutually explored. Nevertheless, It has become obvious that at this point a further exploration and more profound arrangement is required for the current research. This section will therefore shed light on interorganisational networks, and the important role of sharing knowledge *between* organisations therein.

3.2.2 INTERORGANISATIONAL NETWORKS

Research on (interorganisational) networks has been booming over the last decades, and the topic is an extremely broad and complicated one. It would go beyond the scope of this thesis to elaborate thoroughly on the numerous concepts and theories surrounding the issue. For the sake of simplicity and practicality, some leading theories that are most in line with the objective of this thesis are discussed here in order to understand the basics. A network is a set of actors connected by a set of ties. The actors (often called "nodes") can be persons, teams, organisations, concepts, etc. Ties connect pairs of actors and can be directed (i.e., potentially one-directional, as in giving advice to someone) or undirected (as in being physically proximate) and can be dichotomous (present or absent, as in whether two people are friends or not) or valued (measured on a scale, as in strength of friendship) (Borgatti and Foster, 2003). Manring and Moore (2006) describe in their article the difference between traditional and network-based structures. Within a traditional organisation, units are enclosed and aligned by the framework or the structure of their organisation. Unless the size of the framework is increased, there is a barrier that must be overcome to include units that are not inside the box. It requires energy to build and maintain such wall. Within a connected network structure, there are no barriers to entry or exit. The only energy that is required is to find connections to the

network (Manring & Moore, 2006). Unlike (hierarchal) organisations, networks typically lack a central authority, often have blurring boundaries, and seem to require 'social' mechanisms, such as trust and reciprocity, to operate effectively (Manning, 2008). There is emerging evidence that the application of network structures and learning organisational models, when placed within the broader context of sustainable development and production, can be very productive (Wheeler, 2002 in Manring & Moore, 2006). The rationale for network formation is central to coping with the realities of continuous and often volatile environment change (Quinn, 1992 in Cravens *et al.*, 1996). In order to become a bit more specific, Williams is referred to here who describes six reasons why organisations enter and remain in an interorganisational network: to meet legal-political requirements (necessity), to reduce uncertainty in their environments (stability), to economise on transactions (efficiency), to pursue common or complementary goals (reciprocity), to gain credibility and respectability through association (institutional) and to preserve their autonomy (asymmetry) (Oliver's, 1990 in Williams, 2005). In their article Cravens *et al.* (1996) describe the network paradigm, and provide a classification framework to illustrate several network forms implied, as illustrated in Figure 5. The first classification dimension is the *volatility of organisational change*, which is related to the fact that environmental volatility increases uncertainty and risks and makes forecasting difficult, meaning that the organisation requires a flexible internal structure that can rapidly adjust to new environmental conditions. The second classification dimension is the *type of network relationship* between members, which may range from highly collaborative links to largely transactional links. On the basis of these classification dimensions, they developed four types of networks: the virtual network; the flexible network, the value-added network and the hollow network. In their article, Manring and Moore refer to the early work of Miles and Snow, who have a different classification and identify three types of network: internal, stable and dynamic (Miles and Snow, 1986 in Manring and Moore, 2006). Previously in the current study it was concluded that when striving for a learning organisation in a complex multi-stakeholder environment, the realisation of an interorganisational network would be indispensible. The next question would consequently be what type of network it is that would prove most suitable under such circumstances. Manring and Moore (2006) describe the nature of the interorganisational network in promoting sustainable development as "a strategic partnership or alliance among the stakeholders who come together to collaboratively address and resolve mutual concerns regarding sustainable development and production methods". They further state that this network is both larger and greater than the individual stakeholder organisations that comprise it, and that the structure and processes of this superordinate entity directly impact stakeholder collaboration and consensus building efforts. Their conclusion is that the institutional arrangement among the stakeholders is most like a dynamic network, i.e., an ad hoc alliance among the strategic stakeholders (Manring & Moore, 2006). In another article Manring states that the ecosystem management network is not an actual organisational entity, but should be more clearly understood as a "virtual web". The network becomes a virtual web of stakeholders when a pool of independent stakeholders agrees in principle to collaborate around the management of an ecosystem (Manring, 2007). She furthermore explains that the quality of "virtualness" is the ability of the ecosystem management network to consistently obtain and coordinate critical competencies through the design of value-adding processes and governance mechanisms involving external stakeholders and the internal constituencies of the network to provide integrated solutions to complex ecosystem management projects (Manning, 2007). Manring's deliberations and conclusions are in line with what Cravens *et al.* (1996) have set out in their classification system, where they assign highly collaborative qualities to the virtual network. The degree of volatility of the environment in a certain ecosystem management project would then further determine whether one should speak of a virtual or flexible network.

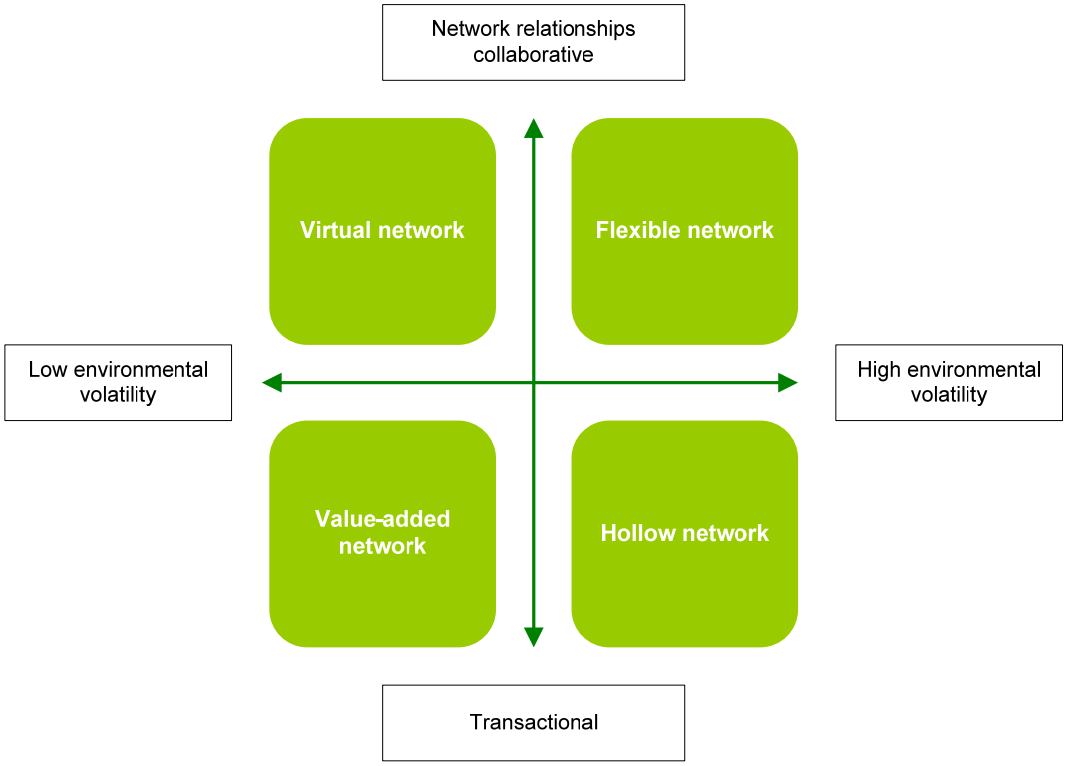


Figure 5: Classification of network organisations (Cravens *et al.*, 1996)

3.2.3 INTERORGANISATIONAL LEARNING

Now that we have briefly explored (intra-)organisational learning, and gained some insight in the conceptualisation of different interorganisational networks, it is for this thesis required to go one step further and focus on interorganisational *learning*. A first challenge faced here is that a lack appears to exist of a generally agreed model or definition of interorganisational learning, which does not exist until today (Huelsmann *et al.*, 2005). However, an attempt to explore the topic has been provided. It is agreed by many that by creating conditions conducive to knowledge sharing, strategic alliances have come to be considered a particularly suitable context for organisations to access and share organisationally embedded knowledge-based resources (Janowicz-Panjaitan and Noorderhaven, 2008). Innovative strategies that explicitly foster collaboration and learning are emerging, and contribute to trust building and the formation of social networks of researchers, communities and policy makers (Armitage *et al.*, 2008), and social transformation is essential to move from a less desired trajectory to one where the capacity to manage ecosystems sustainably for human well being is strengthened (Olsson *et al.*, 2004). Multi-stakeholder processes must formally feed into decision-making forums or they risk being viewed as irrelevant by policy-makers and stakeholders, Fraser *et al.* (2006) state in their assessment of the impact of participatory processes on environmental management. Adaptability among actors is needed to reinforce and sustain the desired social-ecological state and make it resilient to future change and unpredictable events (Olsson *et al.*, 2004), which should preferably be achieved through mutual learning on an interorganisational level. According to Levinson and Asahi (2003) the components that constitute the necessary foundation to promote interorganisational learning are *culture, structure, technology* and *absorptive capacity*. These factors combined with knowledge transfer processes lead to both organisational and interorganisational learning, is what the authors state. They further discuss alliances, and how their overall nature provides the context for interorganisational learning. Alliances vary by defined purpose, time frame, and type and they may be virtual or strategic (Levinson and Asahi, 2003). Another important feature of alliances, according to the authors, is *boundary work*. Focusing particularly on the boundaries of alliances as complex, formal

interorganisational arrangements allows you to see: (a) what knowledge is acquired by participating organisations in an alliance; (b) how this information is transferred; (c) in what form it is transferred; (d) what factors affect the transfer; and (e) how organisations adapt and use the new information (Levinson and Asahi, 2003). Four steps in interorganisational learning are, according to the authors: (1) becoming aware and identifying new knowledge; (2) transferring/interpreting new knowledge; (3) using knowledge by adjusting behaviour to achieve intended outcomes; (4) institutionalising knowledge by reflecting on what is happening and adjusting alliance behaviour (Levinson and Asahi, 2003). Not surprisingly, substantive similarities can be seen between these steps and the characteristics of a learning organisation, as described in the first section of this chapter. Huelsmann *et al.* (2005) describe three perspectives of interorganisational learning: knowledge transfer, knowledge sharing and joint knowledge development. They furthermore emphasise that within the cooperation, interorganisational learning processes occur between the involved elements (i.e. individuals in social systems) of different organisations and that these individuals form an interorganisational learning entity, which means that they are responsible for transferring, sharing, and developing knowledge from the point of view of the cooperation (Huelsmann *et al.*, 2005), which, as was previously stated is commonly a certain unifying purpose. Learning behaviours play an essential role in knowledge transfer within an interorganisational network. Janowicz-Panjitan and Noorderhaven (2008) conducted research on the different forms, and concluded that both informal and formal learning behaviours foster interorganisational learning, but that too much formalisation obstructs learning. Just as is the case with the academic literature on the learning organisation, much of it has been focused on corporate alliances. Also Manring (2007), being one of the few scholars with this particular focus, verifies this, when she states that what has been missing, is an explicit analysis of interorganisational networks for sustainable ecosystem management as emerging learning organisations. Her article demonstrates the explanatory and diagnostic power of applying the concepts of virtual learning networks to sustainable ecosystem management to guide stakeholders in cocreating shared conceptual infrastructure for generative learning, consensus building, and collaborative decision making (Manring, 2007). In her model, she proves an interdisciplinary knowledge base and language for heightened awareness about the structure and dynamics of the virtual entity created by the processes of dialogue, exchanges of information, and double-loop learning among the stakeholders (Manring, 2007). This work will form another pillar of the current research, on which will be further built. Consequently, we have now arrived at the point of exploring further her theorisation. First, Manring describes how stakeholders compose an ecosystem management network (local governments, planning commissions, or boards; school districts; environmental non-profit agencies; nongovernmental organisations and government entities at the state, interstate, and federal levels), functioning at the same time as an interorganisational network – an institutional ecosystem that is both larger and greater than the individual or aggregated stakeholder organisations that compose it (Manring, 2007). Structurally, the ecosystem management network has no hierarchical power and authority; it is a loosely coupled, dynamic political system rather than a tightly bonded, homogeneous, hierarchically controlled system (Manring, 2007). The ecosystem management network is not an actual organisational entity, but it is more clearly understood as a "virtual web". The network becomes a virtual web of stakeholders when a pool of independent stakeholders agrees in principle to collaborate around the management of an ecosystem (Manring, 2007). Three requirements for the success of a virtual web are, similarly, prerequisites for the success of an ecosystem management network: (a) participation by all relevant stakeholder, (b) sound decision-making processes based on clear common objectives, and (c) strong legitimacy, derived from the stakeholders (Franke, 1999 in Manring, 2007). It is also apparent that such network formation relies on the development of trust between organisations (Cravens *et al.*, 1996). Manring furthermore emphasises that collaborative decision making is an essential element of networks. An ecosystem network emerges as a virtual learning organisation to the extent that the multiple stakeholders engage together to overcome the primacy of their initial positions to cocreate a new mental reality – a shared conceptual infrastructure – in the service of consensus building and decision making about the use and management of their ecosystem resources.

The three critical dimensions of the interorganisational network that support its morphing into a healthy "learning ecology" for systematic change are:

1. *The creation of a community of commitment with a growing spiral of trust that supports voluntary and informal links among stakeholders, multiple servant leaders, and multilevel, redundant, non-hierarchal integration;*
2. *The gradual evolution of a unifying purpose and a transcendent vision that facilitates exploration of systemic solutions;*
3. *A sustained culture of decision making through consensus derived from generative, holographic thinking.*

(Manring, 2007)

The (12) key dimensions identified for ecosystem management networks evolving as learning organisations are: (a) **unifying purpose**, (b) **voluntary links among independent yet interdependent members**, (c) **personal mastery**, (d) **value-added shared learning**, (e) **building a shared vision**, (f) **surfacing and testing mental models**, (g) **team learning**, (h) **the "spiral of trust"**, (i) **systems thinking**, (j) **dynamic networks tend to be managed by "net brokers"**, (k) **multiple leaders and integrated levels**, (l) **the web culture** (Manring, 2007). Since Manring combined concepts from the learning organisation (mainly adapted from Senge, 1990) and virtual network theories, it is not surprising to see many familiar terms that also form crucial components of the learning organisation. In other words: Manring builds further on the earlier explored concept of the learning organisation, and has made an attempt to fit it into a network setting. Table 4 elaborates further on this essential part of the current theoretical framework. Since the analysis of the learning organisation in this thesis is based on more scholars than the ones used by Manring, and because it is at this point important to build a bridge between the several fundaments of the current study, Table 4 also provides an attempt to connect the components of the interorganisational learning network with the themes of the learning organisation as derived from the literature used for the current study. Moreover, this simultaneously provides an insight in what exactly are the additional elements of interorganisational learning compared to intra-organisational learning. What we immediately find out is that the main difference lies in five aspects: (1) **unifying purpose**, which is a logical outcome, since one organisation naturally has clear individual aims, purposes which it does not need to share; (2) **voluntary links among independent yet interdependent members**; (3) **trust**, as described earlier an essential aspect of alliances; (4) **net-brokers**, managing and facilitating the network, which will be further elaborated upon in the next section, and (5) **multiple leaders and integrated levels**, although also occurring within organisations this appears especially relevant for a network, which will also be further explained in a next section. We further identify that three aspects have been unmentioned by Manring: (1) **external focus**, probably because all organisations in a network naturally will have a more external focus, which is therefore interwoven in most of the other dimensions - however, this could still be an interesting dimension, since it is also important to know what is occurring outside the network. Logically, this would mean that the externality would shift from an organisational to a network level. In a way, this is embedded in the environmental scanning task of the net-broker, (2) **networked knowledge dissemination**, which is an aspect that is embedded in several of the dimensions, but the actual practice of knowledge sharing appears somewhat under-illuminated, and (3) **learning leadership**, an aspect that is not explicitly mentioned but also embedded partly into the dimension of net broker – that is íf the net broker is the actual leader of the network, an aspect that will be further elaborated upon in a later stage and for now a reason to identify this as a separate dimension. It must be noted here that fitting the several dimensions and themes is a difficult and ambiguous one, and that one could not speak of one-to-one matches since the nature of them is somewhat different.

> *"It means… not only the absorption of facts and analysis, but understanding, assimilation, association with related principles, actions and behaviors in the local context, and application in a constructive manner. It takes time. It involves negotiations, calls for a very great deal of communication, and it demands respect for the human community, political process, and the participating learners" (Manring et al., 2003 in Manring, 2005).*

An ecosystem network evolves slowly, and, over time, as a learning organisation. Ultimately, the measure of success is that multiple stakeholders emerge, stretch, and evolve, fully engaged and committed together, to replace the primacy of their initial positions with permeable approaches to generative learning so they may cocreate a new mental reality – a shared conceptual infrastructure that supports a systemic perspective and holographic view – in the service of consensus building and collaborative decision making about the use and management of their ecosystem resources (Manring, 2007).

Table 4: Interorganisational learning dimensions versus learning organisation themes

Interorganisational learning dimension (Manring, 2007)	**Elaboration** (Manring, 2007)	**Learning organisation theme** (as derived from literature, see Table 2 and Table 3)
Unifying purpose	The stakeholder organisations become networked when there is a consensus about the value and goal of collaboration on the management of ecosystem resources	X
Voluntary links among independent yet interdependent members	Each member of the ecosystem management network, whether an individual or a stakeholder organisation, can stand on its own while benefiting from being part of the whole	X
Personal mastery	Becoming increasingly self-aware and honing the skill of continually clarifying and deepening one's personal vision	Individual / stakeholder learning
Value-added shared learning	Value-added shared learning through "multiplexing" and the use of "virtual memory" are processes that increase the communication pathways through the virtual network	Continuous organisational learning + Interactive participation
Building a shared vision	The process and practice of unearthing shared pictures of the future that foster genuine commitment	Shared vision
Surfacing and testing mental models	The ability to unearth one's internal pictures of the world, scrutinise them, and to make them open to the influence of others; a willingness to discard old ways of thinking and standard problem-solving routines	Openness and experimentation
Team learning	The capacity to think and learn together, which is gained by mastering the practice of dialogue and discussion	Collaborative learning and communication
The "spiral of trust"	Trust begins at the point when members of the network acknowledge the legitimacy of each other's goals and commit to the collaborative partnership	X
Systems thinking	The discipline that integrates other perspectives, fusing them into a coherent body of knowledge	System interconnectedness
Dynamic networks tend to be managed by "net brokers"	Net brokers manage the ecosystem management network and may also serve as facilitator, coordinator, moderator, talent scout, relationship promoter, trust bridge, caretaker, standard setter, disciplinarian, monitor, environmental scanner, policy entrepreneur, and steward.	X
Multiple leaders and integrated levels	Ecosystem management networks, with their multiple stakeholders and numerous net-broker functions, tend to be leaderful rather than leaderless and multilevel rather than flat	X
The web culture	The web culture of the ecosystem network becomes distinct as it becomes a conscious, intentional learning community	Continuous organisational learning
X		Learning leadership
X		External focus
X		Networked knowledge dissemination

3.2.4 NET BROKERS MANAGING DYNAMIC NETWORKS

A special section is now dedicated to an exploration of what Manring describes as "net brokers", since it is expected that EarthCollective may have the potential to operate in such role. Net brokers manage the ecosystem management network and may also serve as facilitator, coordinator, moderator, talent scout, relationship promoter, trust bridge, caretaker, standard setter, disciplinarian, monitor, environmental scanner, policy entrepreneur, and steward (Manring, 2007). A primary task of the net-broker function is to identify all stakeholders with vested interests and complementary resources. In this early phase, the net broker acts as a relationship promoter who contacts people, brings them together, and leads the dialogue and socialising processes among them (Manring, 2007). The main purpose, however, is to create a common bond that promotes mutual trust. The net broker can also become a trust bridge: as stakeholders trust the net broker, they come to rely on the broker's recommendations about the addition of other stakeholders (Manring, 2007). The most valuable asset of the net broker in an ecosystem management network is social capital, and the core competence is social contracting (Manring, 2007). A related role of the net broker is to serve as a "caretaker" to maintain, improve, and enhance network collaboration and promote the partnership concept (Manring, 2007). The net broker facilitates the processes that establish negotiations of the problem definition, standardised practices, and speed up the partnering among ecosystem management network members (Manring, 2007). The net broker also monitors the network to continuously improve effectiveness and performance, tracks the internal and external environment of the ecosystem management network, and proposes how to adapt to any changes. Additionally, the net broker keeps track of the resources and core competencies of the stakeholders as they bear on the network and may also search for new network members to provide missing or complementary resources (Manring, 2007). The net broker is the "policy entrepreneur" or the "key steward", both of which describe the net broker's essential dual roles as creator and steward of the emerging network. Learning organisations may be best led through stewardship, in the spirit of "servant leadership" (Manring, 2007).

> *"I always remember the axiom: a leader...is like a shepherd. He stays behind the flock, letting the most nimble go out ahead, whereupon the others follow, not realizing that all along they are being directed from behind." (Mandela, 1994)*

The concept of servant leadership is particularly appealing for ecosystem management networks because the leaders' sense of stewardship operates on two levels: stewardship for the individuals who compose the network and stewardship for the larger purpose or mission that underlies the enterprise (i.e., the responsible management of ecosystem resources). Leadership of an ecosystem management network that is committed to the vision of a learning organisation would guide the network toward transformational learning (Manring, 2007).

Figure 6: Duties of the network broker - From: Manring and Moore (2005)

3.3 PARTICIPATIVE MANAGEMENT

3.3.1 LEARNING AND PARTICIPATIVE MANAGEMENT

As previously concluded when analysing learning organisations, it is essential to put an emphasis on the participative component. Since the current literature on learning organisations is more oriented at companies with a mainly internal focus – which left us with a gap –, the scope was broadened to interorganisational learning networks. However, also there it was determined that only very few studies focused on networks are dealing with development and/or natural resource management – a field often dealing with complex multi-stakeholder environments. These stakeholders are often influencing or affected in different ways by such projects, and have very different characteristics, resources, and consequently power. Before an attempt is made to build an international learning network, and certainly when managing it, it is crucial to identify the major stakeholders and determine which level of participation should be expected by each of them. To recapitulate, Manring (2007) also emphasises that three requirements for the success of a virtual web are, similarly, prerequisites for the success of an ecosystem management network: (a) **participation by all relevant stakeholders**, (b) sound decision-making processes based on clear common objectives, and (c) **strong legitimacy, derived from stakeholders** (Franke, 1999 in Manring, 2007). Also Pedler *et al.* (1991) describe in the context of a learning organisations that participative policy making requires three fundamental attitudes towards a diverse group of stakeholders: (1) that all diverse groups have the *right* to take part, for their values and so on to be taken into account – this is the *ethical* or *moral* dimension of the learning company; (2) that such diversity, although complicated, is, in fact, valuable in that it leads to creativity, to better ideas and solutions; (3) that only by striving to delight customers and meet the requirements of other stakeholders will the company [Pedler *et al.* utilise the term company as in any collective of people, not particularly a corporate business] be successful in the long-term achievement of its purpose. Eventually, it would be impossible to collectively learn in an objective and balanced way if not all stakeholders participate (which would make it unattainable to oversee and understand the entire situation). This is also in line of reasoning with Leeuwis (2004), who explains that for purposes of arriving at coherent innovations, it is clear that individual [and collective] learning does not suffice, but that simultaneous learning of interdependent stakeholders is needed; that is: in order to arrive at coherent practices, multiple stakeholders need to develop complementary and/or overlapping (or even fully shared) understandings about 'learning fronts' as a basis for effective co-ordinated action. Participation in this thesis receives a special emphasis, since it stresses the correct and salient identification of stakeholders, and it provides insights in the empowerment of disadvantaged groups in terms of required resources to collaborate in or influence developments that might affect them. This is something that is usually not as explicitly described in literature on learning organisations or networks, where it is for the sake of delimitation already assumed that the relevant stakeholders are known. I will emphasise here that the purpose of this thesis is **not** to identify the stakeholders that should logically be included in the network (which would be a typical task of the net broker), but to understand the essentials of participation so that a measurement can be conducted on whether attention has been paid to these issues, in order to draw conclusions concerning the performance of the network.

3.3.2 AIMS AND LEVELS OF PARTICIPATION

According to some authors, such as Borrini-Feyerabend *et al*. (2001) participative management is equal to co-, collaborative, joint, mixed, multi-party or round-table management. However, some would disagree on this and point out several minor differences between the several concepts, which is often a matter of difference in emphasis on certain aspects. In this thesis, the terms participative management and participation are chosen. Participation in natural resource management is often regarded as morally just, and an utter act of putting democracy into practice. However, the issue is an ambiguous one and often comes with vagueness, even misinterpretation which in turn may lead to

being only a good-looking label rather than actual involvement and empowerment of stakeholders involved. One of the many definitions that is noteworthy mentioning in our exploration is the following: "participative management is a philosophy that demands that organisational decision making be made in such a way that input and responsibility are extended to the lowest level appropriate to the decision being made" (Plunkett and Fournier, 1991). Another definition describes participative management as "a situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities for a given territory, area or set of natural resources" (Borrini-Feyerabend *et al*. 2001). The fog surrounding the conceptualisation (and also application) of participative management might be the reason why there is "little evidence of the long-term effectiveness of participation in materially improving the conditions of the most vulnerable people or as a strategy for social change" (Cleaver, 1999). Still, central to the idea of people's participation in development, however diverse and contested in its definition and scope, is inclusiveness – the inclusion in decision making of those most affected by the proposed intervention (Agarwal, 2001), which is of course the bottom line of establishing an interorganisational learning network as well. In his article, Cleaver (1999) describes the dichotomisation into means/ends classifications of participatory approaches. He elaborates on distinguishing between the **efficiency arguments** (participation as a tool for achieving better project outcomes) – if people are involved, they are more likely to agree with and support the new development (Pretty, 1995) – and **equity and empowerment arguments** (participation as a process which enhances the capacity of individuals to improve their own lives and facilitates social change to the advantage of disadvantaged or marginalised groups) – a fundamental right, in which the main aim is to initiate mobilisation for collective action, empowerment and institution building (Pretty, 1995) –. These perspectives are often mixed and not easily distinguished from each other (Cleaver, 2004 in Mannigel, 2008). Over time, numerous theories and models have been developed, often showing the continuum in which an overview of the different levels of participation has been set out, from the one extreme (efficiency) to the other (equity). Most of these models are based on the work of Sherry Arnstein (1969), who developed the "Ladder of Citizen Participation". In order to gain full understanding on these arrangements and to be aware of the existing viewpoints on this topic, hereby several of these models are reviewed. One author who recently adapted from and assembled the theories of several authors is Mannigel (2008), as set out in Table 5. Important to notice is that this table shows a range from participation as a means to increase efficiency, where an institution is minimally engaged in involving stakeholders or just informing them, to participation as an end, where an institution is even sharing or transferring authority. Unique about this model is that it describes both the role of the institution and local stakeholder and relates both.

Table 5: Different understandings of participation

Participation as a <u>means</u> to increase efficiency							
	A	B	C	D	E	F	G
Institution	Minimal	Informing	Information seeking	Actively consulting	Negotiating	Sharing authority	Transferring authority
Local stakeholder	Nominal	Passive	Informing	Giving opinions	Active functional	Interactive	Taking responsibility
							Participation as an <u>end</u> for empowerment and equity

Source: Mannigel, 2008

Jules Pretty, an influential contributor in the field of participative management, developed different similar models to gain insight in the different levels of participation. Mowforth and Munt (2003) combined some of these into a comprehensive overview, as illustrated in Table 6. This is the first table that is more descriptive and provides insight in the meaning of the several levels of participation. It becomes obvious that here we are dealing with a similar range, however there are differences. Pretty also incorporated bought participation, which cannot be found in any of the other models. Important to notice is that the highest level of participation is self-mobilisation, which means that they independently take initiatives, which of course goes along with taking responsibility as shown by

Mannigel. The lowest level in both models is a passive role for stakeholders involved, in which case the institution just informs them. It is difficult to determine which level of participation is expected from each stakeholder. Pretty and Smith (2004) in a later article state that what has become clear is that positive biodiversity outcomes do not emerge with passive, consultative, and bought types of participation.

Table 6: Pretty's typology of participation

Typology	*Characteristics*
Passive participation	People participate by being told what has been decided or has already happened. Information sharing belongs only to external professionals
Participation by consultation	People participate by being consulted or by answering questions. Process does not concede any share in decision-making, and professionals are under no obligation to take on board people's views
Bought participation	People participate in return for food, cash or other material incentives. Local people have no stake in prolonging technologies or practices when incentives end
Functional participation	Participation seen by external agencies as a means to achieve their goals, especially reduced costs. People participate by forming groups to meet predetermined objectives
Interactive participation	People participate in joint analysis, development of action plans and formation or strengthening of local groups or institutions. Learning methodologies used to seek multiple perspectives and groups determine how available resources are used
Self-mobilisation and connectedness	People participate by taking initiatives independently of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over resource use

Source: Mowforth and Munt (2003)

Gonsalves *et al.* (2005a) define the different types of participation again in a slightly different way, as set out in Table 7. Still, once more we can see that the highest level of participation, 'collegiate participation', involves the equal distribution of ownership and responsibility among partners, and that decisions are made by all stakeholders together. The lowest level of participation implies that there is just one stakeholder holding power, whereas others just have to follow the course as set out by the decision-makers. This model assumes that at least all actors are participating, which is a postulation that is not immediately obvious in the models of Mannigel and Mowforth and Munt. However, again we see in this model the continuum that goes from a similar one extreme to the other.

Table 7: Types of participation

Type	*Characteristics*
Contractual participation	One social actor has sole decision-making power over most of the decisions taken in a research process, and can be consolidated the "owner" of it. Others participate in activities defined by this social actor in the sense of being formally or informally "contracted" to provide services and support
Consultative participation	Most of the key decisions are made by one social actor, but emphasis is put on consultation and gathering information from others, especially for identifying constraints and opportunities, priority setting and/or evaluation
Collaborative participation	Different actors collaborate and are put on a more equal footing, emphasising linkage through an exchange of knowledge, different contributions and a sharing of decision-making power during the innovation process
Collegiate participation	Different actors work together as colleagues or partners. "Ownership" and responsibility are equally distributed among partners, and decisions are made by agreement or consensus among all stakeholders

Source: Gonsalves et al. (2005a)

When comparing these three models, we find out that there are some differences in the way the levels of participation are distinguished. Nevertheless, what is more important is that the main lines of thought are fairly similar. In all models we see a range from passive, minimal participation which means that stakeholders are hardly involved, only receive information without having a real dialogue to, on the other hand, full participation which implies working together, sharing authority, responsibilities and ownership, and mutual dialogue which ensures that stakeholders are actually able to fully take part in decision making processes. Again, it appears that the higher levels of participation are prerequisites and at the same time should be the outcome of interorganisational learning processes. A fourth model by Friedman and Miles (2006) is employed here, which is most elaborate and comprehensive. The model is in line with previous models, but describes the levels of participation, management attitude, management tools, intention of engagement, level of influence and style of dialogue. Friedman and Miles distinguish 12 levels of stakeholder management, as set out in Table 8. They emphasise that they do not advocate that all stakeholder relations be conducted at level 12, or at any particular level. It is likely that different stakeholder groups and the same stakeholder groups at different times will be treated at different levels and there may be good reasons for this to do so (Friedman and Miles, 2006), which is important to take into account in the further course of this research. The authors do however also mention that levels 11 and 12 represent bad practice, if done in isolation.

Table 8: A ladder of stakeholder management and engagement

		Management tool / nature of response	*Intention of engagement*	*Level of influence*	*Style of dialogue*
Degrees of stakeholder power	Proactive or responsive / trusting	1. Stakeholder control	Major representation of stakeholders in decision making process	Forming or agreeing to decisions	Multi-way dialogue, e.g. community projects
		2. Delegated power	Minority representation of stakeholders in decision making process		Multi-way dialogue, e.g. board representation
		3. Partnership	Joint decision-making power over specific projects		Multi-way dialogue, e.g. joint ventures
Degrees of involvement		4. Collaboration	Some decision-making power afforded to stakeholders of specific projects		Multi-way dialogue, e.g. strategic alliances
		5. Involvement	Stakeholders provide conditional support; if conditions are not met support is removed. Organisation decides extent of conformity	Having an influence on decisions	Multi-way dialogue, e.g. constructive dialogue
Degrees of tokenism	Responsive / neutral	6. Negotiation			Multi-way dialogue, e.g. reactive: bargaining
		7. Consultation	Organisation has the right to decide. Stakeholders can advise	Being heard before a decision	Two-way dialogue, e.g. questionnaires, interviews, focus groups, task forces, advisory panels
		8. Placation	Stakeholders can hear and be heard, but have no assurance of being heeded by the organisation		
		9. Explaining	Educate stakeholders		Two-way dialogue, e.g. workshops
Non-participation	Autocratic / cynical	10. Informing	Educate stakeholders	Knowledge about decisions	One-way dialogue, e.g. verified corporate social reports
		11. Therapy	'Cure' stakeholders of their ignorance and preconceived beliefs		One-way dialogue, e.g. briefing sessions, leaflets, magazines, newsletters, green glossy social corporate reports, or other publications
		12. Manipulation	'Misleading' stakeholders, attempting to change stakeholder perceptions		

Source: Friedman and Miles (2006)

3.4 STAKEHOLDERS AS MEMBERS OF THE INTERORGANISATIONAL LEARNING NETWORK

3.4.1 WHAT IS A STAKEHOLDER?

So, what exactly is a stakeholder? Over time, countless definitions of what or who is a stakeholder have been developed. In their chronology, Mitchell *et al.* (1997) already summed 27 leading definitions since 1963, and surely since the year of their publication the concept has been further explored and (re-)defined. A widely acknowledged definition still is the following: "a stakeholder in an organisation is (by definition) any group or individual who can affect or is affected by the achievement of the organisation's objectives" (Freeman, 1984 in Vos, 2003). A definition by IUCN that is more specific for ecosystem management is: "[a stakeholder is] a community, a public entity, a group or an individual

who organises itself, takes action to gain social recognition of its own interests and concerns and is willing to assume some task and responsibility for a given natural resource management unit" (Borrini-Feyerabend *et al.*, 2000). It is of major importance to gain insight in the stakeholders that should logically be members of the interorganisational learning network. There is a growing mandate among all sectors of society – public, governmental, business, civic, and environmental – to become collaborative stakeholders in dialogues about the management of ecosystem services (Manring, 2007). It is important to stress here that an interorganisational learning network to manage ecosystems is an open network, where stakeholders who feel in whatever way connected to the issue are free to join. As stated before, the purpose at this point is to provide theories and tools, for identification of stakeholders that should logically form the basis of the network, so that a measurement can take place to determine how well these tools have been applied. First, it is therefore necessary to know what these stakeholders are, and secondly what their level of involvement, as described by Friedman and Miles (2006) should be. A related question which is complicating the issue but for which an answer should be provided is the issue of time: what level of involvement is expected during the several project phases? An important strategic consideration lies at hand here: should all stakeholders be involved from the very first initiation of, in this case a restoration project? Is it desirable to collaboratively formulate aims and strategies while still many uncertainties exist about the feasibility of a project, which could in case of failure lead to tremendous disappointment? How to deal with the knowledge gap that often exists in the initial stages of a project, and the insecurity of realising the necessary funding? It might be sensible to wait for some time until a certain basis and framework has been established, before involving stakeholders and raising enthusiasm. An attempt is made here to discover how EarthCollective deals with these issues. First it must be noted that, since the current network under study is fairly young, it can be expected that a gap between the ideal situation and what is happening on the ground is to be found. As Mannigel (2008) concludes in his study: once participation was established, increasing involvement promoted a series of positive factors that enhanced each other. With increasing involvement, knowledge about the local and institutional realities grew through joint learning and planning (Mannigel, 2008). So again, we should keep in mind to regard the network as a process that is occurring right now, which inevitably originates in an imperfect manner.

3.4.2 IDENTIFICATION AND CLASSIFICATION OF STAKEHOLDERS

For the sake of clarity I once again recite Manring (2007): "a primary task of the net-broker function is to identify all stakeholders with vested interests and complementary resources", which is a motivation to put an additional emphasis on this aspect in this section. As a management problem the stakeholder identification is not easily solved: it comprises, at least, a modelling and a normative issue (Vos, 2003). The modelling issue refers to questions such as 'Who are our stakeholders?' or 'To what extent is it possible to draw the line between stakeholders?'. The normative issue refers to the managerial implications. Relevant questions are 'What stakeholders do we take into account?' or 'To what stakeholders are we willing to listen?' (Vos, 2003). In order to guarantee the normative content of the modelling practice, the various roles and their concerns in relation to the social [and environmental] system have to be specified (Vos, 2003). A first method to identify stakeholders is logically a spatial one. Fraser *et al.* (2006) do so, and immediately note that many populations, some of whom live far beyond the physical boundaries of local communities, can be affected by resource management decisions. The authors propose using a simplified model that shows major environmental pathways through a landscape, including atmospheric systems, aquatic biomass, aquatic systems, soil systems and terrestrial biomass (Fraser *et al.,* 2006). They describe an example of how forest harvesting lead to disturbance of soil systems, which impacted the flow of water, disturbing fish populations, leading in turn to mutually reinforcing interactions between aquatic and soil systems, destabilising slopes and causing landslides. It is therefore concluded that harvesting operations impacted a larger population than those whose activities took them into the forest; and included people who utilised local streams and rivers, and even who could simply observe the slopes beneath clearcuts felt the impact (Fraser *et*

al., 2006). This example is mentioned here since it shows similarities with the case that is currently under research. However, spatial location as a sole criterion is not sufficient. Mitchell *et al.* (1997) conclude in their article that no individual organisational theory offers systematic answers to questions about stakeholder identification and salience. Their theory, which is widely known and utilised by scholars such as Vos (2003) and Friedman and Miles (2006) suggest that to better understand "The Principle of Who and What Really Counts", stakeholder-manager relationships should be evaluated in terms of the relative absence or presence of the attributes **power** (the extent a party has or can gain access to coercive, utilitarian, or normative means, to impose its will in the relationship), **legitimacy** (a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions), and/or **urgency** (calling for immediate action) (Mitchell *et al.,* 1997), which is illustrated in Figure 7. IUCN provides a set of more practical tools to identify stakeholders, which involve issues such as historical data, customary rights of ownership or usufruct, migration, authorities, access, dependency, claims concerning customary rights and legal jurisdiction, knowledge, etc. (Borrini-Feyerabend *et al.*, 2000) – issues that can be placed in the 'power' and 'legitimacy', but also sometimes 'urgency' dimensions of the theory developed by Mitchell *et al.* (1997). Nevertheless, the IUCN authors do emphasise the importance of these issues in order to understand what are the social actors *entitled* to manage the unit(s) at stake. In this way, it is possible to obtain a list of factors and characteristics that at least some people recognise as legitimate 'roots of entitlement' in the local context (Borrini-Feyerabend *et al.*, 2000), which is especially important in natural resource management. Of course there are other tools for the identification of stakeholders, but providing an extensive literature study on this element would go beyond the purpose of this thesis. What is also shown in Figure 7, is that stakeholders can on the basis of the identification criteria and their relative score on it be categorised into low salient classes, moderately salient classes and highly salient stakeholders. Also non-stakeholders can be identified. Another method for categorising stakeholders is distinguishing them in two groups: 'the affected' (is affected), and 'can affect' (the involved). According to Vos (2003), this is an important classification method, especially in the context of corporate social responsibility, however she also mentions that this method may be widely seen as insufficient for stakeholder identification and categorisation. Another method is the categorisation into 'primary' and 'secondary' stakeholders, for which several criteria can be used depending on the situation. Although not explicitly elaborated how, Borrini-Feyerabend *et al.* (2000) suggest to use entitlements as a basis for this classification. Again, there are more theories that shed light on this. However, the purpose here is solely to show their existence, in order to being able to verify if any of those (or any other) has been taken into account and applied by the network under investigation.

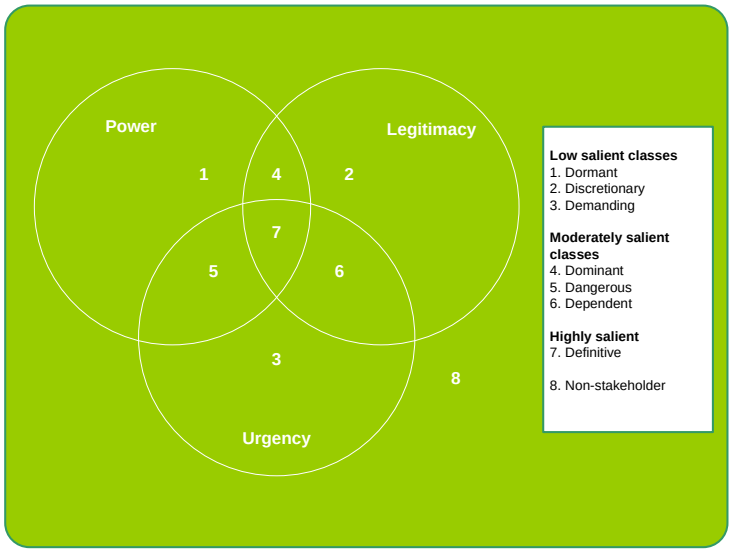


Figure 7: Model of stakeholder salience
Source: Mitchell et al. (1997)

3.5 CONCEPTUAL FRAMEWORK

The previous discussion assessed various theories on the learning organisation, interorganisational learning networks and participative management. This information served as a foundation for the development of a specific conceptual framework, which could serve as a basis for structural analysis in this study. The following considerations guided the delimitation of the study: first the theories of Senge (1990), Strichman *et al.* (2007), Garvin *et al.* (2007), James (2003), Jerez-Gómez *et al.* (2005), Moilanen (2005), Snell (2001), Pedler *et al.* (1991) and Jamali and Sidani (2008) on the learning organisation were used to create ten core dimensions (Table 1, Table 2 and Table 3). Because it appeared that this body of literature was mainly concerned with intra-organisational learning while the current platform analysed has the form of a network, five dimensions were added from the theory on intra-organisational learning networks as developed by Manring (2007). In order to realise this, the ten dimensions distilled from the literature on learning organisations were compared with the twelve dimensions distinguished by her (Table 4). This resulted in the identification of fifteen relevant dimensions for assessing the functioning of intra-organisational learning networks. Since the current research is dealing with a network which involves a range of stakeholders differing to a large extent in terms of available resources and power, it was also considered necessary to include four critical dimensions on participation and participative management, which were distilled from the earlier discussed theories in this field. One dimension covering general issues on membership and perceptions was added. In this way, overall nineteen dimensions for study were identified. These were categorised into six major themes serving as an analytical framework for the study: **stakeholder inclusion and participation; perceptions and attitudes; learning**; **leadership and facilitation**; **shared vision and approach**; and **knowledge dissemination** (Figure 8).

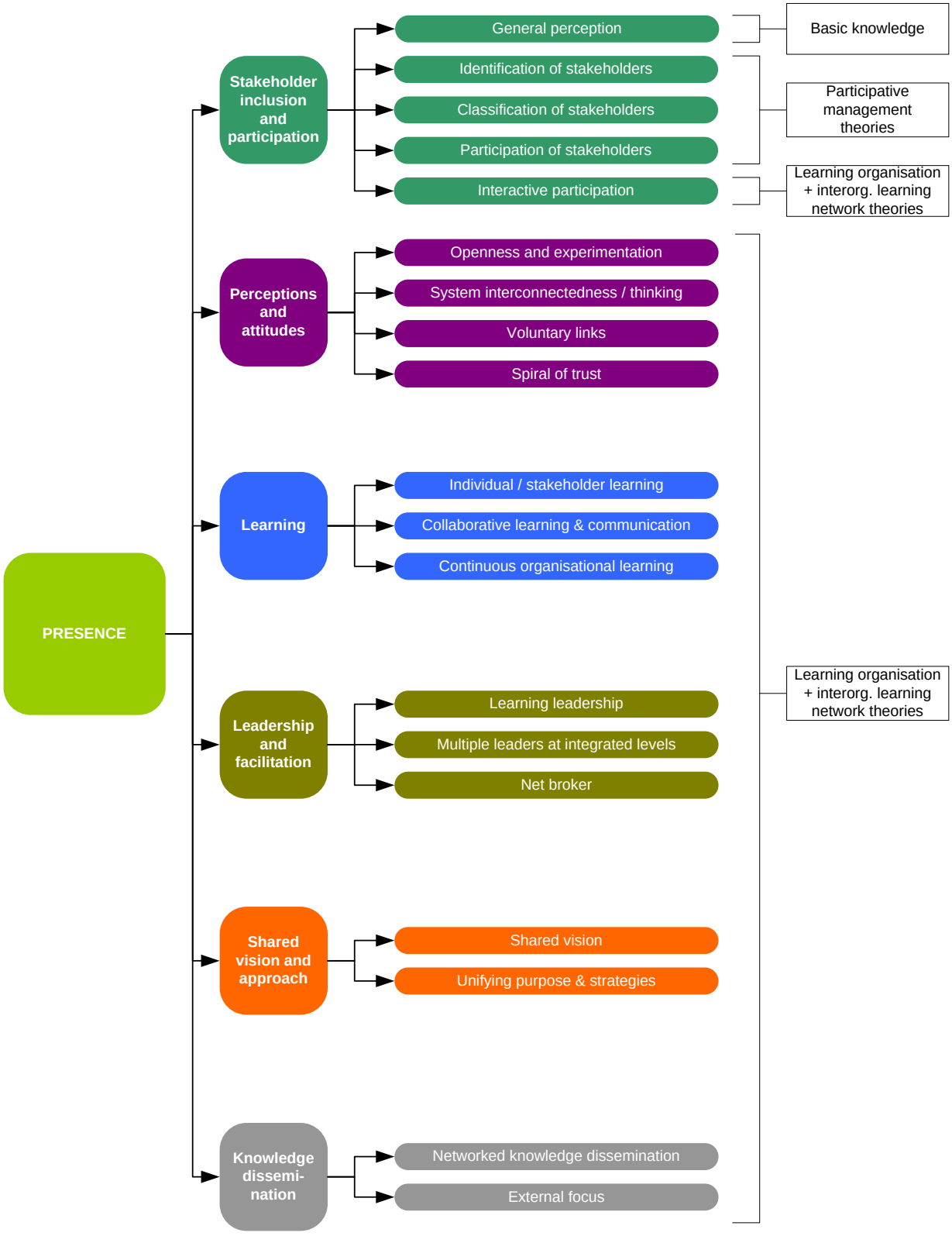


Figure 8: Conceptual framework

4. RESEARCH OBJECTIVE

The objective of this research, based on the problem definition as previously described:

> ***To contribute to the further evolution of PRESENCE as a learning network by assessing its current performance in relation to the dimensions of such networks***

Based on the conceptual framework presented in chapter 2.5 this objective was operationalised in the following research questions:

1. **How is PRESENCE performing on the six themes identified in the theoretical framework?**
    - **a.** How does the PRESENCE network perform in terms of **stakeholder inclusion and participation**?
    - **b.** What are the **perceptions and attitudes** of (potential) network members on the PRESENCE network?
    - **c.** How does the PRESENCE network perform on the different forms of **learning?**
    - **d.** How does the PRESENCE network perform and move along in terms of **leadership and facilitation**?
    - **e.** To what degree is a **shared vision and approach** achieved in the PRESENCE network?
    - **f.** How does the PRESENCE network perform on **knowledge dissemination**?

2. **What conclusions can be drawn on the current performance and gaps therein concerning PRESENCE as a learning organisation/network?**

5. RESEARCH METHODOLOGY

5.1 RESEARCH DESIGN

As has become obvious in the formulation of the research objective and research questions, the current research is practice oriented and serves to provide recommendations on how to find solutions to phenomena occurring in reality. The research objective is related to knowledge that needs to be generated (assessing performance) with regard to a specific problem (how contribute to the further evolution of PRESENCE). The character of the research is explorative as well as action-oriented: theories on learning organisations and networks that have only scarcely been applied in the context of natural resource management are operationalised in order to test the situation on the ground, after which recommendations are provided.

5.2 SELECTION OF RESEARCH OBJECT

Selection of the research object is directly related to the area the PRESENCE Baviaanskloof network is concerned with, covering the Western Baviaanskloof, Eastern Cape, South Africa and the nature reserve. This includes a large area of land owned by a range of different groups and individuals plus the Baviaanskloof wilderness area, which has recently been assigned the status of UNESCO World Heritage Site.

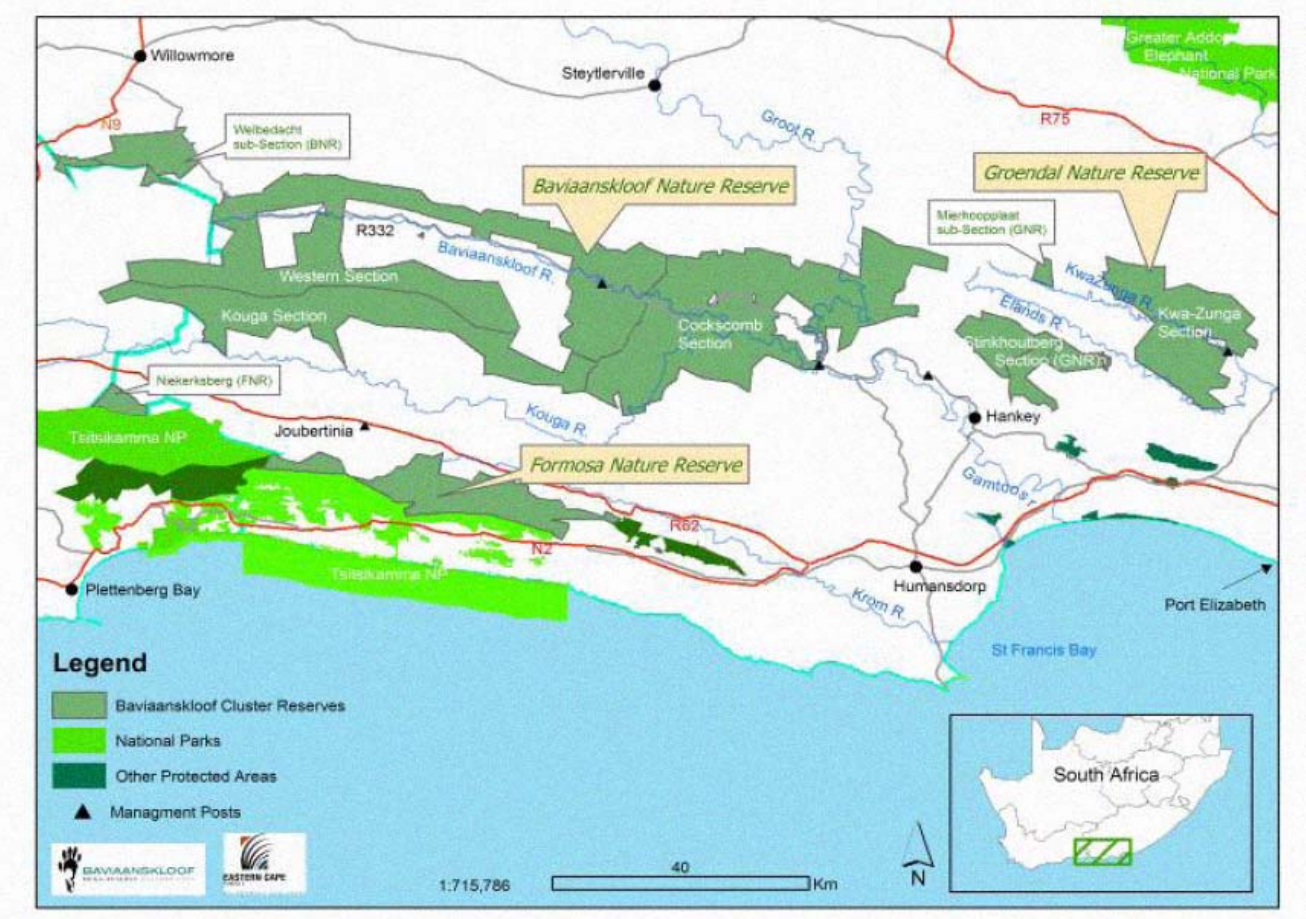


Figure 9: Study area

5.3 SELECTION OF RESPONDENTS

Selecting the participants for this study was not an easy task, since it was initially unclear who is part of the network and who is not. And even if this would be clear, it would be impossible to reveal whether the network was complete or not. It is actually an important task of the net broker in a network to understand and determine who should be in and who should be out. The theoretical framework describes several instruments that could be used to identify network members (stakeholders), which is operationalised in one of the tools in this research to measure performance. Still, somehow the participants that should be under research needed to be identified and delineated. The PRESENCE network currently formally includes eight core members, of which most were approached and interviewed since they could tell most about the performance of the current network. Due to limitations in time and resources it was not possible, however, to realise an interview with all of them. Other stakeholders are not a formal member of the network, but are (to be) affected by outcomes of the network, or have been involved in meetings and contributed knowledge and ideas. These stakeholders were initially selected on the basis of the work of Noirton (2007), who conducted a stakeholder analysis in the Western Baviaanskloof for PRESENCE. Participants from the different groups were selected in a numerically balanced way. However, the selection of participants in this research should be regarded as an iterative process: during the interviews participants were consciously probed whether they would know of other people or groups that could be of relevance for the network and should be included. This is also inherent to explorative social research in this field: the snowball effect occurring while conducting the research.

5.4 METHODS FOR DATA COLLECTION

The main instrument used for the operationalisation of this research is a “mother measuring instrument” (Appendix IV) which covers nineteen dimensions as distilled from the literature: one dealing with general questions, fifteen on the learning network and three on participative management. These dimensions involve different sample items, containing questions designed for either interviews with (potential) network members and net brokers, observation and/or content analysis. As becomes apparent methodological pluralism, or data triangulation is applied for this research, because “no single method or discipline can ever capture the richness and complexity of organisational reality; a single perspective is always only a partial view and unnecessarily restrictive” (Michailova and Husted, 2002). From the mother instrument different separate interview guidelines were created in MS Excel format. During interviews with scientists, government officials and some white land owners answers provided were directly inserted into the laptop during the interview since no negative impact of the presence of a laptop was expected there. During interviews with some white land owners and all senior local inhabitants and coloured community members a printed hard copy with questions was used, and answers were written down on paper since it was considered inappropriate to use a laptop on such occasions. Some questions were translated into Afrikaans, because coloured community members and senior local inhabitants generally only speak this language. In these instances a local translator was used. Although it is realised that this might have resulted in some bias, this is expected to be very limited since the author of this thesis is a native Dutch speaker and, after some practice, was able to understand practically everything that was said in Afrikaans.

Figure 10: Visiting coloured community member for interview

Picture: Matt Zylstra

Semi-structured interviews with the various (potential) network members were conducted. The advantage of (semi-structured) interviews is that it is a good way of accessing people's perceptions, meanings, definitions of situations and constructions of reality (Punch, 2005). However, simultaneously this method brings with it that respondents are aware of being studied, and the method might be experienced as being obtrusive, especially when encroaching into a local community. During the performance of the current research, and being aware of this, it has been strongly attempted to avoid the latter to occur. Another side-effect of interviews in this particular case was that unintentionally the researcher sometimes appeared to operate as the net broker by increasing the awareness of (potential) network members through the interaction on certain issues. The effects of this are twofold: on the one hand it might have led to positive results such as higher appreciation and increased consciousness of the importance and indispensability of PRESENCE as a network and what it involves, a typical net broker task – that is: knowing what is occurring within a network, taking network members' opinions into consideration, understanding what knowledge and information flows exist, etc. On the other hand it might also have resulted in bias. An example is for example a meeting organised for white land owners where student researchers presented their preliminary results, where the author of this thesis had to deliver a presentation but also observe what was exactly happening during the meeting. Consequently, it appeared sometimes impossible to remain uninvolved in the matter. Bearing that in mind, extra caution was exerted in order to remain objective and particularly critical in the outcomes of this research. In order to guarantee the reliability of data, sometimes respondents were visited again to re-evaluate certain issues.

Three net brokers were interviewed for this thesis: Dieter Van den Broeck, Matthew Zylstra and Silvia Weel. Currently, these three people are the local members of EarthCollective and responsible for its activities, which is mainly the facilitation of the PRESENCE network.

Observation was another technique of collecting data. Different meetings were organised by the net broker. During these meetings different elements related to the sample items based on the dimensions distilled from the theory were monitored. This includes elements such as the form, structure, content and presentation of the meetings, but also the approach and behaviour of net brokers during these meetings was observed. Prior to the actual round of interviews with local inhabitants, most were visited once to understand more generally what the issues were and what types of experimentation were conducted. Usually the land owner was kind enough to take us into the field and show in practice what was happening. A second purpose of this first round of contact was establishing a bond and build trust with those to be interviewed in order to achieve more depth and so gain more results from the actual interviews.

Furthermore, document and content analysis took place. Material produced and issued by the net broker was consulted, which includes a strategic implementation plan, agreements, presentations, videos and handouts used during fieldtrips and meetings. Also previous reports produced by student researchers on behalf of the net broker was consulted and considered as a product of the net broker since it was them who determined the need for the studies conducted and they also use the outcomes as core knowledge. The student researchers in this respect could be regarded as external consultants providing knowledge and recommendations to the net broker, however it could be argued that during their research they actually temporarily become part of the net broker. Not only because of their interaction with stakeholders (which is more often than not the case), but also because they are involved in organising different activities (fieldtrips, workshops) and they are usually delivering their (preliminary) results during the course of their research.

5.5 METHODS FOR DATA ANALYSIS

Interview results were immediately added to an MS Excel file, so that answers to one question were structured in a well-organised way. This facilitated the method of comparing, which could then easily be applied. As Punch (2005) writes, the systematic and constant making of comparisons is essential to conceptual development at all levels in the analysis of qualitative data, because it enables us to identify more abstract concepts. Indeed, when studying every series and/or cluster of answers it was attempted to catch the essence behind those answers, or at least a division of them. Accordingly, answers were categorised into different groups, which were determined for each question separately – depending on the sample item, question and answers provided. Next, these answers were summarised and conclusions drawn. In certain cases, the answers were visualised by developing a pie chart, and in the case of knowledge dissemination different answers were combined in order to arrive to specific models. Furthermore, net broker replies were conjoined for each sample item, after which again a comparative analysis per item was conducted in terms of content and congruency. Results from observations (if present) and the various essential information from document analysis were examined and placed into the right dimensions. These three types of data were then aggregated in order to arrive to correct, objective and coherent conclusions (Figure 11).

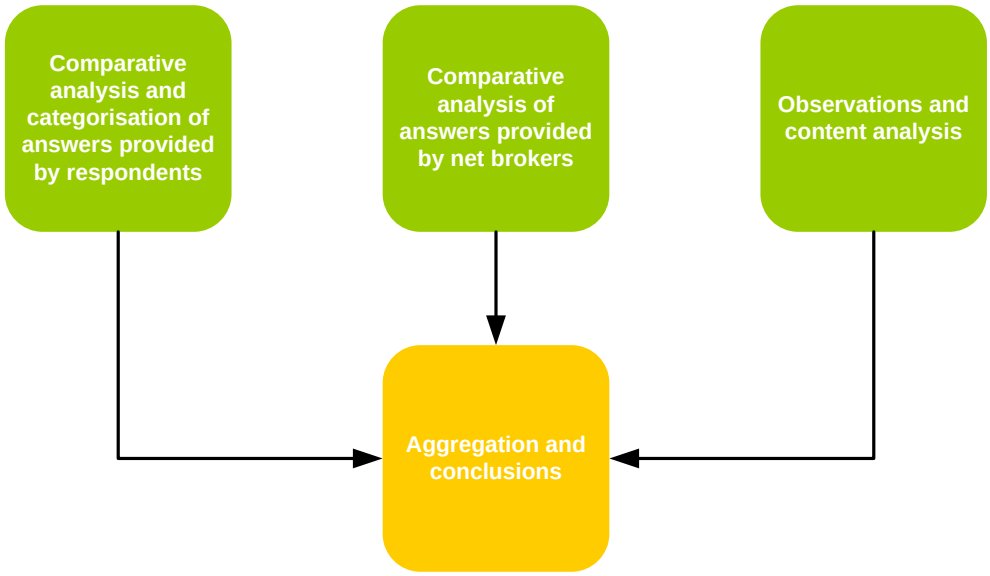


Figure 11: Methods of data analysis

6. RESULTS

This section provides the results of interviews with (potential) network members, net brokers and observations made in the course of the research. The chapter contains six sections, each containing results on one of the themes as described in the conceptual framework and related research questions. Within the different sections, a systematic structure for presenting results was used: first the results of the results obtained from network members has been worked out, followed by a review of the answers provided by the net brokers, and a description of relevant observations made. The different sections are subdivided on the basis of identified dimensions in the conceptual framework. Bearing in mind the readability and structure of the results section, it was decided to place tables with summarised and categorised results of interviews with (potential) network members in Appendix I; a structured transcript of the interviews with the net brokers is present in Appendix II. Within the sections, references are always made to the matching tables and interviews as provided in these appendices.

For clarity purposes, the way this chapter has been structured is explained with an example. When reading paragraph W.X.Y.Z, this means that **W = chapter** (results), **X = main theme** (e.g. attitudes and perceptions), and **Y = dimension** (e.g. openness and experimentation).

6.1 STAKEHOLDER INCLUSION AND PARTICIPATION

As was indicated in the theoretical framework, an essential issue in a learning network concerns the question of which stakeholders are involved and how they are selected. For that reason, the dimensions on stakeholder identification, classification and participation as derived from the theoretical framework have been included first, which is important for further understanding throughout the results section. This chapter commences with the results that aid in gaining insight in general perceptions of those stakeholders on the nature and essence of PRESENCE and the role of EarthCollective.

6.1.1 GENERAL PERCEPTIONS ON PRESENCE AND MEMBERSHIP

Distribution of network members

This section deals with gaining understanding in PRESENCE and EarthCollective by respondents which is required to gain understanding in how they feel related and/or member. Chapter 6.2 will further discuss perceptions and attitudes on other dimensions of the network. Recapitulating from the research methodology: relevant stakeholders are current official members of the network which have been selected by the net broker. According to the net brokers scientists have been selected on the basis of scientific relevance and government officials on the basis of involvement and links on either spatial qualities, topic and/or funding affairs. Secondly, local stakeholders have been selected on spatial criteria. This has occurred on the basis of the thesis by Noirtin (2008), who conducted a stakeholder analysis in the Baviaanskloof on behalf of EarthCollective. However, as will be more clearing during the course of this section, during the current research certain limitations were identified. For this research, it was necessary to build further on her work, basically meaning that certain stakeholder groups were sometimes broken up because of their apparent diversity, or that new stakeholders were identified. Figure 12 illustrates the distribution of the 30 interviews in simplified terms. However, within the different strata a large variety in respondent types exists (Appendix I, Table A). During four interviews two or more respondents were interviewed simultaneously. However, in the further analysis of results, one interview is considered equivalent to

one respondent. In the further course of this thesis the expression "local communities" is often used. Local communities in this context include coloured communities as well as white land owners and the alternative community living in the Baviaanskloof. If meant otherwise, a specific reference to such individual groups was made.

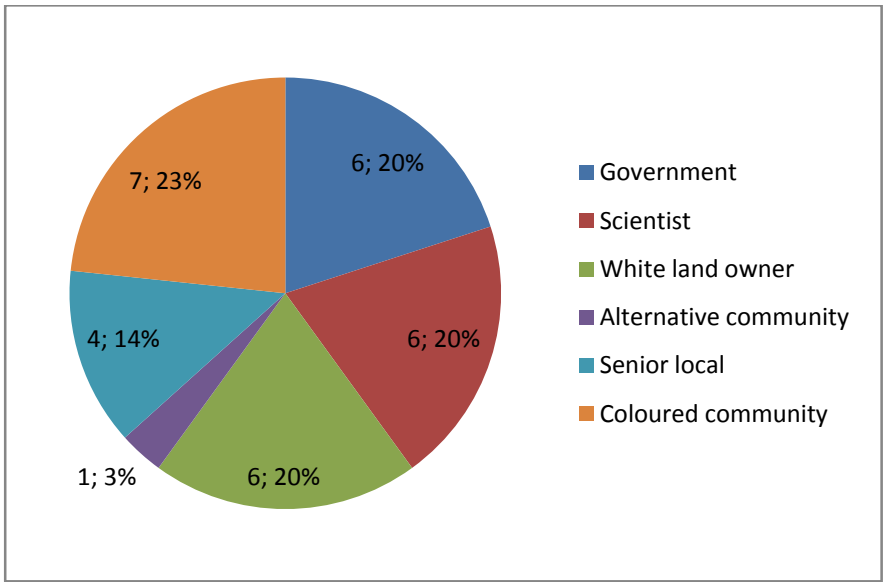


Figure 12: Distribution of interviews

Familiarity of respondents with PRESENCE and EarthCollective

Figure 13, Figure 14, Figure 15 and Figure 16 show to what degree stakeholders are familiar with the Spekboom/thicket project, PRESENCE and EarthCollective, and to what degree they feel affiliated to the PRESENCE network.

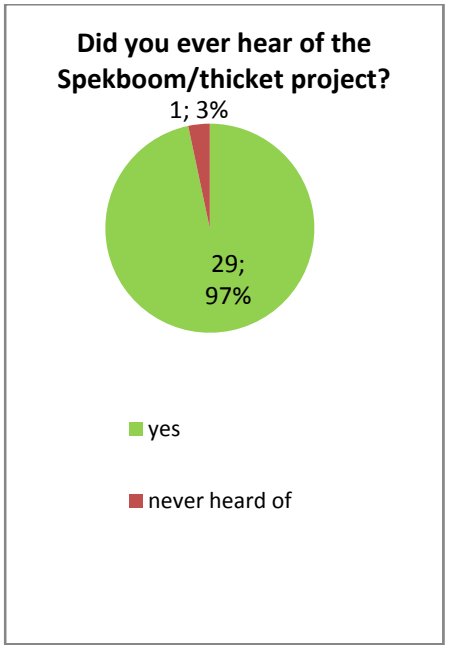


Figure 13: Familiarity with Spekboom project

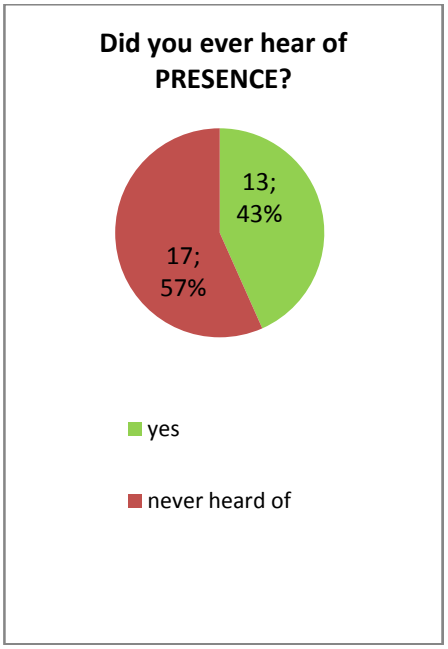


Figure 14: Familiarity with PRESENCE

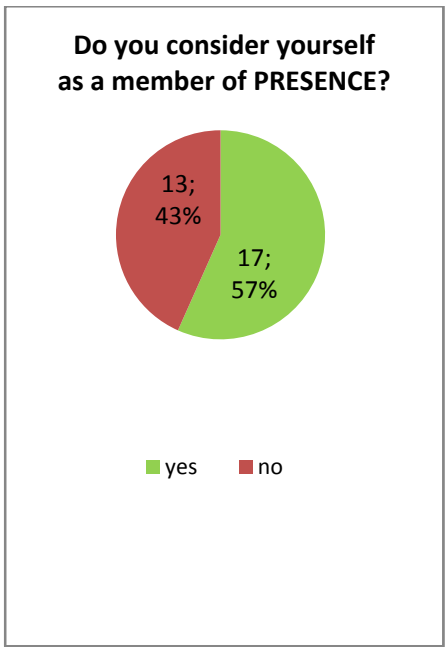


Figure 15: Affiliation with PRESENCE

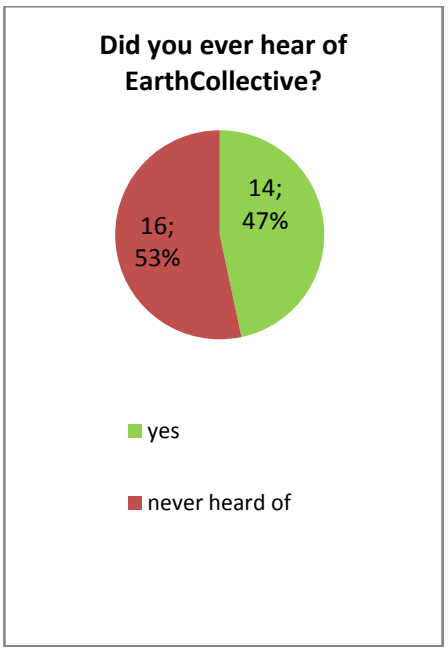


Figure 16: Familiarity with EarthCollective

It appears that practically all stakeholders are familiar with some Spekboom/thicket project (STRP, essentially), whereas considerably less (on average 50%) know about PRESENCE or EarthCollective. Those who never heard of PRESENCE and EarthCollective were mainly local inhabitants. A relatively empowered community member, running a restaurant in the Baviaanskloof reported: "I do not know anything about a Spekboom project, and I do not believe that at Zaaimanshoek community meetings people have spoken about the Spekboom project". One of the farm dwellers interviewed mentioned to have heard of the Spekboom project from friends, but that no one from the organisation came to explain it. On the other hand, two inhabitants of Zaaimanshoek (father and son) indicated to know about the project, since the son had actually worked for the Working for Water programme as a contractor. Thereby, most local inhabitants did see things happening on the ground (mainly STRP trial plots), which is why they know there is something going on with Spekboom and which explains the difference in familiarity. It must be noted here that the number of respondents stating to consider themselves to be a member of PRESENCE appears to be higher than the number of respondents who heard of the network, which seems illogical. However, after the initial question ("did you ever hear of PRESENCE?") it was explained by the researcher what the network actually was. Some respondents, after gaining this understanding, mentioned that they do actually feel a member of the PRESENCE network.

Perceptions of the essence of PRESENCE network by respondents

The thirteen respondents confirming to have heard of PRESENCE all did an attempt to describe what it signified (Appendix I, Table B). The most important conclusion that can be drawn is that perceptions are very diverse, from "informal/facilitating network", to "capacity building resource", to "affiliation of individuals and organisations working towards a collective vision", to "integrated environmental management initiative, to just "research". It is important to note here that PRESENCE was also five times referred to as "coordinator", or "facilitator", which indicated a confusion with what is EarthCollective.

Perceptions of the role of EarthCollective by (potential) network members

Thirteen respondents provided a description of what EarthCollective signified from their point of view (Appendix I, Table B). Sometimes the initial description of PRESENCE was altered, since respondents realised with this question that they confused PRESENCE with EarthCollective. Descriptions of EarthCollective included the following diverse yet similarly flavoured responses: "(post graduate) students doing research", "altruistic driven organisation to do ecological good in various parts of the world […]", "a sister union of world service", "overarching group of people of having this idea of setting up facilitation networks around the planet", "Non Profit Organisation of Wageningen students, with PRESENCE as a spin-off", "Dieter, Matthew, Silvia acting as a cross-pollinator". Three respondents were confused and did not understand the difference between PRESENCE and EarthCollective.

Those involved in the current PRESENCE network as perceived by respondents

It must be noted here that for this sample item purposely an open question was posed to understand what answers naturally came to respondents' minds. Twelve respondents were able to answer this question (Appendix I, Table D). It appeared that respondents in total mentioned twenty-six different organisations (of which some are overlapping, e.g. academic institutions and Rhodes University), with DWAF (10), R3G (8), CSIR (7), GIB (7) and EarthCollective (5) most frequently mentioned. Interestingly, many of the organisations and individuals mentioned actually are no members of the current network. Local communities were mentioned several times: farmers (3) and local communities (2). ASSET, being an official member of the PRESENCE network, was unmentioned. Furthermore, all official members were mentioned, of which the majority was among the most frequently mentioned.

Perceptions of the essence of PRESENCE and EarthCollective by net brokers

The net brokers describe PRESENCE as either a network or a platform. Two of the net brokers mention the complexity and heterogeneity of the network, and describe how an important difference exists between PRESENCE as an umbrella network, and PRESENCE Baviaanskloof. PRESENCE Baviaanskloof is actually a case study, with local stakeholders involved who are generally not part of the bigger PRESENCE umbrella network in which scientists and governmental officials are permanently seated. Other keywords that are mentioned by net brokers are transdisciplinarity, north-south cooperation and the restoration of living landscapes. EarthCollective is described as initiator, enabler, facilitator with a final goal of capacity building with a focus on relationships and the way people's way of working is incorporated within the network. Furthermore, net brokers state that EarthCollective is a very adaptive team and that in the future it should be less and less involved – local social capacity should be able to take over its role.

When comparing the answers to the question concerned with who are the actual members of the network, some inconsistencies appeared and new questions emerged. First, what exactly is a formal member of the network? It was explained by net brokers that a common verbal agreement forms as a basis, and that no official document is signed. It is yet unclear if this means formal membership of PRESENCE umbrella or PRESENCE Baviaanskloof. Although one umbrella network with a subnetwork appears to exist, it appears that it is only possible to be a formal member of the overarching one, and not of the local one. Secondly, the net brokers emphasised the difference in PRESENCE as an umbrella organisation and PRESENCE Baviaanskloof, but it appears not yet completely clear who is a member of each. GIB as an implementing agency for example is a local government agency, but is considered a formal member of the PRESENCE umbrella network. ECPB on the other hand is a regional management authority covering the entire Eastern Cape and could (depending on future directions) be regarded as a formal member of the umbrella network, whereas it is not. Furthermore, DLR, DLG and WWF are each mentioned once by one of the net brokers as being part of the umbrella network and Baviaanskloof subnetwork, whereas the others do not mention them (Appendix II, Table A).

Since it has become obvious that it is not entirely clear which stakeholders are a member of the PRESENCE network (either Baviaanskloof or umbrella), and since it would go beyond the purpose of the current research to determine anything on this matter, from this point those interviewed are referred to as "(potential) network members".

6.1.2 IDENTIFICATION OF STAKEHOLDERS

Inclusion of all relevant stakeholders according respondents

Figure 17 shows the distribution of answers provided by the thirteen respondents who knew what the PRESENCE network was, and for that reason were able to reply to the question whether they felt all relevant stakeholders were now included in the network. It appears that respondents do not agree with each other on this issue, with 4 (31%) stating that this is the case, 5 (38%) of the opinion that this is not the case and 4 (31%) of respondent not knowing whether all relevant stakeholders are included at this point of time. As set out in Appendix I, Table E, some respondents founded their answer, which included the following remarks: "if the purpose is to have a research network, yes – so I would suggest to have a separate forum for implementation, where you can involve the local communities, farmers, etc. and a limited representation of the PRESENCE network as well"; "from a farmer side all groups are involved"; "not convinced, identifying is difficult"; "doubts, difficult one is municipalities – you have to be careful with involving too many organisations"; "yes, I think so, most people that have an influence are on board"; "not sure whether it is necessary to sit on the table with all people – scientists, GIB, etc. It may become more bureaucratic and I prefer the way it is going now – it is not a governmental thing, but a private thing". One respondent thought out loud: "I battle with the boundaries. I think you can never put very clear boundaries. But regarding the work that's done, especially in the Western Baviaanskloof, how can you not consider… Of course local communities are part of the network. It's not like a club, so they are naturally part of it. But as the project moves on, they might be out of it again, being a separate entity. But for example in the strategic workshop in Port Elizabeth... How do you engage them? It wouldn't necessarily have to be everyone you're dealing with. It depends on the purpose (for example fieldtrip water management), so sometimes you need subgroups for that. But it fluctuates all the time, it's not static". Again, respondents appear to struggle with the structure and nature of the network, which explains the variety in answers provided: does the network have a scientific purpose or a purpose of restoration? What are the boundaries of the network? Are respondents referring to the PRESENCE Baviaanskloof network, or the PRESENCE umbrella network, and do they realise the difference? For example one farmer mentions that from their perspective all relevant groups are involved, while they themselves are actually not officially – which is also shown by the fact that some do believe they are a network member, while others do not. There are also further questions related to the structure of the network: is it one big network, or should we regard it as a network with subnetworks? And how about the possible bureaucracy that may increase in this case, and/or in the case the network further expands? Most questions are related to the purpose of the network(s), as will become apparent in the next section the application of identification methods, so it is very important to have a close look at these different dimensions before arriving to conclusions.

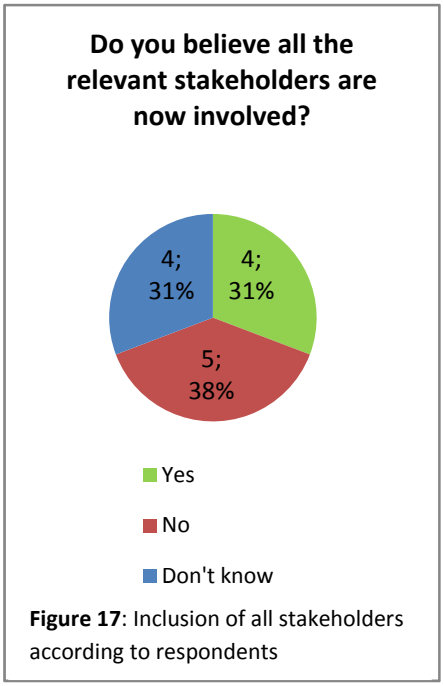


Figure 17: Inclusion of all stakeholders according to respondents

Information from net brokers on the identification of stakeholders

Research conducted for the identification of stakeholders

The net brokers provide different information on this issue. One of the net brokers mentions that through the reports of student researchers (Lorencová, 2008; Noirtin, 2008) this has been done. This net broker continues: "The students are like the arms of the network; they are in the field and know what's going on, and at the same time also help in building trust. Concerning the stakeholder analysis, I would do it differently if I look back, process-wise. Indirectly we did research by talking with people". One of the other net brokers mentions that no specific identification of stakeholders has been realised, but that it is a by-product from research: ideas for potential new network members come from all directions – farmers during farmers meetings (for example one land owner mentioning DEAT), and also through students and my own research. The third net broker mentions that an assessment of stakeholders was made when PRESENCE was in it's seed phase, which was necessary writing the proposal for PRESENCE. Before the strategic PRESENCE workshop in 2007 another assessment of current and potential partners was made, whereby also the farmers were put together, according to this net broker.

Research conducted aimed at identifying stakeholders on the basis of criteria related to space, power, legitimacy, urgency (salience) and/or roots of entitlement

One of the net brokers mentions there has been no identification on spatial criteria; one refers to the report of Lorencová (2008). The third net broker explains that the case of PRESENCE Baviaanskloof is directly related with space and so involves the representatives of the different groups of interest. When it comes to identification on the basis of power, legitimacy and/or urgency (salience), according to one net broker there has not been such method applied. Again one of the net brokers refers to Lorencová's work (who did not apply such method). The third net broker describes that for the PRESENCE umbrella network partners/stakeholders have been selected on the themes of different scientific disciplines (expertise) and decision making power (e.g. Christo Marais, DWAF), also on a local level. Thereby, potential partners were selected on personality - some people were expected not to fit into the network -, which also really has to do with politics, according to this net broker. When asked whether stakeholders were selected on the basis of 'roots of entitlement', none of the net brokers provided an answer – one referred again to the report of Lorencová.

Criteria for determining which stakeholders are members of the network, and which are not

Two of the net brokers emphasise here that it is important to distinguish between PRESENCE Baviaanskloof and the PRESENCE umbrella network. Within the PRESENCE umbrella, one of the net broker mentions, the criterion is "people we have contact with, and have been there since the beginning. In the strategic workshop in November 07 people stood up and helped setting up the network, those are in. People who were involved in STRP, and now with Baviaanskloof Water Catchment (DLG for example)". The other net broker mentions here as an including factor: "what they can bring to the network. I think if I look at the network now, most boxes are ticked. You look at the network, and think: yeah, now we're pretty complete. Also make sure you don't double, because that may create conflict". For PRESENCE Baviaanskloof the criterion is, according to one net broker, "those who have a stake in the Baviaanskloof, especially local landowners who have to be involved in restoration - and who are influenced". The other net broker mentions here: "the Baviaanskloof, it's a spatial criterion - in the valley but also outside, e.g. municipality".

Identification of the various roles of stakeholders

The roles of stakeholders have not been officially identified, replies one of the net brokers, "but we know it ourselves – so unofficially, yes". However, this net broker also comments that more expertise on how to do it exactly is required, by involving someone who is stronger at social engagement – for example from Michelle Cocks (Rhodes ISER) or Andrew Knight (Stellenbosch University). The net broker furthermore mentions that "maybe we should have involved Michelle more in the beginning,

but this was difficult due to personal developments on her side". The other net broker explains that on the broader level the roles have been defined, and that this was also one of the remarks after the Zandvlakte agreement (strategic plan 2009-2015) – the fact that roles and responsibilities should be better defined. This net broker continues: "we have been working on that. In the Baviaanskloof, their role is that they can be cooperative".

Identification of the concerns of stakeholders in relation to the social and environmental system
All net brokers confirm that the concerns of stakeholders have been identified. One of the net brokers mentions that they are aware of social issues on for example fire management and how this is a difficult political issue, and waste management. One of the other net brokers mentions that this is also a by-product from student research and from one-to-one conversations with communities, and by attending farmers meetings (four times per year). The third net broker immediately mentions Janssen's thesis (2008), one of the student researchers looking into socio-cultural values of ecosystem services in the Baviaanskloof, for which she applied the Peddle distribution method from which it became clear what exactly was most important for (coloured) communities. This net broker also refers to Noirtin's work (2008): "who is willing to restore and why?".

Keeping track of resources and competencies of stakeholders
This issue remains largely unanswered by the net brokers – one replies that they are not able to do this, but try to see it in workshops.

6.1.3 CLASSIFICATION OF STAKEHOLDERS

Information from net brokers on the classification of stakeholders

Since this is a dimension not suitable to confront (potential) network members with because it is something that typically needs to be done by a leading or facilitating authority, so no question was included in the interviews.

Classification of stakeholders
When asked whether stakeholders have been identified on the basis of distinguishing between 'those affected' and 'those involved', two net brokers mentioned that this is not the case. One of the net brokers mentions that this has been done, and that this is the way EarthCollective learns and monitors how reactions will be. Replies on the question whether any other form of classification might have taken place include the following: two net brokers distinguish between the PRESENCE umbrella network and the PRESENCE Baviaanskloof network. According to one of the net brokers, the PRESENCE umbrella network is classified in three groups: science, implementers and funders. The other net broker explains that this network is classified on the basis of themes/disciplines and on the other hand science/decision makers. In the Baviaanskloof, one net broker distinguishes between "science who creates the products, the funders, implementers, but also the beneficiaries (in the middle). I actually see the farmers also as funders, because they offer their land. They should realise though that the project also offers them benefits. Science is at service for everyone." One of the other net brokers mentions how the classification here started out as farmers, communities and hippies, but that now there is also a distinction within the farmers: lifestyle farmers with more tourism orientation and traditional farmers. This net broker further continues: "communities I think you can bundle, although there are differences between Zaaimanshoek and Sewefontein, and then you have ECPB and the municipality". The third net broker refers to the "old" classification as set out by the previous net broker: farmers, communities and hippies. This net broker furthermore states: "we did not really go into literature, but we have it in mind". In an article by one of the net brokers – which does not distinguish between different networks –, six groups of stakeholders were identified: farmers, communities, researchers, managers, implementers and facilitators (EarthCollective, 2008b). Noirtin (2008) conducted an analysis of stakeholder interactions and involvement in thicket restoration in the

Baviaanskloof on behalf of EarthCollective. Although she generated fundamental new information on stakeholders, the thesis seems to lack a well-described and well-analysed stakeholder identification tool (mainly on services). In her thesis she apparently also struggled with this: "Another problem is the selection of stakeholders…. It is also possible that other stakeholders that use or affect the thicket ecosystem functions and services have not been identified"(Noirtin, 2008). Neither did she apply any classification tool based on empirical theories.

6.1.4 PARTICIPATION OF STAKEHOLDERS

Stakeholders outside the PRESENCE network that should become a member

Prior to asking respondents which stakeholders outside the PRESENCE network should become a member, it was revealed which organisations and groups are currently regarded as such. For this item, the PRESENCE Baviaanskloof network was used as a basis. Respondents in total came up with fourteen groups and individuals that should be included in the PRESENCE network (Appendix I, Table F). Those most frequently mentioned were local coloured communities – Zaaimanshoek, Sewefontein, farm dwellers – (9); white land owners/farmers (6); Department of Agriculture (6); more involvement of DWAF, also water sector (3); and municipalities (2). The Department of Land Affairs, DEAT, Provincial department of environmental affairs, Nelson Mandela Metropolis – clients, water users –, local coloured communities in Cambria, WWF, "pollutors", Andrew Ansli – communal lands expert in ISER – and "all those who want to participate in restoration" were mentioned once. It becomes apparent here that many of the stakeholders believe that local inhabitants of the Baviaanskloof should be included in the PRESENCE network. During the interview some of the community members themselves noted that they would like to work together more with other groups to develop things, participate more in the project and get more information about it. Notably, however, according to one of the net brokers a large sum of money was suddenly available in 2007 which was proposed to be spent on Spekboom planting in Sewefontein and the Trust actually rejected this, which seems contradictory. Also the Department of Agriculture is mentioned frequently, and one of the respondents adds there that it is important that this should happen as soon as possible since it might lead to problems when they are included too late; given that they might feel excluded and offended. More involvement of DWAF (also mentioned by the DWAF representative interviewed) appears to be important to several of the network members, as well as involving certain municipalities. These suggestions, in combination with one respondent mentioning the provincial department of environmental affairs, indicates that in general more involvement of government agencies on different levels is recommended by respondents.

Interpretation of net brokers on participation of stakeholders

Inclusion of all identified stakeholders in the PRESENCE network

All net brokers immediately focus on the local inhabitants when this issue is raised. One of the net brokers mentions to wish seeing the communities much more involved, and believes that EarthCollective should start empowering them in relation to the restoration programme: "making them really part of the decisions". One of the other net brokers also mentions that the communities could be better involved, and mentions to achieve this with the realisation of the learning village and by using champions to transfer information, and by doing so create a link to these communities. This net broker furthermore believes EarthCollective is doing a good job with regard to involving the farmers (white land owners) and explains that the focus has been mainly on them because "without having them behind you restoration is not possible since they possess the land where restoration should take place, whereas coloured communities do not have any land to restore". One of the net brokers also explains how a language barrier complicates things, not only linguistically but also culturally. This net broker furthermore mentions there has not always been sufficient input from on the ground, and from workers. The third net broker mentions: "Communities and farmers are part of

the Baviaanskloof PRESENCE network, but not of the broader PRESENCE network. It's not that I want to exclude them, and they are welcome to higher meetings, but just a matter of structural purposes".

Difference in stakeholders' level of participation caused by characteristics and time

Net brokers were asked first whether they expect a different level of participation from each stakeholder, which resulted in a variety of answers. One of the net brokers mentions that in an ideal world a similar level of participation would be the case but that this is very difficult in practice. "The most important thing is to at least give them a feeling that they are involved, but that appears to be difficult in terms of organisational structures", according to this net broker. The second net broker describes that this does not necessarily have to be the case, and that it can be explained by Maslow's theory: once you fulfil all your other needs, you start to pay attention to altruistic needs: "of course I expect less from farm dwellers than a proactive white land owner. So maybe restoration should not be seen as altruistic, but as fundamental". The third net broker replies: "yes no, and maybe. I would love to give them the chance to participate equally, but in practice I think some people have the will to interact more, and it might not happen". When asked whether time and project stage play a role in stakeholder participation, all net brokers agree. One of the net brokers replies: "level of participation changes for sure. In the beginning farmers were involved in the social assessment, and might go a bit to the background, but now it is more time for empowerment of communities, involvement of municipalities. For good monitoring in the future you might have to go levels up for more money to invest". The second net broker states that this is definitely the case, and that "temporal and spatial factors are critical". The third net broker explains: "I think time plays a role. Maybe we started with the easier ones so far to convince, so we can experiment. Time plays a role in that sense".

Relation between actual and expected level of participation

When asked whether the actual level of participation of stakeholders is in accordance with the expected level of participation, two of the net brokers refer to some groups in particular. One net broker mentions that with regards to the farmers, it is definitely the case ("perfect"), which is also confirmed by the reply of the other net broker, mentioning as an example: "the farmers are sharing their life, spending a day in a warm shed to listen to us". With regard to the local communities, one net broker replies that they have been doing a good job creating labour, but that "we could do better in involving them in true participation, which will be focused upon in the coming time". The other net broker mentions: "we haven't been trying so there's no mismatch of expectation there. There was a different strategy behind it: knowing that Yolandi [GIB, Working for Water] was busy planting, and the fact that all the land for restoration was on private land. I have now issued a proposal for my PhD which is purely focused at participation of communities, so it's a big thing on the agenda for 2009". One of the net brokers mentions that participation of ECPB could be better, which also has to do with the internal organisational structure of the organisation. This net broker furthermore mentions how the involvement of municipalities could be better, but that EarthCollective has achieved the first municipality ever to invest in restoration, which he believes is an important achievement. Generally, one of the other net brokers believes, the level of involvement has exceeded expectations.

Observations and project document study with regard to participation

Familiarity amongst local inhabitants regarding the Spekboom project

It appears in practice that certain stakeholders, especially the coloured communities have not been participating to a large degree: apart from participation in Working for Water programmes by some members from one of the communities, none is seen active in the network, for example during strategic meetings. Still, research conducted on behalf of EarthCollective on socio-cultural and economic values has shown that a change in land use rights and activities due to the implementation of carbon credit mechanisms may conflict in certain areas with the current usage of the local communities (Janssen, 2008) and that local communities are strongly dependent on the ecosystem (Noirtin, 2008). In her research, one of the previous students also mentioned that "STRP was not so successful in communicating with local communities" (Lorencová, 2008), which is in line with current

findings (although it must be noted here that STRP is not EarthCollective, but part of it). Noirtin (2008) furthermore concluded that cooperation between local coloured communities and other stakeholders is limited. On the other hand, while attending a meeting of Sewefontein it was found that the Spekboom project was actually the first point on the minutes. This concerned a very practical matter: how to arrange fences to keep the cattle from going into areas where Spekboom needs to be planted. Generally, it can be sensed that over the last year(s) a process has taken place where members of this community have gained a more positive attitude towards the planting of Spekboom, however their involvement has not increased.

6.1.5 INTERACTIVE PARTICIPATION

Issues with regard to strategy formulation of the PRESENCE network

For this sample item an open question was posed without revealing the policies and strategies as set out, not only to understand whether (potential) network members agree with them and to gain insight in how much they know about them, but also indirectly to understand to what degree they have been involved in influencing them. Thirteen respondents attempted to answer this question; the other seventeen were not confronted with the question because they never heard of the PRESENCE network. Replies to this question turned out the be very diverse (Appendix I, Table G). Two of these thirteen respondents did not know what the strategies of PRESENCE are. Eight respondents were positive about the strategies and mentioned to agree with it. Responses included the following remarks: “it should be less ecologically focused, less top down and more of a holistic approach with more involvement of local people”; “it should be further institutionalised with a good structure, increasing resilience”; “more diversity, Spekboom is a good start but not the forest – plant Cedar for example”, “continue with creation of continuous employment for communities, there seems to be a break there”; “the proof is going to be in the sustainability of the initiative, but I agree with it”; “the issue of funding needs to be focused on in a clearer fashion – EarthCollective should be more clear in setting up their budget”; “there should be a loose strategy, not too much of a top-down determination focus, so a flexibility to stakeholders needs – ‘if it’s not broken, don’t fix it’”; “I don't understand the Best Management Practices point. That point is derived from particular network members. I don't see how people/students facilitated by Eco are necessarily falling under it”, and “I think carbon alone is not enough – we need to bundle it. How to broker a deal, we don’t have deal brokers inside the team”. Generally, it appears that about one third of respondents know something about the strategies of the PRESENCE network, and although most agree with them many do come up with some ideas with regard to it. The following item focuses on whether these issues have been shared with other network members and/or EarthCollective.

Responses of network members to ideas with regard to strategy formulation

Eight of thirteen respondents (62%) indicated that they never shared ideas with regard to strategy with other members and/or EarthCollective, five respondents (38%) mentioned they did (Appendix I, Table F). Although five respondents of those thirteen knowing something about strategy formulation form 38 percent, this means that only five out of a total of thirty respondents (17%) ever shared ideas about strategies. These respondents mention that “EarthCollective has always been very receptive and transparent, open when we come with new ideas”; “responses are pretty open”; “not sure if everyone understood the point I made on carbon, maybe it was not internalised enough because people hear so much”; “they are open to these kind of suggestions, Dieter is quite persistent in hearing my opinion”; and “Dieter responded to an idea of a farmer that it will be researched further, which is positive – however not all the local ideas are good ideas and we should keep on going with things you know will work”. Those who did not specifically provide input mentioned furthermore: “I don't think Eco would have a problem with fundamentally new ideas, however it is hard to say how the other network members would react”; “they are open for it, respond in a good way”; and “they are open to any suggestions, not following a hard line – they are thinking a lot it seems, everything is thought over”. It

was sometimes unclear whether respondents referred to other network members when they used "they", or to EarthCollective – although generally the latter is usually the case probably, since they mainly defined the strategy. Sometimes EarthCollective (or Dieter) was specifically mentioned. Assuming that this is the case, the first thing we can conclude is that all respondents consider EarthCollective as open to new ideas and suggestions, receptive, transparent, not following a hard line and responding in a good way. However, the fact that such few respondents were able to respond to this question is a more negative indicator when it comes to performance on higher levels of stakeholder involvement.

Information of net brokers on interactive participation

Equal say of all groups and organisations in the formulation of policy and strategy
When asked whether all groups and organisations have a say in the formulation of policy and strategy, one of the net brokers mentions that this is the case, but that it is not sufficiently stimulated and done. This net broker continues: "on the local level with farmers, yes, but with the coloured communities less. If they come with a good argument you definitely have to listen. The next question is if you totally have to change everything". One of the other net brokers explains that this is not always the case, but that with the development of a new interactive knowledge sharing portal (discussed in the knowledge section of this chapter) things will be more efficient. This net broker continues: "we are always open for discussion on these kind of things, but we do have to think about selecting people to talk about it". The third net broker replies: "if we asked them, yes. Usually, with any big strategy issues we send around for reactions. But today, most people just say: keep us informed and do what you're doing, it's looking good".

6.1.6 CONCLUSIONS

Generally, respondents of all stakeholder groups are aware that a Spekboom/thicket project is being conducted, however only 50% knows about PRESENCE and/or EarthCollective. Most of the respondents (57%) consider themselves members when explained the essence of PRESENCE. Perceptions on PRESENCE and EarthCollective are very diverse with respect to essence, role or those involved, often misinformed and both were often confused and mutually exchanged. Twenty-six different organisations were mentioned as being a member of the current network, according to respondents, of which many actually are no members. Apart from one member (ASSET), all official members were mentioned. Net brokers distinguish between PRESENCE as an umbrella network and PRESENCE Baviaanskloof, a distinction that was not made by any of the respondents. Incongruence appears to exist amongst the net brokers about which network members are a member of which of the two levels, which is related to the fact that uncertainties seem to exist with regard to the status and nature of the network and membership of it.

Respondents do not agree on the issue of whether all relevant stakeholders have been identified and are now involved in the PRESENCE network. Again, respondents seem to struggle with the structure, nature and purpose of the network, which may explain the variety in answers provided. Another factor is that no clear method or tool for the identification of stakeholders has been applied, for example on the basis of criteria related to space, power, legitimacy, urgency (salience) and/or roots of entitlement: not by the net brokers, and neither by students conducting research on behalf of EarthCollective. The net brokers describe a loose process through which stakeholders are suggested via students or other network members. In the PRESENCE umbrella network stakeholders have been selected on the themes of scientific disciplines and decision making power, and personality. In the case of PRESENCE Baviaanskloof those who have a stake in the area are in the network, especially local land owners who have to be involved in restoration – and those who are influenced, according to one net broker. Roles of stakeholders have not been officially identified. Concerns of stakeholders have been identified, which has occurred as a by-product from research, but also through two student researchers who

conducted research on behalf of EarthCollective. The net brokers indicate to not have been keeping track of resources and competencies of stakeholders.

Responses of net brokers on whether certain tools for the classification of stakeholders are applied are not congruent. Two net brokers indicate that the method of distinguishing between 'those affected' and 'those involved' has not been utilised; while one net broker states this has been done. In the PRESENCE umbrella network net brokers distinguish between science, implementers and funders or on the basis of themes/disciplines and on the other hand science/decision makers. For PRESENCE Baviaanskloof stakeholders are classified into the following groups: science/implementers/beneficiaries, or farmers/communities/hippies, or lifestyle farmers/traditional farmers/communities/hippies. In an article issued by one of the net brokers six groups of stakeholders are identified: farmers, communities, researchers, managers, implementers and facilitators. No specific indicators are applied to classify stakeholders, which probably explains the incongruence in the classifications provided.

Respondents mention fourteen stakeholders outside the PRESENCE Baviaanskloof network that should become a member, of which coloured communities, white land owners/farmers and the Department of Agriculture are most frequently mentioned. Furthermore when analysing the data, it appears that more involvement of government agencies on different levels is recommended by respondents. Net brokers acknowledge that coloured communities should be more involved and that they should be more empowered and become part of the decision making process. A learning village (which is in development) and appointing "champions" are mentioned as measures to be used. Net brokers furthermore believe they are doing well involving the white land owners. Net brokers provide different answers on the relation between time/project phase and stakeholders' level of participation. When asked about the relation between actual and expected level of participation, net brokers indicate that this relation exists with regard to farmers (white land owners), and that the actual level of participation of coloured communities should be higher – although net broker opinions differ on this. In general it appears that the way net brokers regard issues with regard to participation is mutually less congruent than on most other issues. Observations and studies conducted on behalf of EarthCollective show that local inhabitants are heavily dependent on the ecosystem and that the project outcomes may affect the way they can make use of it, but that at the same time communication has not been very successful and cooperation between different local stakeholder groups limited.

Approximately one third of respondents know something about the strategies of the PRESENCE network, and although most agree with them many do come up with ideas with regard to it. Most respondents (62%) of those who knew something about strategies indicated that they never shared such information with other members and/or EarthCollective. This means that only 17 percent of total respondents ever shared ideas with regard to strategy formulation with other network members and/or EarthCollective. Generally, respondents indicated that if ideas or suggestions were (to be) proposed, EarthCollective was, or was expected to react in a receptive, open and transparent manner. Net brokers indicate that all groups in principal have a say in policy formulation, and that big strategy issues are sent around for reactions, but that input has not been sufficiently stimulated and realised so far, especially concerning coloured communities.

6.2 PERCEPTIONS AND ATTITUDES

This section further elaborates upon perceptions and attitudes in a more specified manner. It sheds light on how respondents perceive various occurrences or processes in the network such as openness (for which a necessary link has been established with experimentation, which is a major indicator in this respect), system interconnectedness, links between network members and trust.

6.2.1 OPENNESS AND EXPERIMENTATION

Types of experiments conducted to arrive to new solutions related to restoration

PRESENCE network activities are characterised by a large amount of experiments conducted by the various (potential) network members in the field of vegetation (biophysical), water management, social, tourism and different other areas (Appendix I, Table I). Different types of experiments and studies were performed: STRP thicket wide plots: experiments on small scale, fenced off plots with spekboom; a case study for restoration of tributary streams and related flood plain at the farm level at one of the farmers properties in order to calculate costs and benefits of restoration; experiments of farmers on their property on a wide range of different water management measures; farmers developing different types of tourism accommodation and activities as an alternative source of income; one land owner experimenting with community empowerment projects; a farmer experimenting with controlled burning (leading to a catastrophe and large smoke clouds over the Baviaanskloof). Another important element in the network when it comes to experimentation is the Kouga Dam Restoration Nursery, experimenting with different plant species for the purpose of restoration and generating a constant flow of new data. One of the major trends observed here is that most experiments in the field of vegetation are conducted by either scientists or members of the government, whereas experiments in the field of water management and in the social field and tourism are realised by local inhabitants. Generally, these two groups both have their own purpose for experimentation: (1) experiments by (non-local) government officials together with scientists (including the nursery) are mainly aimed at large scale future implementation and/or scientific experimentation, and (2) local inhabitants are experimenting as a livelihood strategy in order to guarantee survival.

Collection and gaining of new knowledge and insights

Respondents reported various knowledge collection methods related to restoration, such as consulting academic literature (5), observation and experiments – self generating (4), through teachers, courses or education (4), through external consultants and specialists (3), through personal experience and common sense (3), through the internet (2), talking to other scientists (2), talking to people on the ground (2), reading books (2), being involved in projects (1), attending forums and conferences (2), through management data (1), through in-depth interviews (1) and by reading technical manuals (1). This appears to be a large and varied amount of methods, which reflects the variety of respondents interviewed (Appendix I, Table J).

Translation of such new information into practical solutions

This question was often superfluous, since the answer was already provided in the question under 6.2.1.1; in other words it became apparent in the way people conduct experiments which are often a result of new knowledge and insights gathered. However, it is still valuable to display the results of this question (Appendix I, Table K) – which was mainly answered by scientists and government officials –. Useful responses here are that practical solutions are realised through implementing agencies, by developing economic models, through educational programmes, by incorporating the information into future policy and strategies, protocols, best management practices and guidelines and for weather stations. What can be observed here is that these answers differ from the answers provided in 6.2.1.1 in that they actually lead to a result, a deliverable, whereas under 6.2.1.1 the new information becomes once again part of a continuous (scientific) process.

General attitude and response within the PRESENCE network towards new ideas

Generally, there are approximately twice the amount of positive answers compared to negative responses (15:7) when respondents are asked about the general attitude of others within the

PRESENCE network towards new ideas (Appendix I, Table L). Another observation that can be made is that all scientists and most members of government are more positive about the attitudes of other members towards new ideas, whereas local inhabitants have a more negative perception towards this. Generally, observations in the field showed that respondents were open to new ideas. Scientists naturally have to since it is inherent to their discipline and government members are investing in the generation of new ideas so obviously they must be open to those. Results show that local inhabitants generally find their "neighbours" less open-minded, and responses differ in this respect, while at the same time there is a large amount of experimentation. It was interesting to observe what exactly is happening here. The tendency appeared to be that it generally just takes more time for local inhabitants for ideas to permeate, which might partly be a mindset but also has to do with the fact that in order to survive they need to be more result-oriented. In other words, the idea itself is not always enough, but a tangible and proven benefit should be available before spending energy and time on it. Also the source of information appears to be important for local inhabitants: ideas from other local inhabitants seemed to be accepted more easily, while a natural tendency existed not to believe instantly what scientists and government officials present. An interesting observation may serve as an example here: while interviewing a senior local, one of her relatives (one of the white land owners) was also present. This particular lady knew a lot about succulents and while interviewing recommended the land owner to put some trials with Spekboom on his field and provided him with some guidelines on how to do this. After the interview the farmer mentioned that he was going to try it very soon. This is interesting, because for two years land owners were stimulated by different PRESENCE members to start planting Spekboom, which had not resulted in him taking action, while now he suddenly did. Furthermore, the fact that different network members, especially some scientists, are hesitative about the inclusion of certain stakeholder groups within the network, already reveals something about willingness to be open to sources of knowledge other than academic. It has been mentioned by some that PRESENCE has been set up as a scientific network and that it should stay like that, which cannot considered a particularly open attitude. In this respect, the answers provided by respondents seem slightly contradictory with observations.

Information from net broker on openness and experimentation

Collection of new knowledge, insights and information by net brokers

Two net brokers reply that their own collection of data does not occur sufficiently, or less than in the early stages, however at the same time question their role and responsibilities in this. One of the net brokers, more involved in a specific science mentioned to collect data through talking to people, meetings, different research agencies, journals, articles and the internet.

Existence of a formal process or protocol for conducting and evaluating experiments or new ideas

No formal protocol or process exists, according to the net brokers. Two net brokers explain that the process is very dynamic, that it might not be possible to standardise these things and that it depends on deliverables, conferences or need of knowledge at a certain point in time. However, one of the net brokers also mentions the possible need for such protocols and procedures in the future, when other people are replacing them.

Reward system for new ideas or input

No reward system is in place in terms of money for knowledge, according to the net brokers. However, two net brokers mention that there is a reward for behaviour: people who are involved more, will be the first to benefit and their ideas can be put into practice; they will be supported. Two net brokers also question the added value of such system, and wonder whether it might undermine altruistic motivations.

6.2.2 SYSTEM INTERCONNECTEDNESS / THINKING

Factors interconnecting a network such as PRESENCE

Consciously a very open and more abstract item, and for that reason interesting and a good indicator of the level of consciousness of people in order to understand their realisation of being part of a bigger whole. Different (potential) network members were not able to answer this question and practically all answers provided come from government officials or scientists. A large variety in answers was provided with the following essence: a common goal, concern/shared vision (7); personal relations (3); communication (2); people getting together (1); knowledge and information (1); relevance (1), personal choice to belong to the network (1); personal motivation of EarthCollective to forge relationships (1), individuals complementing each other (1); and a shared methodology and approach (1). The actual literal formulation is quite important here, which is why it is worth consulting Appendix I, Table M. From these answers it appears that (potential) network members providing answers here do have a good idea of what interconnects a network such as PRESENCE. However, it must be noted again that this was a question that proved to be very difficult for local inhabitants to answer, first of all because they were not aware of the existence of the network, and secondly because a more abstract phenomenon such as a learning network is not immediately understood by individuals not having any background in it.

Information from net brokers on system interconnectedness

Network interconnection
Two of the net brokers mention almost all of the answers provided by different (potential) network members: shared goal/vision, people in a network with an own role, identity, niche (no competitive roles), communication in order to reach the goal, personal relationships and trust. Furthermore two net brokers mention the importance of EarthCollective in interconnecting the network because they have demonstrated not to have self interest, and are driven by passion. One of the net brokers also mentions that there are different factors, as mentioned, that have pre-existed, but that EarthCollective has a catalyst function. Furthermore, one of the net brokers questions whether EarthCollective should just be an initiator or more, and if the network would continue performing without its involvement.

Models, figures, drawings and scenarios provided to stakeholders to increase understanding on how different elements in the PRESENCE network are interrelated
The net brokers indicate that people were not specifically educated on this, but that documents have been spread within the scientific part of the network. Local inhabitants have not received any of this. One of the net brokers mentions that EarthCollective might have been lacking to some degree in making people aware of being a part of it.

6.2.3 VOLUNTARY LINKS BETWEEN INDEPENDENT YET INTERDEPENDENT NETWORK MEMBERS

Benefits of the PRESENCE network

For this question, respondents were encouraged to specifically mention all those benefits outside knowledge (Appendix I, Table N). After categorising it appeared that in total, twenty-five different benefits were mentioned. Most frequently mentioned were: students and their products (4); networking and exposure to new actors (4); receiving advice (4); brainstorming and debate (3); and the social aspect and friendship (3). Although fascinating to conclude that respondents have come up with so many results, it is striking to see that just one respondent (white land owner) mentions restoration, the actual purpose of the networks existence. Although the question is not related to the general purpose of the network, this purpose is in line with what should be a major benefit of people involved: the restoration of their living environment.

Contribution to the PRESENCE network

Again, respondents were asked to mention those things other than knowledge. This time, seventeen different answers were provided, however almost all just once (Appendix I, Table O). Most frequently mentioned were: network /linkages to other networks (4); advice to EarthCollective on how to set up the network (4); continuing to be an advocate for it (2); and funding / fundraising (2). A difference in types of answers with 6.2.3.1 is that answers appear to be a bit more specific, which is logical. This series of answers shows how people are aware that the mutual exchange of services and knowledge is important, however it does become evident that significantly fewer answers are provided here, compared to the question on benefits from the network.

Future expectations of the PRESENCE network

Again a wide variety in responses to the question of what future expectations of the network exist: in total twenty-two different answers were provided (Appendix I, Table P). Most frequently mentioned: more effective collaboration and synergies (4); more effective exchange of information and more data sharing (2); improvement ecological systems and processes (2); and expanding beyond the reserve (2).

6.2.4 THE SPIRAL OF TRUST

The role of trust in a network such as PRESENCE

All respondents agreed on the importance of trust in a network such as PRESENCE – so *no single* respondent was of the opinion that it was unimportant (Appendix I, Table Q). Because many of the respondents added their own clarification on why it is important, it is recommendable to consult this Table Q. Some of the most striking elaborations include that trust is especially important when dealing with local communities and farmers, that there should be openness between partners without hidden agendas, that people only participate if they can trust other people, that it is the success of failure of such network, that it is particularly relevant when it comes to sharing ideas, that it gets exponentially harder to get such network work when you lose it, that it is more important than research, and that you cannot have a network such as this without trust. What should be carefully observed, according to one respondent, is that a collective goal in the network exists, but that at the same time people want to advance their careers. The crucial thing in a competitive world, according to her, is finding a balance between the two, which means not always keeping information for yourself. The respondents generally seem very aware of the role of trust.

Level of trust within the PRESENCE network

When asked about the level of trust, some respondents provided a more general reply about the overall level of trust, while others went into more specifics and mentioned trust issues between certain members (Appendix I, Table R). In the latter case, the answers of one respondent were, if appropriate, split up into the different strata. For that reason, one element is not always equivalent to one respondent. In general, with 14 positive, 10 neutral and 4 negative elements in the responses, it can be concluded that trust is fairly good. However, at the same time it indicates that some issues must be occurring between different (potential) network members. A general observation is that reports are quite contradictory. It must be realised here that trust is one of the difficult dimensions to research, since one cannot expect that individuals will be completely open to an external, unknown research whom they might not even trust themselves. Some important remarks reveal or point towards the following issues:

- Scientists and government officials appear more on the positive side than local inhabitants.
- The trust relation between all local inhabitants and ECPB is doubtful but appears to be recovering. This has to with several historical events, such as the announcement some years ago that inhabitants would be expropriated for the sake of the nature reserve, leading to great

unrest. Also the fact that one of the coloured communities (Coleskiplaas, as explained, not included in the current analysis), situated within the reserve, is actually in the process of being expropriated – again causing insecurity for others. Also the introduction of rhinos in the wilderness area has lead to turmoil; apparently one of the animals once entered the valley causing chaos. Furthermore another incident, the sudden removal of an alien cactus species by the government (Opuntia ficus – indica) used for different purposes by the local communities has lead to broken trust, which was also reported by one of the previous student researchers (Janssen, 2008). Although such events have taken place three or four decades ago, they are still remembered and mentioned by local inhabitants and may affect current attitudes and relation. Generally, local inhabitants feel that ECPB is a government authority taking many decisions they are not able to have a say in, but which can affect their lives to a great extent. Recently, ECPB decided to register every person and vehicle entering the wilderness area (enforcing national legislation), which caused irritation amongst the local white land owners, who were used to cross the area freely. The previous ECPB park manager appeared to have very limited contact with the local inhabitants, which has probably not improved the situation. Since mid-2008 he has been put off-duty, and has been replaced by a new park manager who is considerably more stakeholder-oriented, taking their concerns into consideration and providing them with legal support. This is probably a reason why most of the ECPB-related trust issues mentioned bear with them a certain tone of optimism.

- The trust relation between R3G, Rhodes University, GIB and DWAF appears to not always have been harmonious, of which some apparently were internal R3G problems. For this research it was decided that identifying this issue was enough, and that it would be sensible not to dive deeper into the case for the sake of not getting involved in delicate matters.
- The trust relation between farmers and scientists appears not optimal: one senior local mentions that trust is good, while a prominent member of the white land owners mentions that it is doubtful. Also the general sentiment felt amongst the white land owners was not always very positive towards scientists. A statement very suitable to describe this sentiment is amongst the answers: “they write articles about the Baviaanskloof, and we have not seen them here”.
- The trust relation between different scientists also needs attention. Knowledge, one of the core assets and determinants of the PRESENCE network is for scientists their main product, asset and of utter value for them – especially in terms of capital. Logically, the sharing of knowledge might become a game of give and take, in which it is also important not to give away too much before credits are taken. This might cause delays in developing solutions (knowledge being restrained) and might cause distrust in what is being hid – something that is actually happening, following some remarks.
- The trust relation between different communities in the Baviaanskloof also appears to be doubtful at times. Although some respondents report it is good, other testimonies suggest that it is not always very perfect. Apartheid still appears to play a crucial role here, colouring the way white land owners interact with coloured inhabitants. This issue is further elaborated upon in the Chapter 7.
- One trust issue is related to the expansion of the network, in other words the inclusion of new players. Some of these players are relatively powerful (such as the recently joined CSIR), which causes concerns amongst other members about the intentions and capacity of such organisations to use and bend the network for the sake of their own benefits. It is apparent that it will take time and effort to build trust between such new members and the already established collective.

Information from net brokers on trust

General level of trust within the PRESENCE network
All three net brokers are aware of the essence of trust in a network such as PRESENCE, and describe it as most important, the glue that holds it all together and the essence of the network. One net broker furthermore mentions how transparency is a very important word that comes with trust. All three net brokers believe that they are doing well in terms of being trusted by other network members, also considering the fact that they hear about all the issues that play. Simultaneously, two net brokers are aware of the fact that trust in the PRESENCE network is variable and that trust between network members differs a lot. One of the net brokers mentions that there is a whole history of relations between people before EarthCollective arrived.

6.2.5 CONCLUSIONS

Two types of experiments were identified: those aimed at large scale implementation and scientific simultaneously for scientific purposes, conducted by scientists and members of the government, and those conducted by local inhabitants as part of their livelihood strategies. Most experiments in the field of vegetation are conducted by either scientists or members of the government, whereas experiments in the field of water management and in the social field and tourism are realised by local inhabitants. This indicates an imbalance of involvement of science in experimentation with regard to social and development issues when compared to vegetation and biophysical studies. A large and varied amount of knowledge collection methods on restoration is described, varying from consulting academic literature to self generation and education. Some of this newly generated knowledge leads to tangible results and direct deliverables such the development of economic models, educational programmes, incorporation into future policy and strategies and best management practices. Other knowledge is re-used and remains part of a continuous scientific process.

Generally, respondents are positive about the attitude of others towards new ideas. Scientists and government members appear to be more positive on this issue than local inhabitants. In practice this difference seems to be related to a different approach: the first group is naturally expected to be open for new ideas (which is one of the main reasons of membership of PRESENCE – developing new ideas and implementing them), whereas local inhabitants are more result-oriented, which causes a delay in the acceptance of new ideas (first see, then believe). Some scientists show a tendency of capturing PRESENCE for the sole purposes of science, which raises questions about openness towards local experiments or ideas. There are no formal protocols or processes for conducting and evaluating new experiments or ideas, which, according to the net brokers, might not be possible to establish due to the dynamic nature of the network. Neither is a reward system for new ideas available in terms of monetary remuneration, however indirectly a reward for behaviour does exist in the form of support.

Respondents familiar with PRESENCE seem aware of the interconnected nature of such network, and deliver a large share of factors realising this of which a common goal or concern, personal relations and communication were most frequently mentioned. It appears that mainly scientists and government officials were able to provide a reply on this issue. The net brokers themselves seem very well aware of what it is that interconnects PRESENCE, providing almost all components delivered by respondents, but indicate that only to the scientific part of the network models have been spread that illustrate this.

Most respondents seem to be well aware of their independence, but also realise that they are interdependent and benefit from the membership of PRESENCE. Twenty-five different very diverse benefits are mentioned, including students and their products, networking, receiving advice and brainstorming and debate, however only one respondent mentions the actual purpose of the network: restoration. Simultaneously, respondents mention seventeen ways of contributing to the network, ranging from network, linkages, advice and acting as an advocate for it – a sign that an awareness of a

certain reciprocality exists. Respondents are also outspoken about their future expectations of the network, providing twenty-one different answers of which more effective collaboration and synergies and more effective exchange of information are some of the main prospects.

All respondents agreed on the importance of trust in a network such as PRESENCE and the general level of trust within the network seems to be fairly good. Again, scientists and government officials generally appear to be slightly more positive on this issue than local inhabitants. Indications from different respondents point towards trust issues between local inhabitants and ECPB, between R3G, Rhodes University, GIB and DWAF, between farmers and scientists, between scientists themselves and between local communities in the Baviaanskloof. Trust was also mentioned as a factor related to the expansion of the network. Many of these trust issues have a history and often originate from times long before PRESENCE was erected. Net brokers appear to be aware of the trust issues and believe they are generally well-trusted themselves by other network members, which is in line with the positive testimonies of respondents with regard to this point.

6.3 LEARNING

6.3.1 INDIVIDUAL / STAKEHOLDER LEARNING

Personal learning experiences through the PRESENCE network

During interviews respondents were specifically interrogated about the learning aspect, as in: obtaining new skills, expanding knowledge and wisdom as set out in the theoretical framework; so not solely the receiving of knowledge and information but one step beyond. Reponses varied from very explicit learning aspects related to technicalities, but interestingly twice as much social learning aspects were mentioned (Appendix I, Table S). The six answers related to technical matters included: thicket (Spekboom) restoration and research; the basics of restoration; wetlands; types of soils and horticultural skills. Eleven responses were related to various facets of social learning: learning personal things; learning how other people saw things through presentations; how facilitation is extremely difficult; that young people are on the right track in choices of study; about stakeholders in the Baviaanskloof; new ways of thinking; how to be involved; about the need of facilitating research and the social science requirement for embarking restoration on the ground; that Europeans have a lot of energy to make a difference in Africa; and how to work together with local people and that it is important to become more advanced with computers to keep up with developments. Some respondents also indicated that it was too early to say; that no particular skills were obtained; and that no learning has taken place because of being not involved enough.

Learning materials

None of the 30 respondents indicated to have received learning materials specifically aimed at improving or acquiring new skills, knowledge and/or wisdom.

Information from net brokers on individual / stakeholder learning

Existence of a specific philosophy on training and capacity building for the PRESENCE network
The net brokers indicate that currently there is no such philosophy but that different plans are in development. One of the net brokers indicates that there are two levels here: the academic and local level. On the academic level EarthCollective would like to attract local South African students and build capacity there (which has not occurred yet). On the local level, nothing has been organised yet, and one of the net brokers states that it is something that needs to be developed further. One of the net brokers mentions that informal learning has taken place through for example a fieldtrip on wetlands, organised by EarthCollective. Further plans include participatory monitoring (mentioned by all three

net brokers), environmental education, the development of a learning village and training "champions" from the communities who can bring over their knowledge. One of the net brokers furthermore mentions that it is important to build capacity, but that EarthCollective needs to learn from local communities as well. No PRESENCE/EarthCollective project documents describing a philosophy on learning or capacity building and/or learning material was found during the time of research.

6.3.2 COLLABORATIVE LEARNING AND COMMUNICATION

Sharing of knowledge and mutual learning in the PRESENCE network

It must be noted here that many of the respondents indicated that it was slightly too early to describe the way people in the network share knowledge and learn from each other (Appendix I, Table T). Still, when analysing the responses it seems that positive developments are currently taking place, but that there are some issues as well:

- A gap between local inhabitants and government and scientists appears to exist. Several of the local inhabitants have the feeling that those "out there" are not always receptive to their knowledge, and that the initiative of exchanging information and learning from each other has to come from them. However, one of the white land owners also mentions that the situation is currently improving with the realisation of PRESENCE.
- Several reports reveal that between the different local communities not much learning is taking place, a conclusion that was also drawn when discussing trust – however we find contradictory reports here, some also saying that these interactions are generally good. Again, Apartheid might still play an important role, which will be further discussed in Chapter 7.
- As was also discussed in the trust section, several respondents mentioned that sometimes people appear to guard knowledge and methods for their own benefit, which also obstructs learning processes.
- Once more, we see the concern of some respondents of big institutions entering the network which may cause friction due to the increase in intellectual capacity and people being wary to share their knowledge.
- A member of ECPB feels that overall learning has not been overarching and all encompassing, and that the required communication in this respect between the network and ECPB has been insufficient.
- Lack of time may hinder collaborative learning processes.

Information from net brokers on collaborative learning

Quantity of knowledge sharing meetings organised by PRESENCE
All net brokers mention the annual PRESENCE workshop in Port Elizabeth as being meetings that allow collaborating learning to occur. Furthermore, a remote sensing workshop and the river bed restoration fieldtrip are mentioned by all three. A GIS workshop organised by EarthCollective was another meeting mentioned by one of the net brokers. Besides, presentations at Eastern Cape restoration programmes are mentioned, and providing information on farmers meetings, four times per year. One of the net brokers also mentions how Skype meetings and students presentations add to collaborative learning.

Evaluation meetings
There is no consistent reply by net brokers on whether real evaluation meetings have been organised. Whereas one mentions that none were organised yet, but that the Port Elizabeth workshops ('07 and '08) contained some elements, another net broker mentions that these workshops were actually evaluation meetings to a great extent. One of the net brokers mentions that evaluation meetings should be upscaled more to a broader level.

Observations on collaborative learning

For this dimension observation appeared to be a particularly useful method to understand more about collaborative learning experiences during meetings. During the period of research, three meetings were attended that involved learning elements: the PRESENCE strategic workshop (30-10-2008), the Kouga Rehabilitation Nursery meeting (05-12-2008) and the Farmers workshop (06-12-2008). This section is mainly dealing with the content and structure of the meetings related to learning, a further discussion on the organisation and facilitation will follow in section 6.4.3 (net broker). Furthermore, the first steps in developing a learning village have been witnessed.

PRESENCE strategic workshop

The presence list at the strategic workshop included people from Stellenbosch University, Rhodes University CSIR, NMMU, ECPB, CAPE, DWAF, GIB, Alterra and DLG. The objectives of the workshop were to identify completed, existing and planned research/implementation projects, identifying research and implementation gaps within the implementation network and identifying synergies and opportunities for collaboration between the different projects. The agenda included an introduction to the area, an introduction of the different participants, an exchange of ideas about the relevance of the suggested operational framework, and the different projects were presented by those involved in terms of objectives, time schedule, expected outcomes, results, deliverables. There was also a general open discussion about how to proceed. First, the attendance rate was very high, especially regarding the busy schedules of the participants – providing hints on their interest in it. Secondly, participants were very delighted to have such meeting organised, and having the opportunity to meet others operating in the same field. The presentations of the different research and implementation projects were providing new information to many of those present and the discussions were vivid, with most people having a say. Furthermore, EarthCollective took the opportunity to elaborate on the meaning and purpose of existence of PRESENCE and EarthCollective. So what was the collaborative learning effect? Probably, attendants did not obtain new skills, but following the definition as set out in the theoretical framework learning definitely took place: people were linking and expanding information and knowledge, which has probably altered cognitions towards the Baviaanskloof, what projects are conducted, but also about other people and, as was stated in many of the answers provided, about the process of getting together and sharing knowledge itself.

Kouga Rehabilitation Nursery meeting

The Kouga Rehabilitation Nursery meeting was organised to provide employees of the nursery (all part of a social project, aimed at creating temporary employment and acquiring new skills for people from a local village), net brokers and student researchers (stationed at the same location) the opportunity to explain what their work involved. Approximately fifty nursery employees were present, as well as six students, the net brokers, several members of GIB and also individuals from related projects and similar nurseries. First, the net brokers delivered a presentation on PRESENCE, followed by the student researchers presenting their activities after which the Kouga nursery manager and the three contractors of the nursery (also people from a local village) explained about the nursery and their activities, followed by some presentations from similar (external) projects. During this meeting there was not a lot of time for dialogue and discussion. The fact that most presentations were set up in such a way that they were understandable for all attendees, clearly an improved mutual understanding and possibly even respect for each others activities. After the official part, a braai was organised in which everybody participated. Again, attendants probably did not obtain new skills, but new insights and understanding about events outside the usual and daily business were clearly obtained. Also the informal part lead to cross-cultural interactions that might have improved mutual understanding.

Farmers Workshop

The farmers workshop was organised in a shed on one of the white land owners property in the Baviaanskloof. All farmers were invited, of which approximately ten were present, as well as four students, the net brokers and a member of DLG. EarthCollective started with providing results and outcomes of previous student research, an explanation of the meaning and activities of PRESENCE and what tangible results were achieved so far. Afterwards, students presented their activities and preliminary results, followed by a presentation by a DLG official. During and in between the presentations all participants were invited to raise questions and discuss about the issues presented, which also happened but to a limited degree. After the official part, a braai was organised by the farmers and different social interactions could be observed, which most probably catalysed relationships and mutual understanding. The presentations provided information that was (at least partly) new to many of the participants, leading to new insights which became apparent from questions raised and the debate taking place. It was apparent that again, collaborative learning took place – new insights and understanding were realised. As is described on the section on facilitation and leadership, this process could have been catalysed more if more discussion would have taken place.

Learning village

Currently, EarthCollective, together with one of the white land owners is working on plans for developing a learning village in the Baviaanskloof. On his estate, the structures of what used to be a primary school (closed because of social problems) stand, largely in tact. The idea of the learning village is to build a local knowledge centre, preferably with a library and spaces where locals can obtain knowledge about nature and environmental issues, interact with each other and people from outside the Baviaanskloof such as scientists.

6.3.3 CONTINUOUS ORGANISATIONAL LEARNING

Structural reconsideration of basic goals and strategies of the network

When asked whether respondents believed basic goals and strategies of PRESENCE were structurally reconsidered, ten respondents (77%) believed this was the case, whereas one respondent was not agreeing (Appendix I, Table U). Two respondents (15%) indicated they could not answer this question because it was either too early to say, or because the respondent did not know EarthCollective well enough. The positive responses often include an ode to the net brokers in terms of their openness to new ideas, adaptability, dynamic attitude and flexibility. However, the one respondent replying negatively mentioned that they stick to hard to diffuse terminology and that they are too consistent in their structure, which is unnecessarily complex.

People within the PRESENCE network discussing strategies

Most respondents answered not to know of any people within the network discussing strategies, which would have been a good indicator of developments happening (Appendix I, Table V). Nevertheless, the few individuals or organisations mentioned in this respect were R3G (2), CAPE (1), DWAF (1), EarthCollective (1) and Richard Cowling (1).

Information from net brokers on continuous organisational learning

Evaluation of methods, techniques and the way things are done (single loop learning)

The net brokers all mention that there is no official or structural way of evaluating methods and techniques, one of the net brokers mentions that this perhaps should happen to a further degree. Two of the net brokers describe how this is mainly naturally occurring on the basis of intuition, and through people around them; particularly students and farmers are mentioned here. Furthermore, net brokers indicate that they are constantly checking out and discussing whether things are done in the right way, including their own efforts.

Evaluation methods used to achieve this
One of the net broker replies instantly that there is no evaluation method. The other net brokers mention internal discussion, feedback from people and continuously questioning whether it is ecologically relevant, socially acceptable and economically feasible. One of the net brokers mentions the following example: "one of the land owners asks: why don't you use Aloe as a pioneer species instead of Spekboom? You can do two things: from an ecological perspective dismiss it (based on scientists who say Aloe does not grow on degraded lands), or you could try to be open for it. So we took it on board, and next time we see an expert in that field discuss it with him, and ask for his opinion. You have to be open enough to challenge your own opinions and beliefs."

Structural reconsideration of basic goals, norms, strategies in use and assumptions (double loop learning)
Again, the net brokers indicate that no *structural* reconsideration of basic goals, norms, strategies and assumptions exists. However, the net brokers provide different examples which show that reconsideration of these issues is taking place: talking to people, through formal meetings such as the Port Elizabeth strategic meetings (e.g. mainstreaming, an important term in the project documents – it was thrown in the group whether this was an appropriate term), critical feedback from universities and visiting conferences. Furthermore one of the net brokers replies: "we are not doing a big evaluation right now, but we are making a small evaluation. I do have the feeling that we are evaluating about how we are doing things. And this reflects a lot on our strategy; we have a lot of ideas for next year. So evaluation is happening because we are strategising for next year." During the PRESENCE strategic meeting in Port Elizabeth it was observed that strategy and policies were indeed discussed. However, it is unclear whether these discussions have actually resulted in changes in those strategies and policies, e.g. whether project documents have been adapted on the basis of this. During the farmers meeting and Kouga nursery meeting discussion on strategies and policies was not occurring, but at the farmers meeting the way things were done was discussed.

People within the PRESENCE network discussing policies and strategies
This question, similar to what (potential) network members were responding to, was also probed to the net brokers. The net brokers mention members from DWAF, CSIR, R3G, DLG and Richard Cowling as people with whom policies and strategies are discussed. "On a different level also the Kouga Rehabilitation Nursery manager and one of the land owners".

6.3.4 CONCLUSIONS

Personal learning experiences in the social and technical field resulting from the activities of PRESENCE was mentioned by respondents, of which socially oriented were mentioned twice as often as technical aspects. None of the respondents indicated to have received training materials specifically aimed at improving or acquiring new skills, knowledge and/or wisdom. This is in line with testimonies of net brokers who indicate that no specific learning tools have been organised and that this needs to be developed further. Participatory monitoring, development of a learning village and training "champions" from communities are mentioned by net brokers as plans for the nearby future.

Positive developments in the field of collaborative learning and communication are taking place, however several issues were identified requiring more attention: the enduring gap between local inhabitants and government officials/scientists; the lack of learning between communities; guarding of knowledge by knowledge institutions and linked to this the possible danger of increasing intellectual capacity; the apparent inadequacy in communication between ECPB and the rest of the network; and more generally a lack of time which may hinder collaborative learning processes. Several workshops, presentations and a fieldtrip are mentioned by the net brokers as settings allowing collaborative learning. Observations confirm that on the PRESENCE strategic workshop 2008 collaborative learning took place, especially through presentations and discussion. Also the Kouga Rehabilitation Nursery meeting and Farmers Workshop were examples where collaborative learning took place to some

degree, during the official part but also during the informal social events that followed both meetings, although more debate and discussion would have stimulated collaborative learning.

The vast majority (77%) of respondents believe that goals and strategies of PRESENCE are at present being reconsidered. These respondents expressed in an emphasised positive manner on the open attitude towards new ideas of the net brokers. One respondent replying negatively mentioned that net brokers stick to hard to diffuse terminology and that they are too consistent in their unnecessarily complex structure. Most respondents indicated not to know of any people within the network discussing strategy issues, however some were mentioned of which only R3G twice. Net brokers mentioned similar groups and individuals, and added the Kouga Rehabilitation Nursery Manager and one of the land owners. Net brokers indicate that there is no official or structural way of evaluating methods, techniques and the way things are done (single loop learning). However, this is mainly done on the basis of intuition and through people around the net brokers. Evaluation methods by net brokers include internal discussions, feedback from people and continuously questioning whether it is ecologically relevant, socially acceptable and economically feasible. Basic goals, norms and strategies and assumptions neither are reconsidered in a structural manner (double loop learning). Nevertheless, this type of reconsideration is occurring through talking to people, formal strategic meetings, critical feedback from universities and visiting conferences.

6.4 LEADERSHIP AND FACILITATION

6.4.1 LEARNING LEADERSHIP

Appropriate form of leadership for PRESENCE

Since a single respondent sometimes delivered two different types of leadership to the question on appropriate form of leadership for PRESENCE or characteristics of them, it was decided to split up such responses and where necessary place them in different categories. Ten of the answers provided (56%) contained an element of facilitative/coordinative leadership, while three respondents (17%) delivered a reply related in some manner to a more authoritative/strong approach to leadership (Appendix I, Table W). Five responses (28%) contained an element that could not be placed in either of both styles, namely democratic; an interdisciplinary panel of experts; the reference group; administrative leadership; and that there should be no director and/or unilateral decisions, where it was not specified who in that case should take the lead. Those who mentioned that facilitative leadership would be the most appropriate founded this statement by putting forward that the network should remain customer-driven and that domination would lead to collapse; that a dedicated leader is necessary, but that facilitative leadership as it is now is the right way; that someone should manage the knowledge, like a secretary; that facilitation is important;; that the leaders should avoid duplicating projects through coordination; that negotiation and informing people is essential; that the facilitative role is essential rather than profiling as a political, decision-making leader. On the other hand, those who plead for a more authoritative role argue that somebody needs to take leadership, provide guidelines because otherwise the network would collapse; that once the plans are definitive, strong leadership is required to get there and that strong leadership is necessary to keep the topic going – to stick to what has been appointed. It becomes obvious here that the different lines of answers might at first sight seem contradictory, but all contain valid arguments and which might be conjoined.

Leaders in the PRESENCE network

When asked about the current leaders in the network, 12 respondents (86%) immediately point at EarthCollective (Figure 18). This is an interesting finding, and although it seems logical this not necessarily has to be the case in a network such as PRESENCE – due to a certain power or legitimacy derived from certain resources it sometimes occurs that not the net broker but another network member is able to decide where the network is heading and how. However, during interviews and conversations it was indicated that some of the respondents (of which all are scientists and government officials) have previously been very closely involved in setting out policies, strategies and approaches. At the same time, EarthCollective is the "motor" behind the network, being the only group that consciously organises events, brings people together and intentionally spreads knowledge to multiple (potential) members of the network. EarthCollective is deriving its legitimacy it seems from the fact that members do not seem to have a hidden agenda or stakes, their open and inspiring characters and their sense of idealism.

Net brokers on leadership

Appropriate form of leadership for PRESENCE

The net brokers appear to be very aware of their position and the role they play and describe their facilitative function. One of the net brokers answers here: "the leader in a network should be a leader, but at the same time no leader. A good captain in a team should not be a captain, humble, grateful, know what the strengths are, and make himself indispensible – he should not have his own agenda and appreciates people." This net broker furthermore mentions: "In Ice hockey I learned that if your best player is the captain, you have a problem. It should be a person that is not in the spotlight. The leader in a network should have no stake in the network. I think that is also where it often goes wrong in organisations: that this person has too much personal stake, and is going to wave around with the flag. For us it is important that the network works, not where or how restoration takes place. The network members should be happy." One of the other net brokers also stresses how leadership should not be tainted by ego, and that it is important to be one step ahead of where the network is, that it should be inclusive, forward thinking and collaborative. The other net brokers immediately refers to the reference group when it comes to leadership and describes how 40% of this group is not active and not acting the way EarthCollective would like to see it. This net broker also mentions that everybody seems to be happy that EarthCollective is keeping the group together, but that over time the members should be happy with the direction PRESENCE is moving.

Current leaders within the PRESENCE network

As was already revealed in the previous question, two of the net brokers believe EarthCollective is taking the lead within the PRESENCE network. However, one of these net brokers also mentions that this is especially on the higher level the case, and that on the local level students (be it unconsciously) have a big influence – they are not leaders in the sense of leaders, but they form the process. This net broker furthermore mentions that in the future there should be different leaders: academic leaders, implementation leaders, and a leader amongst the stakeholders. The second net broker also mentions how EarthCollective is the leader of the network, but that there are scientists who also have a leadership function in their own area. The third net broker is of opinion that it is a very shared lead, and that deciding on what needs to be done is ultimately taken on by many different heads of the network.

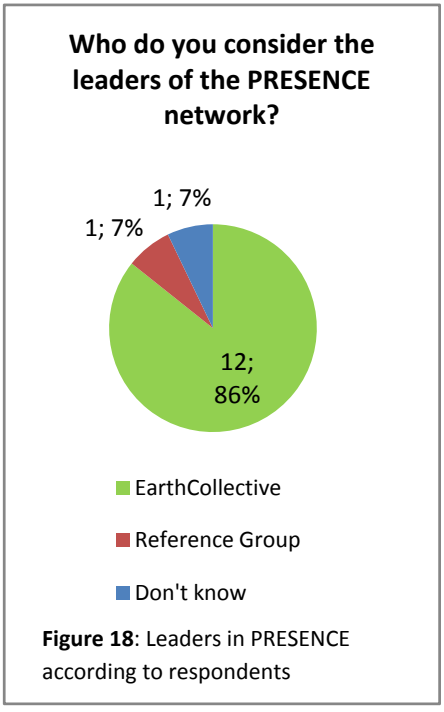


Figure 18: Leaders in PRESENCE according to respondents

6.4.2 MULTIPLE LEADERS AT INTEGRATED LEVELS

The (non-)existence of a single point of power

Eight responses (62%) are of the opinion that no single organisation commonly having the final word exists in the PRESENCE network, whereas five respondents (38%) state the opposite (Appendix I, Table X). Those who believe there is no single point of power found their argument with the fact that generally everything is by consensus, and that currently everybody has the last word. Many of the respondents place a footnote in their answers, including the fact that EarthCollective should take care that this does not happen (for example DWAF putting a stamp on the network) and that it is important that agreements will be put on paper in advance in which the agendas of the different organisations are discussed. Another respondent mentions that it is important not to arrive to a point where you slack up or stand still. Other respondents just mention that they are not aware of one player taking final decisions, or that it is still too early to say. Those who do believe there are groups having the last word come up with different answers: one respondent mentions that in restoration issues, the last word comes from GIB or DWAF, which is a financial matter because the funding comes from them. Interestingly, respondents from GIB do not believe so themselves, but a DWAF respondent also answered to this question that his organisation plays that role, because they fund R3G and that it happened "quite a few times" that this person had to say "no" due to institutional rules. Furthermore, a respondent from ECPB mentions that his organisation has the last word when it comes to anything happening in the Baviaanskloof wilderness area since ECPB is the biggest stakeholder and management authority. One white land owner mentions that people from outside the Baviaanskloof usually make decisions, such as during steering committee meetings in Port Elizabeth, as well as ECPB, PMU in the past, universities, or interest groups – something this person does not like. A member from the alternative community explains that there are three groups who dominate in the Baviaanskloof: ECPB, the farmers union and the tourism group. This respondent furthermore argues that these groups can all affect decisions to be made that are important for restoration, and that they have too much freedom to do what they like.

Net brokers on the (non-)existence of a single point of power

The opinions of the three net brokers vary on this issue. One of the net brokers mentions that at the moment, there is no single point of power, but that it could happen more at the moment DWAF gets more involved, however that this should not be allowed to happen. This net broker also mentions that it depends on what level this is approached; academically or funding. Another member of the net brokers mentions that it is EarthCollective who usually determines what happens, and that furthermore the topic determines who has the last word, to some extent. Generally, there is not someone who has more power or resources that can make him have the last word, according to this net broker. One of the net brokers also mentions that for each project, there is someone who seems to have more decision-making power: for example in remote sensing CSIR and DLR. Also funders, such as their main current funder SELS has a certain power, according to this net broker. Furthermore, R3G is mentioned because they are really into restoration, in the sense of determining which projects are interesting and where to put students on.

6.4.3 NET BROKER

Since the answers provided by (potential) network members on leaders of the PRESENCE network were so unambiguous (nearly all pointing at EarthCollective) it was decided to place the dimension on net brokers under this section.

Performance on stimulating debate and leading the dialogue

The first sample item was aimed at gaining understanding on how EarthCollective performs in stimulating debate and leading the dialogue. Eight responses (67%) were placed in the positive realm, whereas two responses (17%) were neutral and two responses (17%) carried a sentiment that left room for improvement (Appendix I, Table Y). Positive responses were generally provided in a resolute manner and contained a spirit of enthusiasm: they are very good; they are doing a very important job, even though people may not be aware of it and "if they were not there we might be competing instead of working together"; very well – brilliant; their positive enthusiasm is infectious and creates cohesion in the network; outstanding, very talented for this job; in a very professional manner, diplomatic; bringing different views together, encouraging dialogue and people to bring new things to the table; inviting people to bring input, get the debate going. However, two respondents provided some critical notes on this issue: one attended the PRESENCE strategic workshop 2008 in Port Elizabeth and states that the net broker sometimes gave the floor too much space on the process and that the lead should be taking more there. The content can then be determined by others. For example, the net broker might have better explained the model on mainstreaming himself, instead of having the scientist who developed it, so that he could keep the lead. The other respondent attended the farmers meeting in December 2008 and concluded that there was never a real debate on the water issue; that there was a lot of information, but never two groups actually debating with each other and together finding an outcome. This person furthermore mentions that the debate between him and another land owner was handled well by the net brokers, but that it should happen more. "For example, organise a game: have each group on one side – out of such debate you can learn a lot". Furthermore, one respondent explains not to know, and one respondent is not sure whether the net brokers are in such role yet. This person argues that "the net brokers facilitate, but not so much stimulate the debate – which is not criticism because I like the way they let it happen rather than telling what they think too much. They are good at listening, getting the ideas together". For this dimension observation appeared to be a particularly useful method to understand more about the way the net brokers were leading the dialogue during meetings. During the period of research, three meetings were attended that involved learning elements: the PRESENCE strategic workshop (30-10-2008), the Kouga Rehabilitation Nursery meeting (05-12-2008) and the Farmers workshop (06-12-2008).

PRESENCE strategic workshop

First, this workshop was a good example of how EarthCollective brought together different network members in order to exchange information and speak about how to proceed with the network. As set out in the section on learning, however, the only attendants of this workshop were scientists and government officials, so it is questionable whether the list of attendants was a balanced one. The first stages of the meeting involved a welcome round in which every participant had the opportunity to introduce him or herself. This was important for understanding who was who: some people present knew each other since a long time, while there were also new faces and people who had not met before. During the meeting the net brokers attempted to find common ground, by emphasising that all aspects are relevant for restoration. The net brokers also facilitated processes that established negotiations on the problem definitions and basic strategies, by demonstrating and elaborating upon the basic model that is used in the network to arrive to its final aim. Discussion took place on some of the basic strategies of the network (e.g. mainstreaming of restoration). People were also invited and encouraged to take the floor; feedback from participants was continuously asked for and the net brokers appeared to listen carefully to what was said and demonstrated a willingness to entertain alternative points of view. The net brokers attempted to stay up with the agenda, but eventually it turned out that this was not completely successful – some elements had to be shortened or skipped in the end. Sometimes it appeared that the net brokers slightly hesitated whether they should take the lead or have the collective decide on issues regarding the process. Because of the broad nature and large amounts of information and knowledge shared, it sometimes appeared that focus was lacking.

The fact that participants were presenting all their research and implementation projects was highly appreciated, and seemed very successful – also filling a gap since these kind of meetings were not organised by anyone before. During the debates it appeared that some of the participants were more dominant than others, and the net brokers did not react on this or apply tools to guarantee a more balanced input from all participants. The form of the workshop was rather static, no tools to stimulate a more dynamic group process (working groups, rotation, etc.) were applied to engage more people and be more efficient. While the meeting was arriving at its final stages, on of the net brokers made a wrap-up model of the input that was provided, which was presented at the end of the workshop. As a closure, participants were asked their opinion on PRESENCE as it performs now, and about how they experienced the workshop. All participants were enthusiastic, and generally the conclusion was that PRESENCE and EarthCollective were at this point indispensible, after which funding opportunities were discussed. The workshop appeared to be a good example of the net broker acting as a care taker to maintain, improve and enhance network collaboration and promote partnerships.

Kouga Rehabilitation Nursery meeting

As described in the section on learning, this meeting involved a lot of presentations, delivered by a range of speakers. Although the net brokers delivered their information in a way adapted to the audience (meaning no jargon, scientific terms, simplified models), and student researchers were encouraged by them to do the same, it was not possible to see them in action in leading the dialogue. The programme of that day was actually too full to allow for many questions or interaction.

Farmers Workshop

During the workshop approximately ten land owners were present, as well as two members of the alternative community. No members of the coloured community were invited and/or present. The net brokers attempted to provide tangible results as a response to the apparent need for it amongst the local inhabitants. The meeting also involved many presentations and a large amount of information was delivered in one afternoon. This caused that after some hours many of the land owners appeared to have some difficulties staying focused and keeping their attention to the presentations. Although participants were frequently invited to deliver their input, not a lot of debate took place (which was also mentioned by one of the land owners). For that reason, the communication appeared to have a slightly one-directed nature. Although the meeting was highly appreciated by the land owners, and it seemed to have influenced their feeling of being involved in a very positive sense, more debate would probably have generated an even more positive effect.

Performance on operating as a trust bridge

Seven respondents (44%) were positive on the performance of EarthCollective operating as a trust bridge, seven respondents (44%) provided a neutral answer and two respondents (12%) were delivering critical notes (Appendix I, Table Z). The positive responses were founded as follows: their activity is well suited, just in time; they are catalysing social processes – for example on the fieldtrip on water restoration one could see the buy-in between scientists and farmers; bringing people together is creating a trust bridge; their generosity builds trust; the fact that people get to speak out for themselves is an indicator for good trust; and EarthCollective was seen operating in difficult situations, handling that very well; and the character of the net brokers builds trust. Those who conveyed a neutral answer are never negative about actions of EarthCollective, but those respondents mention that they have not yet seen them operating in conflict situations, so it was too early to tell; others doubt if in such cases EarthCollective would be able to solve these; that the presence of students builds trust but that this at the same time may affect trust due to lack of continuity; and that more could be done to build trust during meetings. Those with a more critical note report that EarthCollective should be more aware of informing landowners on the attendance of students on their lands, and that more could be done between farmers and scientists. As could be observed before, a great variety in answers is provided, but besides the critical notes the bottom line is that respondents

generally believe that EarthCollective is doing well, considering the circumstances and the time they have been operating.

Performance on enhancing network collaboration by promoting partnerships

Eight respondents (73%) provided a positive answer when asked about EarthCollective's performance on enhancing network collaboration, while two answers (18%) were neutral and one (9%) was negative (Appendix I, Table AA). Again, the positive replies generally contain a very encouraging sentiment. The PRESENCE strategic workshop 2008 was mentioned as a great achievement; getting all those people together, as well as the fieldtrip on water management. Furthermore the lack of ego and enthusiasm is mentioned again in a positive light, as well as the fact that EarthCollective seems to do a good job here on a local as well as institutional level. Those who provided a more neutral answer believe EarthCollective is doing alright, but that there is a shortfall, which is why the strategic meeting in Port Elizabeth needed to be organised. Another (local) respondent doubts whether the local inhabitants already see students and members of EarthCollective as partners and recommends that there should be a clearer message that they are going to stay and truly are partners. The same respondent also notes that EarthCollective has been doing "a very good job in partnering scientists and locals – the best ever". The one respondent with a negative answer believes EarthCollective has not been doing excellently here: "despite their trust, I do not see yet big collaborations steaming ahead. It is still early days to say".

Suggested improvements for net broker by respondents

The suggestions provided by net brokers have been categorised into eight different groups (Appendix I, Table AB): 'participation and roles', 'structural', 'knowledge and communication', 'content', 'operational', 'funding', 'leadership and facilitation', and 'other'. It would go beyond the limits of this chapter to elaborate on the forty-eight answers here, however an attempt has been made to touch upon trends and those results that are striking and/or typical. What will become obvious is that many of the points are dealt with in the various results sections. **Participation and roles**: the involvement of students from South African universities is mentioned several times. One respondent mentions that this should be black students, another respondent suggests to include more PhD students. It is also suggested that more universities in different parts of the world should be included in the network, especially those specialised in similar (semi-arid) conditions. Furthermore, the need for a further analysis on who should be in and out of the network (on the basis of power/interest) is mentioned, also to gain more understanding in roles and synergies of and between (potential) network members. This is also related to a critical note by one of the respondents, who wonders whether certain institutions should be involved and if the net brokers are aware of possible consequences. In addition, a respondent suggests to prioritise communities, and one ECPB member wonders why the logo of ECPB is not included while they are the biggest stakeholder. **Structural**: one respondent proposes to formalise the network further, resulting in people feeling more part of it. Several respondents mention getting confusing about the different arms, groups, names and subdivisions of PRESENCE/EarthCollective, which is also related to one respondent feeling that things sometimes get a bit diffuse and that it is unclear who does what. Another respondent answers in line with this that EarthCollective should make more clear what they are doing, if they expect people to acknowledge their role and be sustainable – and also get more clear what is the network, who is in and who is out. Furthermore, it is mentioned that EarthCollective should wake for the danger of the network becoming too massive and clumsy by involving too many stakeholders, and a suggestion is made to possibly create subgroups. One respondent mentions to be looking forward for PRESENCE to expand to other areas, which creates opportunities for collaboration. **Knowledge and communication**: The need for a webpage to exchange information is mentioned, which will be elaborated upon in the knowledge dissemination section in this chapter. Several respondents mention that it is most important to get people together, and that more meetings should be organised – however one respondent that here lies the challenge of keeping the amount right: not too much, not too few. Communication through e-

mail is mentioned by two respondents: receiving e-mails on a monthly basis providing information on new events is important, but now they sometimes are too long and they should work more with bullet points, highlights. Receiving conclusions from student research is regarded very important by several respondents, and a suggestion is made to produce a living document with all the executive summaries of students, which is not too lengthy. This could be used as a marketing tool as well. This is related to another suggestion by two respondents, who explain that it is important to deliver tangible results on what is happening, also because attending meetings needs to be justified towards the company who is paying that day. One respondent mentions that there should be a lot more data sharing. Some other suggestions in this respect are that caution should be taken when communicating with coloured communities, that it is important to be aware of intellectual rights of knowledge – also with regards to students coming in and out –, that EarthCollective should link sellers (land users) to government institutions, and that it is very important that ECPB is informed about all the research activities, which apparently was not always the case. **Content**: One of the respondents mentions that there should be paid more attention to social research. Another respondent is of the opinion that PRESENCE is too much on the scientific side, and that a holistic approach of restoration is lacking resulting from the fact that there is not enough an understanding on the ground of what restoration should be – so too much of a fixed idea. Furthermore, respondents mention that there is a vacuum in policy and social issues, and institutional issues implementing restoration. It is furthermore mentioned that the quality and content of meetings is important, and that information should be kept up to date, that success stories and progress reports should be included. **Operational**: some more practical, operational remarks include the following: "why planting the area full of Spekboom, I like open spaces!". Another respondent wonders why only Spekboom is focused upon, and not Aloe or other succulents. One respondent believes it is more rational to focus on farm areas than the wilderness area, which seems pretty untouched. Finally, it is suggested that there should be a better system for re-usage of fences, which is very important for restoration, according to one respondent. **Funding**: according to one respondent it is essential that EarthCollective secures more funding, in order to secure the future existence of the network, since it has not been established well enough to go without EarthCollective. **Leadership and facilitation**: EarthCollective should more emphasise their role in facilitating, because many people do not get it at this moment, is what one respondent believes. Furthermore, they should keep the lead in the process, keep on facilitating and bringing people together. One remark by a respondent is that EarthCollective members should be careful not to be too serious and not to burn-out – have a bit more fun, lighten up a bit. **Other**: two respondents mention that it follow-up and continuity is important, and that the momentum should be kept – so no space for slacking off. One respondent mentions that it should be kept in mind that it will take many generations to restore vegetation in the area. EarthCollective should carry on the way they are doing, but they could be more demanding and exert some more pressure to the Research Group, according to one respondent. An idea put forward by another respondent is that more of the big players (Dr's, Profs) should be invited to live for a week at the Kouga Dam to improve understanding of what is going on – "like a public relations thing", which could help in advocacy.

Considerations of net brokers on net broker tasks

Contacting stakeholders and bringing them together

Various methods of contacting stakeholders are mentioned, all through personal contact: e-mails, phone and visiting. One net broker mentions how his philosophy is gratefulness, and how that is emphasised in e-mails. People are brought together through meetings, workshops and fieldtrips.

Leading the dialogue

It appears that one net broker in particular leads the dialogue; this was also observed during meetings, and one of the net brokers also immediately refers to this person for answering the question related to this issue. This net broker answers that there are certain objectives he wants to reach, from a team perspective. It is interesting to literally quote this person here: "I know I have to listen more to people,

caused by my enthusiasm. I am trying while facilitating to make sure that everybody says something. I know what people's problems or issues are, so I try to ask specific questions that might sometimes appear stupid to engage these people. I try to have an attitude like: "the things will come by itself", while I have the objectives in the background." The third net broker adds that it is important to ask questions to find out why people are there, and what their needs are. That it is furthermore important being able to adapt swiftly.

Experimenting with different ways of organising the network system and structure
Two net brokers explain that no experiments in this field have been organised, and that the network is still young. Thereby, one of the net brokers mentions, it first has to imply that the network is organised, and it is not sure if people out there are waiting for a lot of structure, a very formal network. The third net broker mentions that there has been experimentation, and that the concept of a tree is used, illustrating how each component of the network is interlinked. This net broker furthermore mentions that there are ideas on working on the structure, and that conceptually it is ready – which is somewhat contradictory to statements of other net brokers.

6.4.4 CONCLUSIONS

The majority of respondents (56%) believes that the appropriate form of leadership for PRESENCE is facilitative/coordinative. There are also those who plead for a more authoritative leadership approach (17%), and others who mention any other form which may include other elements such as democratic leadership and administrative leadership (28%). Proponents of a facilitative form of leadership generally mention how domination would lead to collapse, and that coordination, negotiation and the management of knowledge is of highest relevance. Those in favour of a more authoritative form of leadership advocate that strong leadership is required to provide guidelines and give directions once the plans are definitive in order to reach the aims of the network. The vast majority of respondents (86%) refers to EarthCollective being the leaders in the network. Two of the net brokers share the same opinion, however add nuance to this by adding that sometimes also students may act as leaders in the process, and scientists have leadership functions in their own areas. The net brokers appear to be very aware of their position and the role they play when they describe their facilitative function.

The majority of respondents (62%) believes there is no single point of power, the rest (38%) states the opposite. Many of those place a footnote when they mention that EarthCollective has to take care that this should not happen and that agreements should be put onto paper. Some respondents indicate that in restoration issues the last word comes from GIB or DWAF because they are the funders. A respondent from ECPB mentions that his organisation has the last word when it comes to anything happening in the Baviaanskloof wilderness area since ECPB is the management authority. Local inhabitants frequently mention external groups to take decisions on the Baviaanskloof (without involving them). The net brokers mention that there is no single point of power, but that the topic or project generally determines who has the last word.

Generally respondents were very positive about the performance of EarthCollective as a net broker, especially regarding the short period of time of operational activity. Two-thirds of respondents were positive about EarthCollective stimulating debate and leading the dialogue and the PRESENCE strategic workshop was a good example of the net broker acting as a care taker to maintain, improve and enhance network collaboration and promote partnerships. In this respect, the Kouga Rehabilitation Nursery Meeting and Farmers Workshops were less successful since debate took place to a considerably lesser degree due to time constraints. From their testimonies it appears that net brokers consciously apply certain ideas on how to facilitate such group processes. Generally, opinions of respondents on the performance of EarthCollective acting as a trust bridge were also on the positive side (44% positive against 12% negative), however also a large group (44%) was neutral in his or her reply mainly because they never saw EarthCollective operating in conflict situations. A vast majority of

respondents (73%) was positive about EarthCollective's performance on enhancing network collaboration, in which respect the PRESENCE strategic workshop was mentioned multiple times as a great achievement. Two respondents (18%) were more neutral in their answers and one respondents (9%) was more on the negative side, stating that no big collaborations steaming ahead can be observed yet. When probed to suggest improvements for EarthCollective, forty-eight answers were delivered, categorised into eight different groups: 'participation and roles', 'structural', 'knowledge and communication', 'content', 'operational', 'funding', 'leadership and facilitation', and 'other'.

6.5 SHARED VISION AND APPROACH

6.5.1 SHARED VISION

Description of common vision of the PRESENCE network

In order to understand how the different respondents conceive the vision of the PRESENCE network it was useful to literally cite the various answers provided (Appendix I, Table AC). Twelve out of the thirty respondents (43%) were able to reply to this question. Appendix I, Table AC combines the answers of two questions: besides describing the vision, respondents were requested to provide their opinion on it. Note: after some interviews it was decided to reveal the vision of PRESENCE to the respondent after an attempt was made to describe it for the purpose of gathering more useful answers. This explains the difference in detail in the answers of the first respondents and those interviewed in a later stage (Appendix I, Table AC has been arranged in a chronological order). The answers vary greatly, and it appears that no single respondent was very close to exactly describing the vision ("The Restoration of Living Landscapes: Mainstreaming restoration as a socially desirable, economically feasible and ecologically acceptable multi-functional land-use"). Respondents mostly did not distinguish between the vision and strategies or approaches – repeatedly they described the *way* of achieving the network's aims instead of the overall vision, or a combination of both. Possibly, this was related to the fact that respondents had difficulties understanding the difference between PRESENCE and EarthCollective; most answers provided were closer to describing EarthCollective's vision than PRESENCE's. Five respondents mentioned the term "restoration" in their answer. Other descriptions included "creating a cohesive action group that can realise restoration in a cohesive manner"; "enable people to exchange information and experiences"'; "to get everyone involved from research until roll-out phase"; "to unlock resources in order to improve natural resource management"; "world service"; "maintain an open and transparent mechanism for integrated environmental management that would incorporate all stakeholders"; "green vision, nature, biodiversity restoration and conservation"; "to bring together a network of north-south collaboration"; and "achieving the restoration of natural capital through social and economic incentives". Most respondents were very positive about what they just described, but (sometimes after reading the actual vision) some suggestions for improvement were provided: making the area a bit wider, so not just Baviaanskloof and immediate catchments; making sure there will be a long term vision, also after restoration; being aware of the possible conflicts between ecological and economic aims; and putting ecology (ecologically desirable) first instead of financial. One respondent mentions that it is a very mouth full, "like a baboon swallowing a miely (a whole corncob)", but that he likes it. Another respondent mentions that "restoration is a process, whereas conservation is a state, once you talk about land use, you're talking about conservation and maybe not so much about restoration". During the PRESENCE strategic meeting it appeared that some network members were confused about the actual meaning of mainstreaming, which lead to discussion and questions were raised on whether this term should be used. So generally, and apart from some critical points, it appears that people like what they see and what is happening, although they are not talking about the same thing and perceive the network's vision in a different manner.

Existence of a shared vision within the PRESENCE network

Respondents did not seem to be on one line when asked whether they believed a certain shared and commonly supported vision exists within the PRESENCE network, and a big variety in answers were delivered: four positive (33%), five neutral (42%) and three negative (25%) (Appendix I, Table AD). This is an important indicator for the performance of the network, since respondents as well as net brokers indicated that one of main elements interconnecting a network such as PRESENCE is a shared vision. Those positive about a shared vision within the PRESENCE network mostly founded this on their intuition it seems and twice refer to a sense of unity, which is not exactly the same as a shared vision. Also in the answers that have been placed in the neutral group it appeared that respondents have difficulties answering this question. The bottom line in their answers is that with the current network, organisation and experts behind it, people might understand the vision and that it might work getting all the noses into one direction. Also a sense of people taking it for granted, or actually knowing what is best for them without knowing the exact vision appears to exist. One respondent remarks that the unifying factor so far has been: "what can I get out of it, and not: what can I contribute?". Those who do not believe a shared vision exists yet believe that it has not permeated to everyone, and that it will take time for people to understand what it is all about. Another respondent mentions that EarthCollective is falling short at the moment, and that the communication in this respect is still lacking – the strategic PRESENCE workshop only being the first time this person saw communication on shared vision concretely happening. This respondent also mentions that one of the net brokers appears to have too much knowledge. One respondent states that restoration is a common link, but that everybody is going there through own agendas, sometimes trying to push that into their own direction.

Information from net brokers on shared vision

Existence of a shared vision

The net brokers moderately seem to be of the opinion that a shared vision exists. One of the net brokers replies: "I would say yes. Does everybody understand that, and give input? To a lesser extent". This net broker furthermore explains that EarthCollective tries to achieve a shared vision through determining what the strengths and needs are, but that it is unknown whether it actually exists: "to a large extent yes, but maybe some people are not agreeing with it totally". One of the other net brokers explains that "PRESENCE, the visions, is having PRESENCE Baviaanskloof as a pilot to test the PRESENCE approach – the results from that project can be used for other projects as well. It is important to understand that PRESENCE is not the same as PRESENCE Baviaanskloof. On a high level, yes. In the sense of our end goal, yes. But on how to get there, no. In the Baviaanskloof, I do not think there's a shared vision. But still: everybody wants to have a healthy future for his children. But again: the opinions differ on how to get that, which is a strength and a weakness, I believe. The third net broker believes that after the workshop in 2007 the people are slowly getting together: "we first had to push it a little bit, this social process. But over time it has improved, people are getting enthusiastic and involved".

6.5.2 UNIFYING STRATEGIES

The meaning of restoration

This question focuses specifically on how to achieve the vision of the PRESENCE network, with regard to approach and strategy. The main point of the vision that is known by respondents is restoration, which is what this question focuses upon. The most essential deliverances have been selected, and it was decided here to cite some more literal answers, since this is of utter importance to gain understanding in this issue (Appendix I, Table AE): "not to be wasteful with water"; "nature itself is only capable of restoration"; "preventing harvesting"; "the development towards an optimal natural state of the landscape in terms of ecosystem functioning"; "restoration of the landscape, river beds,

but not only that: also of cultural assets such as rock paintings"; "planting trees"; "restoration of natural situation, biodiversity without big man influence"; "rehabilitation. For me it is the reserve, restoring where possible the ecosystems"; "restoration in this area to how it was exactly is not possible in this area, but you have to bring it back to a stage where nature can restore itself"; "physical process, restoring ecosystem level – landscapes and ecosystem processes, getting this back prior to human intervention, which includes a social component, might require cultural change to get there – however the key end goal is not cultural restoration"; "return to it's natural state, whereas rehabilitation is return to it's original function – so re-instating a functional ecosystem to return ecosystem functions to degraded areas through various mechanisms". Summarising, according to respondents restoration may include a dimension on water/river beds, landscape, ecosystem (functioning and/or processes), biodiversity, trees, and/or culture. Some believe it means bringing one or more of these elements back to how they were prior to human intervention, others believe this will never be possible and/or believe it is not human kind that is able to do so.

Information from net brokers on unifying strategies

The meaning of restoration

One of the net brokers describes that "it depends where it happens, but that it generally involves restoring the landscape so that it is more functional for the people who live on the land, or the objective of the land. In the case of a nature reserve you will aim for biodiversity – if it is on a farmers land you want to bring back the landscape so that it can be used for natural grazing, tourism, etc. So first you determine the goals, then the type of restoration". A second net broker describes it as "bringing a system back from degraded condition into a natural state – restoring the function and structure of the system". The third net broker referred to a document.

6.5.3 CONCLUSIONS

Twelve respondents (43%) attempted to describe the vision of PRESENCE but none came very close to expressing the correct formulation. Respondents mostly did not distinguish between the vision and strategies or approaches – repeatedly they described the *way* of achieving the network's aims instead of the overall vision, or a combination of both. Possibly, this was related to the fact that respondents had difficulties understanding the difference between PRESENCE and EarthCollective; most answers provided were closer to describing EarthCollective's vision than PRESENCE's. Opinions on whether a certain shared and commonly supported vision exists were spread: those supporting the existence repeatedly referred to a sense of unity, others indicate that it probably has not permeated to everyone what PRESENCE is all about, and that communication in this respect is lacking. Net brokers are hesitative on this issue, and indicate that probably the vision of PRESENCE is not known and/or understood by all, but that in the end everybody wants to have a healthy future for their children indicating that in a roundabout way the strategies are supported.

A large share of explanations on the meaning of restoration – being the fundamental concept of the vision – is provided by respondents, which may include a dimension on water/river beds, landscape, ecosystem (functioning and/or processes), biodiversity, trees, and/or culture. Some respondents believe it means bringing one or more of these elements back to how they were prior to human intervention, others believe this will never be possible and/or believe it is not human kind that is able to do so. Net brokers describe that it depends on where it happens and that it is related to the function and structure of the system or land.

6.6 KNOWLEDGE DISSEMINATION

6.6.1 NETWORKED KNOWLEDGE DISSEMINATION

Dissemination and types of knowledge within the PRESENCE network

The model in Figure 19 was created on the basis of the results of four questions related to the receiving and conveying of knowledge to others within the network in order to gain more insight in knowledge dissemination. This model shows the one-to-one knowledge exchange; workshops or other types group gatherings are not included. If these would be included, it would lead to a relative reinforcement of connections between government and scientists, since members hereof attend more collective meetings on restoration than the local inhabitants.

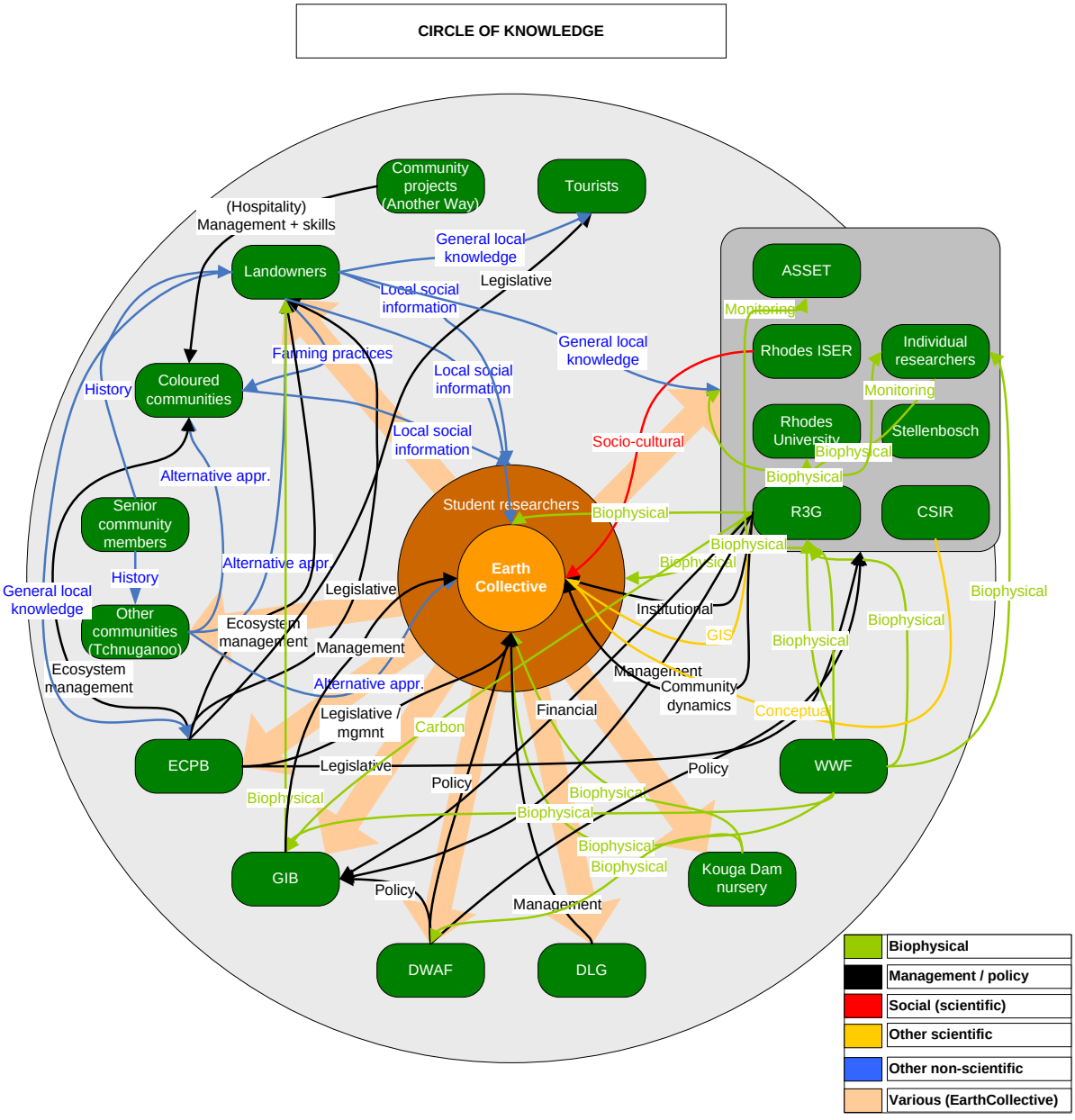


Figure 19: Circle of knowledge

A first impression when seeing this model might be one of bewilderment. Although this is understandable, the model still does provide us with relevant information to gain insight in general trends. This model is by no means all-encompassing, and since it is based on an open interview

question it is very probable that respondents have forgotten to mention one or more of the knowledge connections. Measuring knowledge dissemination is very difficult, quantifying almost impossible and probably an entire study would be required to arrive to a more significant outcome. Thereby, one could measure data transferred through digital and official channels, but gaining insight in the information that is disseminated in informal ways is rather tricky. This is also one of the shortcomings of this model: it does not show the amount of knowledge transferred, and the way it is transferred. So if one out of the entire group of land owners would sometimes in an informal way verbally exchange some information with a member from EarthCollective, this would result in a connection in this model – a same connection as two members who would share knowledge on a daily basis. Still, an attempt has made here, simply by asking (potential) network members, realising the potential bias that may occur, and double checking the data before drawing any conclusions on trends:

- A useful insight that can be retrieved from the model is that it shows the complexity and dynamics of knowledge dissemination and distribution through a network such as PRESENCE. Anyhow, a positive first conclusion to start with here, is that a lot of knowledge dissemination appears to occur.
- When analysing some more concrete results, it becomes apparent that coloured communities only seem to receive information; so no knowledge is conveyed by them throughout other communities or the network.
- The divide between local inhabitants and to some degree government, and to a further degree science is another issue. ECPB is nowadays more present in the Baviaanskloof, providing knowledge on legislation and ecosystem management, and sometimes GIB provides biophysical knowledge on water and vegetation, but that is as far as it goes. Not many members of the scientific group have (often) visited the Baviaanskloof, and there are not many other channels through which their knowledge is translated and conveyed into the Baviaanskloof – only now recently through EarthCollective. The same counts for local knowledge not being transferred to scientists and only to a limited extent to EarthCollective, which is for the greatest part realised through student researchers. In chapter 7 this issue has been further discussed. In the section on results, further issues on limited knowledge sharing of local inhabitants is discussed.
- The Model in Figure 19 also shows the limited amount of socially oriented (scientific) knowledge versus the vast amount of biophysical/ecological/vegetation knowledge. Only one connection has been found here, between Rhodes ISER and EarthCollective – however this respondent mentioned that so far the knowledge sharing has been very limited. This observation is in line with the findings on experimentation, where it was concluded that most experimentation by scientists and government officials was in the field of vegetation and biophysical studies. What this model reveals is a probable consequence: scientific results are disseminated, while the socially oriented knowledge is not or hardly conveyed throughout the network.
- Very limited knowledge transfer is occurring to and from the only community empowerment project in the Baviaanskloof (Another Way).

In an attempt to gain more insight in a qualitative way on an important type of knowledge, namely the student research results, some observations are described here. It appeared that this knowledge dissemination might not always be going as smooth as it should go. Examples are the fact that previous student research was not shared with one of the network members (government), and this person did not know where to find it. Not all farmers are convinced about the usefulness of research because as yet, previous research has not always been returned or presented to them – the farmers workshop in December 2008 was the first time this happened extensively. Students who previously conducted research also mention in their report that a certain degree of “stakeholder burnout” was occurring: researchers are coming and going without returning results (Janssen, 2008). Also from own experience it was felt that now is a crucial point in time, and that results should be delivered since otherwise the enthusiasm about the project could diminish and momentum lost.

Awareness of existence of interactive knowledge sharing portal

None of the respondents answered the question on whether they were aware of an interactive portal or computer system to share knowledge with a confirming nod. Five respondents immediately provided an explanation with their response: three were positive, believed it was a great idea and they would use it. Two respondents were not as optimistic and explained to expect never to use it, since "more constructiveness comes out of coming together because I would not have time to read a lot of the resources that would be available on such portal", and "I get so many e-mails that I do not have time to go to a specific website". Nevertheless, it has become obvious from this question that such portal is definitely not in the air yet, or at least nobody is aware of its existence.

Suggestions for interactive knowledge sharing portal

Appendix I, Table AF presents the large share of ideas and suggestions by respondents for a virtual knowledge sharing portal. This question also revealed that generally respondents were enthusiastic and it appeared that a need seems to exist for a more sophisticated way of knowledge sharing within the PRESENCE network. Although very relevant information for the net brokers, it would go beyond the purpose of this thesis to dive too deep into technicalities here since it does not provide information on any form of performance. Noteworthy to mention is that again some respondents stress that the absolute minimum of information should be shared, that concise bullet graphs are appreciated, that it should be kept simple – no over engineering, and that information should be kept up to date.

Information from net brokers on knowledge dissemination

Knowledge dissemination by net brokers

The net brokers indicate to spread knowledge about opportunities, documents of the students, ideas of other people. Basically all information to everyone – moving between disciplines, and summarising what is relevant, as one of the net brokers explains. "Moving between local needs and scientific importance. Providing guidance and knowledge on structure to students. Experience & approach. Knowledge, what is it? Knowledge is a knowing, and if you can incorporate that in your activities... that is what we're doing". The third net broker, who is applying her speciality (remote sensing) in the network, indicates to also spread knowledge in the field of spatial analysis. When asked more specifically to whom the knowledge is disseminated, the net brokers mention "everyone"; the main partners, farmers, ECPB, GIB, and the students. The information that is received comes from the same individuals and groups, and includes a large variety of things such as documents, information and opportunities. One net broker remarks that he hopes that it will be better in the future, and that through the internet portal EarthCollective's role will be more clear for other network members.

Monitoring of knowledge transfer throughout the network

All net brokers explain that knowledge transfer throughout the network is not monitored. One of the net brokers mentions that the idea of PRESENCE as a network has only been evolving lately, and hopes that the portal will provide more opportunities. This net broker also mentions that meetings, blogs, etc. are more important than articles (which is more easy to measure), because in that way also experiences are shared. One of the other net brokers mentions that it "kind of manifests in peoples actions and ideas". The third net broker wonders how and if this could be possible, and whether it is desirable to control the network so much.

Application of standard process/procedure in which data is entered, imported and/or gathered

One net broker explains how the different EarthCollective members strive for a similar structure in documents, but that there is no real process or procedure. This net broker also mentions to realise that this must improve, because as the network grows information increases. One of the other net brokers also acknowledges that no standard procedure is in place in a sense that it is written down. Furthermore, it is mentioned that students are asked to produce a summary of their work, targeted to

a general knowledge since the whole network must be able to use it. Nobody in the network, this net broker continues, delivers a lot of information. The third net broker mentions that the data is stored in a structured way on different computers and that actually software was sought to synchronise the data, which has not been found yet. Creating a structure involves a standardised way of naming folders, where different net brokers all have their expertise. An intranet system does not exist due to lacking facilities. As for now, net brokers have to talk a lot to each other to make sure the latest versions are used, according to this net broker.

Application of a standard process/procedure through which data is disseminated
All net brokers mention that a standard procedure through which data is disseminated is not in place. One of the net brokers mentions to make notes from new information in the cell phone, and always keeping a notebook in the pocket, after which it is determined where the information has to go. Another net broker mentions that certain steps are followed before releasing information, which includes a check who needs it, and making sure all the information is in one e-mail or document, so that no more e-mails need to be sent than is necessary. Content and language are discussed. Furthermore, one of the net brokers mentioned that the development of the knowledge sharing portal is very important in this respect.

Management of standard process/procedure on how to deliver new knowledge and ideas
The net brokers mention that this is done by all of them, and that there is no procedure of making sure that new knowledge is streamlined. But the net brokers normally are 24/7 together, and these things are discussed. Layout-wise EarthCollective has a house style. One of the net brokers mentions that it is difficult when realising a standardised structure, because in that case you could touch upon organisational structures of network members – CSIR for example has a different structure than universities. However, this net broker mentions, it is important that people see it is facilitated by PRESENCE – especially local stakeholders.

Interpretation and processing of new knowledge for identification and solving of problems
The net brokers seem to be very aware of the link between “problems” and ideas, and explain this each in their own way. One of the net brokers explains how they do not approach things from the idea side, but from the problem side: trying to understand what is the problem, then try to involve students or find knowledge to arrive to answers. One of the other net brokers mentions here that they do not look so much at problems, but rather see it as challenges – looking at opportunities and finding out what can be the beneficiaries with the new knowledge. The third net broker explains that the net brokers are thinking about ideas a lot, and try to connect it to problems, of which an example is the learning village. This net broker further explains how when they receive information, it stays on their minds and they keep thinking about what to with it.

Existence of knowledge sharing interactive portal
The net brokers indicate that once they used Topshare, but that it cost too much time to get it off the ground and so it was not launched formally. At this point just MS Outlook is being used, but a new portal is in development and the aim is to keep it South Africa based.

Accessibility of knowledge sharing interactive portal
Topshare has not been accessible, but the new portal will be, and the idea is to use the learning village that is being developed to spread knowledge to those who are not able to access the internet portal, according to one of the net brokers. Another net broker mentions how the coloured communities do not have internet, and plans to deal with this by selecting and filtering the information that is there, and disseminating it in a more traditional way. This net broker furthermore explains: “I realise that you have to make a judgement call, but I wouldn't know how to do it differently”. He furthermore states that the portal is mainly oriented at the broader network, but that from initiation the local inhabitants will have access to certain areas of it.

Management and moderation of knowledge sharing interactive portal
Ideas of the net brokers differ on who will manage the portal: one mentions that it will be necessary to divide the tasks and determine how much time is needed, while one of the other net brokers mentions that it has not been decided yet and that it would be a good idea to involve somebody for six months, perhaps make it part of the internship of a student. The third net broker believes that somebody from EarthCollective should be appointed to manage the portal, rather than outsourcing it.

Application of GIS/graphic software to make information more understandable for stakeholders
Net brokers indicate that so far, a GIS system or graphical software to visualise information in order to make certain things more visible and understandable for stakeholders has not been utilised. At this moment, however, EarthCollective is busy handing in a proposal at Google Earth so that stakeholders can add pictures, information and issues to a map. Furthermore, developments are taking placing in the field of participatory GIS, educating people and EarthCollective to use maps, according to one of the stakeholders. This stakeholder continues: "When I build a map I do it from my perspectives and background, but maybe stakeholders perceive it differently. For us it is important to understand this, to understand each other. This plan is part of the learning village". Positive observations that have been made include the fact that a poster of each student research is developed, which have been seen hanging in for example the main corridor of GIB. Also the (3D) application of Google Earth in a very sophisticated way was observed during the PRESENCE strategic workshop in Port Elizabeth and farmers workshop, which provided a clarifying overview of the area, and the projects that are organised there – and appeared to be understandable for all participants.

6.6.2 EXTERNAL FOCUS

Influx and outflow of external knowledge

The model in Figure 20 only illustrates the external knowledge influx and outflow to and from other organisations and individuals. Naturally (also due to the nature of the network), many respondents mentioned to gain new knowledge and ideas from books, courses, academic literature and/or other media, as the results under the section on learning show. These results are not displayed in Figure 20, which was created for the purpose of understanding the degree and variety of external connections to the network. Again, this model is by no means all-encompassing and probably not complete. Nor does it provide quantitative and/or qualitative information on the knowledge transferred. It must also be noted that it was sometimes almost impossible to distinguish between internal and external knowledge, especially in the academic sphere. The model solely shows the external connection of (potential) network members, and not those of EarthCollective and/or students. Bearing all this in mind, it is still interesting to find out if certain trends can be identified:

- Generally, a large amount of connections with the external world appear to exist. Also the variety in external connections appears to be very large: from external institutions to farmers, botany groups, external communities, trainers, consultants, researchers, school groups, different associations, other implementing agencies, study groups, government institutions on a regional, national and global level, environmental action groups, eco-farm and perma-culture networks, external social projects and a land community trust. This is an important performance indicator for a learning network, since it implies that new knowledge continuously flows in and out. This means that the probability of "knowledge rotation" – that is, knowledge being recycled, resulting in no or fewer innovation – is lower.
- All these external parties are linked to a large range of (potential) network members, naturally related to their needs and interests. This is also a positive indicator; the fact that all (potential) network members have a connection to the outside world, which means also access to information and knowledge – so this adds to the balance of the network.
- Generally, many of the (potential) network members exchange information with external parties, whereas the coloured communities (where most connections were found) only receive

information. They receive knowledge (and usually aid) from municipalities, a land community trust, at least one external researcher and research institute, an NGO (landmark foundation), external students, different government departments and a tourism association. By itself this seems positive; it means that probably a lot is happening to empower them and improve their situation, however the problem here seems to be that they are not conveying any information externally. Earlier it was concluded that no information was conveyed throughout the network by coloured communities, so now it appears that actually no or very few information is conveyed by them at all.

- Again, we see that the amount of social scientific knowledge coming from the external environment is limited – even non-existing based on the results.

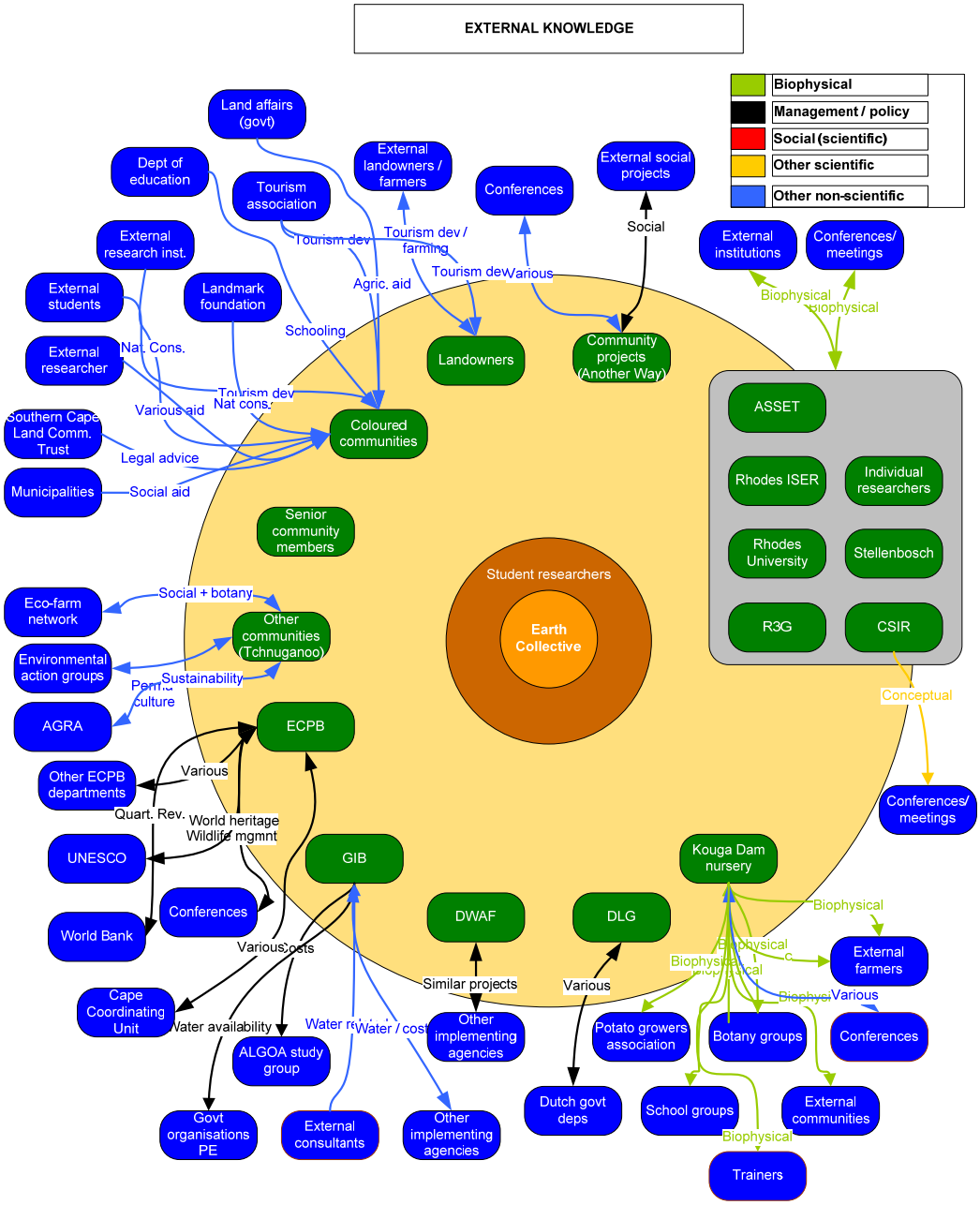


Figure 20: External knowledge

Information from net brokers on external focus

Collection of external information and knowledge

Net brokers mention that they collect external knowledge on ecosystem management through international conferences such as an IUCN conference (2008), and they are busy becoming an official part of the IUCN Commission on Ecosystem management. Furthermore they mention that external knowledge on ecosystem management is gathered through reading literature, through students coming through, and general media such as the farmers weekly. In addition it is mentioned that there is no real systematic procedure, but that collection is happening regularly and consciously. One of the net brokers believes that the institutionalisation will further enhance this process and it is also mentioned by one of the net brokers is that a subscription to a South African ecosystem management magazine is missing. External knowledge on broader social and economic trends is gathered to a lesser degree, and one of the net brokers refers to partners in the network who have this kind of knowledge but also acknowledges that they should do it more themselves. Another net broker mentions that it happens through attending conferences and reading literature. Systematic external knowledge on technological trends is carried out to a greater extent again, according to the net brokers, of which two refer to GIS systems and Google Earth. In this respect, one of the net brokers adds that three partners of EarthCollective are big institutes (CSIR, DLR and WUR) who specialise in this type of knowledge. One net broker furthermore states that he believes that "in general, ecosystem management and technological external knowledge should be stimulated to be carried out by the partners, while the social, economic and political external information should really be tracked by the net broker".

Utilisation and application of external knowledge by members of the PRESENCE network

Two net brokers believe that external knowledge is utilised and/or applied by members of the PRESENCE network, however one net broker states that it should happen more. This net broker furthermore states: "Academically it should happen by itself, especially through students. There should also be an organisation looking at funding. If you have a good network different partners tap into external knowledge, and as a net broker you should stimulate that." While observing some of the river bed experiments at one of the white land owners' farms, an example of the incorporation of external knowledge was mentioned. The land owner explained how Dutch engineers visited the Baviaanskloof together with government officials to inspect water management measures of farmers. Although some instructions were given on the spot to the farmers, they left quickly and the farmers did not receive official recommendations on paper. Still, this land owner applied some of the techniques that were discussed with these engineers.

6.6.3 CONCLUSIONS

Knowledge dissemination and distribution through the PRESENCE network appears to be complex and dynamic. Net brokers indicate not to monitor these processes. A positive general conclusion is that a lot of knowledge is disseminated throughout the network. However, when going more into details it appears that coloured communities only seem to receive information. Furthermore, a divide between local inhabitants and to some degree government and a further degree science appears to exist. Another trend identified is the limited amount of socially oriented scientific knowledge versus the vast amount of biophysical/ecological/vegetation knowledge within the PRESENCE network, which is in line with previous findings from which was concluded that experimentation by scientists was almost solely carried out in the field of vegetation and biophysical studies. What becomes clear in this chapter is that this technical scientific knowledge is conveyed throughout the network more than locally generated knowledge. In addition, a very limited knowledge transfer to and from the only community empowerment project in the Baviaanskloof (Another Way) appeared to exist. Furthermore, feedback on student results to different stakeholders appears not have occurred perfectly all the time, bearing with it a major risk of exacerbating stakeholder burnout. None of the respondents are aware of the existence of an interactive knowledge sharing portal, which seems valid because the net brokers

indicate that they once developed a portal but never launched it. However, currently a new portal is developed and is expected to be launched in April 2009, of which it is still unclear who will manage it. Respondents provided a large share of ideas for this portal, although some are more enthusiastic than others and it is stressed by many that the minimum amount of information should be shared, or at least in a very concise form. The fact that local communities do not have internet and so no access to the portal must be compensated with the learning village, according to one of the net brokers. Net brokers themselves spread knowledge about opportunities, documents of students and ideas of other people throughout the network. No standard process or procedure through which data is entered, imported and/or gathered is utilised by the net brokers, but data is stored in a structured way on different computers. Neither is a standard procedure through which data is disseminated in place, although net brokers do have their own ways of noting down new ideas and knowledge and distributing them to the right place. A standard process or procedure on how to deliver new knowledge and ideas is not in place either, although EarthCollective has its house style and according to the net brokers it is important to bear in mind not to touch upon organisational structures of partners. Net brokers appear to be very occupied with and conscious about linking problems (or rather 'challenges') to ideas, or as explained by net brokers the other way around. So far, no GIS system has been utilised to make things more visible and understandable for stakeholders, however EarthCollective is busy handing in a proposal at Google Earth. During the PRESENCE strategic meeting it was observed that Google Earth was applied and 3D video images were used to enhance insight and understanding of the Baviaanskloof and projects.

Generally, a large amount of external connections appear to exist, which is a positive indicator for external knowledge dissemination and which means that the likelihood of new knowledge flowing in and out of the network is considerable. The variety in these connections appears to be very large; external different groups and individuals varying from very specific grass root organisations to global (non-) governmental organisations have a relation with one of more of the (potential) network members. The distribution of these external connections is also even, meaning that practically all (potential) network members have connections with the outside world – adding to the balance of the network. Striking is how most (potential) network members exchange information with external parties, whereas coloured communities only receive information, which means that coloured communities basically do not convey knowledge both within nor outside the network. Net brokers indicate to collect sufficient external knowledge on ecosystem management through conferences and various media, however to a lesser degree on broader social and ecological trends and somewhat more on technological trends. It was earlier concluded that an imbalance in knowledge dissemination exists in terms of types of knowledge, and the finding here that the amount of socially oriented scientific knowledge coming from the external environment is limited can be regarded as a logical consequence of this.

7. DISCUSSION

Conducting social research in a dynamic environment where myriad developments are taking place in a swift manner comes with challenges. These challenges are related to validity issues, and as a student researcher one has to continuously be aware of his role and purpose of visit. Some of the main issues are described in this chapter. However, first a discussion of the role of apartheid in the Baviaanskloof and possible implications for participative management is presented, as well as a discussion on the main operational model applied by the PRESENCE network and a dialogue on local knowledge sharing. Touching upon these issues before arriving at conclusions is extremely relevant to understand more about the context of the current learning network, and prior to undertaking any actions in the field of participative management.

7.1 CONTEXTUAL ISSUES

7.1.1 APARTHEID AND BEYOND

An issue that has been touched upon in the background chapter of this report, apartheid, indeed still appears to play an essential role in South Africa, which is also the case in the Baviaanskloof. Although the system does not officially exist anymore, people still seem to bear it in their minds in various ways. The views on apartheid differ deeply amongst the stakeholders involved. Whereas some farmers and entrepreneurs are very pro-active and progressive in involving and empowering coloured communities, training them to manage their own businesses in the future, others still believe that non-white people simply do not have the necessary skills to ever manage or organise anything properly. A situation was observed where a coloured community member was unexpectedly joining a dinner at one of the most progressive farmers' dinner table. Although this person was treated with respect, the unease was apparent, which showed how these family members were not used to and familiarised and comfortable with having a coloured individual in this private sphere. The usual relation between white land owners and coloured community members is commonly still characterised by strong hierarchy, where whites give orders which the coloureds have to follow. Still, the white land owners have attempted repeatedly to provide aid to communities, which became apparent when attending a farmers meeting. Recently, attempts were made to help out Sewefontein with support in the field of agriculture, but there seemed to be internal problems. One of the farmers mentioned: "I have the feeling we would like to do something, but we should not get involved in their internal politics". In an informal discussion with a son of one of the white land owners, this person mentioned: "farmers have tried to help the communities. However, they do not seem to be willing to take the advice. It makes me so pissed, it is as if they willingly neglect our advice just to piss us of". He provided an example on how farmers provided Sewefontein with crops and taught them that it was of utmost importance to harvest before the temperature raised, so early morning – otherwise the harvest would fail. One morning when he passed the community farm at 11am (apparently much too late for bringing in the crops) he found them harvesting, which made him feel angry: "it seems they are also too lazy to get out of bed, you cannot help these people". There are more examples of aid provided to Sewefontein: support for developing tourism from students and the local tourism association, nature conservation courses, support from the department of Land Affairs and Agriculture, support and advice in different terrains from the Southern Cape Land Committee Trust, support from the Landmark Foundation (a project aimed at protecting leopards), and apparently Rhodes University once started an aquaculture project on Sewefontein which failed and led to disappointment. According to a white land owner, there once was a plan to build a factory on Sewefontein, providing 300 employment opportunities for the community, which was rejected by the Sewefontein Trust. Also the Zaaimanshoek community receives a lot of support, the municipality provided aid on developing basic facilities such as electricity and running water in the garden. In addition, computer courses were organised for members of the

community and the Department of Education is apparently planning to create a mobile library, according to a Zaaimanshoek local resident and community development worker. One of the white land owners donated computers to Zaaimanshoek, and during the time of research also a playground was built by a municipality. The question here is: how is it possible that so much aid has been provided, while so little seems to have changed for the coloured communities? During one of the several conversations with a young (23 years old) and ambitious member of the Sewefontein community (and potential "champion" for PRESENCE), this young man explained how there seemed to be a lack of ambition and aspiration amongst young people in the coloured communities. He mentioned as an example that computer courses were organised by a municipality, and that after two sessions only two or three youth still showed up. According to him, there are only two young people in Sewefontein who are truly ambitious and have innovative plans. He furthermore expressed his frustration with the Sewefontein Trust (consisting of thirteen senior community members) multiple times, and lined out how their conservative attitude blocked many initiatives, which, according to him was not beneficial for the common good of the community. He himself put many efforts in developing himself by completing a guide course and a ranger course, and he taught himself English by studying an English dictionary and listening to the radio. He explains how not long ago he wrote a letter to the Sewefontein Trust with some proposals for tourism development on the community farm, but there was no response. Earlier attempts to start such developments were turned down by the trust, while there seems to be sufficient potential – the farm is blessed with some nice patches of nature, colonial-style buildings, a lot of water and some fountains and water holes. In Zaaimanshoek, it appears we are touching upon a similar story. According to a community development worker, the problem with Zaaimanshoek is that it is a private property; everything has to go through the church. There is a church council of approximately ten individuals (elected each two years) of which some live in Zaaimanshoek, while others do not, which decides everything. The cooperation between the church and young people is not very good, according to this person. The young people are not interested in the church, and there is alcohol abuse. "Zaaimanshoek is very private, the church seems not to like tourism development", the same person explains, and this seems to be the case for most (progressive) ideas. What all these testimonies indicate is that we are dealing here with rather complex community structures and somewhat rigid decision-making processes. A difficult question to answer is: does all of this have its roots in the apartheid system? When these community structures are compared to similar communities in developing countries they do not seem to be unique cases, so it might appear safe to conclude that it is not necessarily related to this regime. However, one could argue that apartheid still has its effect and that the current attitude of communities is a response to all those years of repression: now that they finally are able to, they devotedly want to use that right and do things their own way – in the end, the individuals in the trust and church council are mostly senior people who have suffered from the apartheid system all their lives. Possibly, the natural tendency to reject new ideas or developments originates from a feeling of insecurity and lack of confidence: under the apartheid system coloured people were never taught to organise and manage things; every attempt to do so was (sometimes brutally) quelled. If this is truly the case, it is something that needs to be taken very seriously when attempting to achieve higher levels of participation in restoration issues. A white land owner running the community empowerment project in the Baviaanskloof (Another Way) has experience in this field and has trained local coloured communities to run a restaurant, a shop and accommodation facilities. When asked about these issues, his view was that apartheid actually manifests itself on two levels in human beings: one being a more cognitive level, and one being on a deeper, emotional level. Although many individuals, also in the Baviaanskloof nowadays cognitively understand that apartheid was wrong, that all people deserve equal rights and that they should be treated such way, there are still deeper-rooted automatic, even involuntary responses that are dissonant with these beliefs. These responses are revealed in the way the different population groups deal with each other, for example when a white person tries to teach something to a coloured person, or when a coloured person asks advice from a white person. Building further on this, this person mentions that "any empowering action needs to be deeply personal. The process is as important as the content. The way personal human interactions happen are extremely relevant for empowerment

to happen. People are all the same – it can be the best advice, but if the message is not intrinsically ok, nothing is going to happen". This seems to be a very reasonable way of thinking, and it seems potential lies here when it comes to collaboration between EarthCollective and Another Way (given that this is not happening yet). However, the amount of external aid, involvement and support to communities that is already taking place raises questions, operationally and also politically. This is well expressed by one of the white land owners: "after all those meetings at Sewefontein with local NGOs local communities might think: "to be a good farmer, you have to have a lot of meetings." What is actually achieved there? One has to be careful that such interactions might have a different meaning than first intended".

7.1.2 PRESENCE OPERATIONAL MODEL

This operational model as presented in the introduction (Figure 2), which appears pragmatic and practical, raises some questions. First of all, which stakeholders should exactly be involved at what point of time? In their article, the authors set out how during the assessment phase multidisciplinary and multisector teams should be established, consisting of researchers from natural and social sciences and managers from the natural resource management and human well being sectors; and nongovernmental and other citizen-based organisations" (Cowling *et al*., 2008). The second phase is planning, which is "explicitly collaborative, involving all key stakeholders, including researchers" (Cowling *et al*., 2008). The authors furthermore state here that "strategy development is essentially a process for learning – an opportunity for non-experts to gain an understanding of the issues at stake and for experts to appreciate the concerns and contributions of other stakeholders, including decision makers and the socially marginalised. The involvement of non-experts also is an important opportunity to engender pro-nature behaviour change: appropriately framed information and involvement in a process of developing strategy to achieve a mutually desired state – the vision – can rapidly change people's norms" (Cowling *et al*., 2008). In the management phase, the learning organisation "must be representative of the sectors that are concerned with land-use decision-making and planning and should foster a spirit of colearning, cogovernance, and accountability" (Cowling *et al*., 2008). It the article it does not become entirely clear in what way (apart from exchanging information) stakeholders are empowered, and especially how empowerment is realised between the planning and management phase. When applying some of the theories set out in the theoretical framework, it appears that this framework has a strong character of being based on *efficiency arguments* – participation as a tool for achieving better product outcomes; if people are more involved, they are more likely to agree with and support the new development – rather than *equity and empowerment arguments* – participation as a process which enhances the capacity of individuals to improve their lives and facilitates social change to the advantage of disadvantaged or marginalised groups; a fundamental right, in which the main aim is to initiate mobilisation for collective action, empowerment and institution building –. This is mainly concluded on the basis of earlier cited phrases such as "engendering pro-nature behaviour change", "change peoples norms". Another explanation in the article that could serve as an example here is: "[the social assessment] provides and understanding of how an area works in socioeconomic terms and why. Without the understanding of the social system provided by the social assessment, implementation is likely to be poorly targeted". This again implies a rather top-down approach in which the ultimate goals are *already (pre)determined* and whereby understanding social issues is more a means of reaching that target rather than understanding what the ultimate desires and goals of local inhabitants are. Pretty described this in Mowforth and Munt (2003) as Functional Participation: "participation seen by external agents as a means to achieve their goals". When speaking about this issue with net brokers and scientists, it was assumed that the ultimate goals of the PRESENCE network (restoration) would eventually be beneficial to local inhabitants – although they might not realise it – since ecosystem functions and services form the very basis of their existence. This argument seems to be valid and practical, but it does entail a supposition that experts, scientists do already know what is better for local inhabitants than they know themselves. Here we touch upon very fundamental moral issue of rights of self determination and autonomy, that is not unique in the case of natural resource

management. However, looking at practical reality and witnessing the degradation that has taken place in the Baviaanskloof over the last centuries, resulting in numerous problems for local inhabitants, one cannot escape the thought that perhaps it simply might be the case that external experts do possess more knowledge on how to restore (and manage) ecosystems in a more sustainable way. Following that line of thought, it might be better to intervene now instead of waiting for local inhabitants to call for aid when things have even deteriorated – there are many cases around the world where no intervention took place and regions have become uninhabitable due to unsustainable practices. Nevertheless, at this point as strategies with regard to restoration are becoming more and more lined out, there still is no clear idea amongst local inhabitants what restoration exactly involves, nor have they been consciously involved in the broader set-up of the framework. In all probability, empowering at least some members of local communities even before the assessment phases would be a sensible thing to do in such situation, so that they can be involved in the entire A-Z of the project, attend strategic meetings and act as representatives to their communities. Suggestions, desires and aspirations of local communities will be identified in earlier stages and can then be incorporated, which is also morally the right thing to do and creates the necessary legitimacy towards the network. As one of the net brokers mentioned, this bears with it a major risk: what if the project would not come off the ground, for example due to funding issues? In that case local inhabitants would have been made enthusiastic and fobbed off, which would probably lead to major disappointment. This is true, but on the other hand there is also a major risk in involving certain groups too late: this could lead to perceptions of being excluded, which in turn may lead to resistance and non-acceptance of any developments in later stages. This means that also from an efficiency perspective it might be a sensible decision to involve local stakeholders in an earlier stage.

7.1.3 LOCAL KNOWLEDGE: USE IT OR LOSE IT!

The results on knowledge dissemination showed that limited local knowledge was conveyed throughout the network. This is an interesting finding that is further discussed here on the basis of various sources. When conducting interviews with coloured community members it appeared that several individuals have extensive knowledge on application of local vegetation types for medicinal uses. This is also confirmed when studying the thesis of student researcher Janssen (2008), who conducted research for EarthCollective. She describes how there are individuals very knowledgeable in medicinal uses of thicket species. She refers for example to one individual ("bosdokter" Klaassie (Swart)), who was also interviewed for this thesis), "commonly known and appreciated to be a full-time practitioner in traditional healing based on Baviaanskloof flora and fauna" (Janssen, 2008). During an interview for this thesis, Klaas Swart indicated to know of the Spekboom project, but that he never shared knowledge with members of it. Another member of the coloured community who was well-known for his knowledge about nature (Hans Jumat) was interviewed for this thesis. He indeed appeared to have profound knowledge on nature and application of local flora and fauna. Hans Jumat also heard about the Spekboom project, but does not know which people or organisation are behind it and he never shared knowledge with the project. Janssen (2008) furthermore notes that many individuals in the communities mentioned to teach their children about medicinal plants and the dangers of nature. Several senior community members were interviewed for this thesis (coloured and white), which logically appeared to have extensive knowledge on the history of the area, of which some is particularly relevant for restoration since it involves useful information on weather patterns, water systems, changes in vegetation, fire management, presence and distribution of species, social trends, etcetera. This knowledge often goes back beyond their own lifetime; during interviews they repeatedly referred to things they learned from their parents or even grandparents. None of the senior locals appeared to have been in contact with PRESENCE members. One senior local, Erica Latti, explained to have run a nursery growing succulents for eight years at one of the farms. When interviewing her, it appeared that she possessed detailed knowledge on and experience on succulents, including Spekboom. She provided very specific knowledge that was yet unknown in the network, even amongst scientists (this was confirmed in later conversations with some of the experts). It includes

information on planting techniques, what kind of slips to use, the application of mercurochrome to protect the plant against pathogens, the benefits of planting Spekboom in combination with other species, the importance of moist and how to realise this being retained, how viruses might play a role in degradation, and many different other things (Appendix V). Although not all information and techniques might be completely useful, applicable on a large scale and/or correct, it definitely may provide the seeds for future scientific research. This lady appeared to never have been in contact with any members of PRESENCE. A pattern that can be observed here is that relevant knowledge is at hand in the Baviaanskloof (often possessed by individuals who might not have decades to live anymore), and that this knowledge has not been utilised (at least fully) yet by the PRESENCE network. Local inhabitants believe there are several reasons for the exclusion of their input: the fact that many of the local inhabitants only speak Afrikaans (which government officials do not always master so well), and in the case of senior locals that communication may sometimes be more difficult because they are not able to attend meetings, and because their auditory senses are deteriorating.

7.2 METHODOLOGICAL ISSUES

7.2.1 SELECTION OF RESPONDENTS

Selection of respondents appeared to be a somewhat ambiguous process, as already set out in the research methodology. First the previous work of Noirtin (2008), who conducted a stakeholder analysis was consulted, which lead to a good first insight. However, it was also concluded that for this study no criteria or theories for stakeholder identification and classification based on empirical results had been utilised. For that reason, it was unclear whether all relevant stakeholders were now part of the scope. This unavoidably lead to the situation that again an explorative process was carried out, meaning that during interviews and while talking to people in general an attempt was made to discover more potential network members. This did happen – respondents mentioned numerous groups that could possibly be included –, and thereby a refinement of the current classification was proposed. However, due to confusion around the actual nature, structure and purpose of the PRESENCE network it cannot be guaranteed that now all relevant stakeholders have been identified – not for the current research, nor for the network itself.

7.2.3 NATURE AND EXTEND OF PRESENCE

Due to the fact that PRESENCE is going through a transition phase, and because the difference has not been documented yet, it was initially unclear what the difference was between the PRESENCE umbrella network and PRESENCE Baviaanskloof as a case. This made the phenomenon somewhat intangible and again presented difficulties in determining how to delimit the research object. Eventually it was decided to analyse the PRESENCE Baviaanskloof network that assumedly (since it is the first and yet only operational area) should then include all relevant stakeholders into the group of respondents. Confusion about the nature and extend of PRESENCE might have also affected certain results, mainly because respondents apparently also had a different perception of both, as is explained in the results section.

7.2.3 INCLUSION OF STUDENT REPORTS AS EARTHCOLLECTIVE DOCUMENTS

Whether or not to include student reports in the document study has been an issue of serious consideration. This is not an easy question: should students be regarded as temporary EarthCollective members, or as “external consultants”? Including their documents would mean that these could be used as results in combination with interviews, observations and EarthCollective documents, which would be the case if they are considered as temporary net brokers, but not if they are considered as an external entity. Consequently, the related essential question is: should the student reports be considered as an EarthCollective product? For this research and after consultation about this issue

with the net brokers themselves it was concluded that this definitely should be the case. Firstly, because the students cited in the results chapter (Janssen, 2008; Lorencová, 2008; Noirtin, 2008) have, according to the net brokers, been operating as net brokers to a certain degree. Mainly, they have been building social capital – sometimes together, sometimes in a consecutive order, which is a typical net broker task. Secondly, because the net brokers clearly communicate to students that they are *not* external researchers or in some sort of consultants role, but that during (and partly after) their stay they actually become part of the network, which also means that they carry a certain responsibility in that respect. For that reason, the net brokers emphasise to students that they are not considered so much as students, but more as colleagues, which means they have an integrated role. Thirdly, the products the students delivered have been facilitated and heavily influenced by the net brokers, who clearly provided direction on the basic idea and prospected results. The net brokers usually determine, together with network members, which research is required at a certain moment and on the basis of that attract students. Lastly, the net brokers also mention that if the student reports are not considered an EarthCollective product (although be it in collaboration with in this case WUR and/or other universities), there would not be much left to present as actual products created by them – which is a clear indication that naturally the net brokers consider it (at least partly) "theirs".

7.2.4 VALIDITY OF DATA VERSUS URGENCY

During the process of data collection relevant information for improving the facilitative role was generated. Often, the sooner this information would reach the net brokers, the better. This raised the following question: should the researcher guard the validity of its research results and only provide this information at the moment the research is completed, or should he during the process already inform the facilitators in order to immediately make it possible to adjust certain practices? The current researcher sometimes chose for the latter, which means that there is a possibility that in later interviews, or during interviews with the net broker, certain changes have occurred that positively bias the outcomes of the results.

7.2.5 TEMPORAL SIGNIFICANCE OF RESEARCH RESULTS

The research itself is a snapshot in time, and even every interview is. The first interviews with stakeholders were conducted in October. One of the first questions of the interview is having stakeholders to sum up by heart who they think are involved in the network, without any previous information. In November, a workshop was organised where most of the important current network members were present. So in the interviews after that workshop, respondents often referred to "the organisations that were on the workshop". Of course they had a better idea of who was in the network, and who was not. Several other examples can be mentioned, such as a fieldtrip with farmers and scientists in the Baviaanskloof, and an information day where students present their research and results to farmers. It is probable that these events have biased results. This probably is a general issue when conducting social research, but especially when analysing an entity as dynamic and lively as a social network this is something to take into consideration.

7.2.6 DOUBLE ROLE RESEARCHER AND COMRADE

The twilight role of being a student researcher closely analysing the operations of the net broker requires constant reconsideration of positioning. So far, the students conducting research for PRESENCE had their own research topic which was clearly demarcated and different from the daily business of the facilitator. However, the current research meant constantly observing the practices of EarthCollective. This had its implications, and caused a threat for objectivity. First, at the time of research a friendship was built between the net brokers and the person studying them. This sometimes caused inconveniences, because especially during informal conversations about work-related issues it was hard to determine: where does the research stop? Naturally, during such talks different network members were discussed, just as the current functioning of PRESENCE and

EarthCollective, as well as its future aspirations. What to do with this information? And how to avoid becoming an irritating advisor or wisecracker? How to deal with knowledge provided by stakeholders that cannot be shared directly (often for reasons of anonymity), but which could be valuable input in the discussions? This disparity in not knowing from each other what knowledge was possessed had the potential to create some imbalances in the social process. This resulted in a situation that the current researcher continuously needed to be aware not to at times remain at the sideline – regardless of how tempting it sometimes was to get involved in discussions about how to improve things, how to deal with certain issues, and so forth.

7.2.7 DOUBLE ROLE RESEARCHER AND NET BROKER

The current research should be regarded as action research, whereby it often was unavoidable to actually operate as a net broker while collecting data. As was already noted in the methodology, through the interaction during interviews with (potential) network members, these individuals may have been affected in the way they perceive the network, which is a typical task of the net broker. This might have had positive impacts such as an increased appreciation and consciousness and knowledge about the network. On the other hand it might have biased some results. Furthermore, essential information gathered requiring urgent action was sometimes passed through to and discussed with the net brokers. On such occasions, it was again equivocal whether the current researcher – unavoidably and unintentionally – was actually entering the realm of the net broker.

7.2.8 LIMITATIONS IN DATA COLLECTION DUE TO INADEQUATE KNOWLEDGE RESPONDENTS

As soon as it was concluded that a respondent never heard of the PRESENCE network, it became impossible to ask further specific questions concerning the performance of it. In that case, the focus was immediately directed at issues such as knowledge about nature and restoration, communication and collaboration with other groups or organisations, trust, and participation.

7.2.9 CATEGORISATION AND DIVISION OF DIMENSIONS

It is realised that the categorisation and division of the nineteen dimensions applied to understand more about the performance of PRESENCE as a learning network is somewhat ambiguous. Sometimes dimensions are slightly overlapping, such as some elements from 'continuous organisational learning' and 'learning leadership'. Sometimes elements closely related have been split up into two different dimensions, such as with regard to vision (shared vision and interactive participation). There might be other examples of which it is possible to opt for alternative arrangements. Bearing this in mind, an attempt has been made to categorise the dimensions and themes in such a manner that they serve the broader purpose of this thesis as well as possible.

7.2.10 BROADNESS OF RESEARCH

As was stated in the methodology, it is essential to touch upon all aspects/dimensions when conducting research on an organisation or network. However, in order to be complete this resulted in nineteen different dimensions that needed to be measured and analysed. Given the limited amount of time (as indicated in the subsequent section) and space in terms of number of pages to keep the thesis readable, it was not always possible to go in depth into each of these dimensions. Although it was always attempted to hit the core and deal with the relevancy of an issue, it sometimes led to a sensation of not being completely able to elucidate thoroughly and freely. This was frustrating, because it is realised that each of these dimension require explanation, especially in terms of historical events, developments and relations to other matters to gain a true and fair understanding of a complex reality – also with respect to the net brokers.

7.3 PRACTICAL MATTERS

7.3.1 TIME CONSTRAINTS

Due to time limitations it was not always possible to pose all questions of the open interview to respondents. This occurred either due to a limitation set by (sometimes very occupied) respondents, or because of the fact that multiple students had to interview one respondent in one session. In such case, a smart selection of questions most relevant for that particular respondent was filtered to obtain maximum results. Furthermore, sometimes resources were lacking to interview all those (potentially) involved in the network. Again time was the major issue here, related to distance: many of the researchers were living in different regions of South Africa: from Cape Town, Stellenbosch to Pretoria and Grahamstown. As previously explained, it was attempted to select a well-balanced population of respondents so that all different main groups were involved in the research.

8. CONCLUSIONS AND RECOMMENDATIONS

In this section the main conclusions and recommendations are given. The conclusions and recommendations are based on a further reflection of the empirical conclusions presented in Chapter 6 regarding the status of PRESENCE evolving into a learning network according to the six themes as identified in the analytical framework. In this final evaluation each of the six themes is revisited and general conclusions and recommendations on options for further evolving into a learning network are given. For practical reasons, references sometimes contain a page number in order to assist those consulting this document in finding the right information in an efficient way. Conclusions and recommendations in this chapter are to be interpreted in the context of PRESENCE currently being in the process of evolving into a learning network.

8.1 STAKEHOLDER INCLUSION AND PARTICIPATION

8.1.1 GENERAL PERCEPTIONS ON PRECENSE AND MEMBERSHIP

Regarding the fact that many respondents do not know about (the essence of) PRESENCE, EarthCollective or the difference between both, it seems rational to **get more people acquainted with PRESENCE and its meaning**, and the role EarthCollective plays within it. Developing information brochures (hardcopy) for handing out in simple and understandable language (English as well as Afrikaans), with comprehensible and uncomplicated models is recommendable, suitable for all levels of education. These models should be developed once and it should be attempted to stick to them; so not to include more concepts and/or names than necessary. It is essential to explain to those not familiar with networks such as PRESENCE how they work and what it is that makes it interconnected. Organising meetings with members from all communities can also be beneficial. The Baviaanskloof Police Forum might be a good opportunity to do so, since representatives from all groups are present there. Besides local inhabitants, it still also appears necessary to clarify the difference between PRESENCE and EarthCollective amongst government officials and scientists. At this point **it is not recommended to introduce any new names, brands, logos** and so forth (such as the lately introduced Living Landscapes – "the institutional housing for PRESENCE" –, of which it remains somewhat unclear what it involves and where it stands in relation to PRESENCE and EarthCollective), regarding the fact that now already people appear confused about the meaning of the two existing concepts. This means also that it might be favourable to produce separate quarterly newsletters: one for PRESENCE alone to avoid further confusion and stick to the essentials required for the optimal performance of PRESENCE as a network.

Throughout all the interviews it becomes apparent that respondents do not understand the structure of PRESENCE, which affects the outcomes of different dimensions in a negative way. It seems now important that **decisions on the structure and interrelation of the PRESENCE umbrella and PRESENCE Baviaanskloof network are made**. This includes formalising both networks and making sure people can become official members (preferably of both the different networks) which is then recorded in some way. Formalisation appears important, as was concluded in previous research: "as forest-user networks become more formalised, they are proving more effective at engaging stakeholders in negotiations about resource-related policies and activities. With a more formalised institutional structure networks become respected representative entities with an identifiable constituency of potential voters. This places them in a better bargaining position for promoting dialogue – between individual actors, and by extension, to forest-user groups, various line agencies, and policy-makers (Shrestha and Britt, 1997 in Edmunds and Wollenberg, 2001). Appendix III represents a suggested model and structure. This model can be used on the longer term, vertically showing the different PRESENCE operational areas, and horizontally the different stakeholders and (specialist) groups involved. Such model provides the opportunity of illustrating in an easy way which stakeholders are

part of which network and in such manner, a clear overview can be presented to everyone of who is in and who is out, or better: who is where. More importantly, people will probably start to feel more involved and if done in the right way, may even act as advocates for the PRESENCE network. Since practically none of the (potential) network members knew about different levels of networks, it is essential to communicate this with them and be very open and transparent in this.

Since the nature of PRESENCE is not clear to most respondents, it is essential to communicate very clearly that once the network is realised, **neither the PRESENCE umbrella, nor the PRESENCE Baviaanskloof network is solely a scientific network**. In the theoretical framework it was stated that an organisational learning network is an open network where stakeholders who feel in whatever way connected to the issue are free to join. The only question that is left then is: what would be the best place for an individual or group within the entire PRESENCE umbrella? When confronted with this situation, Manring responded: "I believe that the exclusionary position of the scientific and governmental stakeholders violates the premise of a networked learning organisation" (Manring, personal communication). She furthermore notes that other projects documented similar problems, but that eventually groups who needed to be involved were included, but had not been so initially and that this is truly a long, time-consuming 'learning' process which can take years.

8.1.2 IDENTIFICATION AND CLASSIFICATION OF STAKEHOLDERS

Respondents appear to differ in opinion on whether all relevant stakeholders are included in the PRESENCE network, which is a result of the fact that (1) their perceptions on the nature, purpose and boundaries of the network also vary and that (2) clear criteria are not in place yet. Also the responses amongst the net brokers themselves appears to be less congruent in comparison to other issues. The necessity to further jointly structure the network and communicate this has been discussed previously. Besides, it also appears that no proper stakeholder identification tool has been applied by either net brokers or student researchers, based on certain criteria (spatial, power, legitimacy, urgency (salience) and/or roots of entitlement, as set out in the theoretical framework). Consequently, it is recommended that after a clear structure for the network(s) has been designed another stakeholder analysis based on well-established theories should be conducted. However, due to the fact that (potential) network members have already been visited a lot (sometimes too often which might exacerbate stakeholder burnout), this might not be the best thing to undertake at this point in time. Possibly, on the basis of the theories and references as set out in the theoretical framework, **the net brokers could make decisions on the several issues around the identification of stakeholders**, their various roles (especially on a local level), their classification (for example: those affected/those involved) and also organise a power/interest analysis. It is important that all this stakeholder information is recorded so that it is accessible for everyone and can be passed on in later stages, if/when the EarthCollective members hand over their net broker tasks.

Respondents frequently mention that coloured communities and white land owners/farmers should be included in the network, which is also confirmed by the net brokers. As argued before and based on what is stressed by many of the authors cited in this thesis, **inclusion of local communities into the PRESENCE Baviaanskloof network should be one of the main priorities now**. It is furthermore recommended that the remaining suggested groups and individuals by respondents are taken into consideration for adoption into the network. Especially, the inclusion of different government institutions on different levels seems important. Watts (2006) in this respect mentions how in South Africa "lack of capacity limits intersectoral and intergovernmental coordination which is essential for optimising strategic synergies for natural resource conservation". Obviously, a network such as PRESENCE offers opportunities to enhance such cross-collaborations.

8.1.3 PARTICIPATION OF STAKEHOLDERS

When it comes to the topic of expected participation in certain project phases, net brokers seem to differ in their opinions. One net broker mentions that there has been no mismatch in expectations, because so far EarthCollective has not been trying to involve local communities. This is in line with the observations in the field: local community members are not very familiar with PRESENCE and EarthCollective. It is also shown by the fact that only a very limited amount of respondents declared to have been involved in strategy formulation, while ideas are there. It is also in line with the operational model that is applied by the network (for reasons unknown exactly – it seems an analysis of different options has not taken place), which seems to be developed more on the basis of efficiency arguments than on equity and empowerment arguments. Although there are two sides of the coin when discussing about the right moment of involving local stakeholders, it is generally accepted in participative management and community based conservation paradigms that all those stakeholders identified (especially those potentially affected) should be involved in early stages, including assessment and strategy formulation (see for example earlier cited Arnstein, 1969; Pedler *et al.,* 1991; Borrini-Feyerabend *et al*., 2000; 2001; Agarwal, 2001; Cleaver, 1999; Pretty, 1995; 2004; Mannigel, 2008; Mowforth and Munt, 2003; Gonsalves *et al.*, 2005a; 2005b; Friedman and Miles, 2006). As earlier referred to in the theoretical framework, Plunkett and Fournier (1991) mentioned that "participative management is a philosophy that demands that organisational decision making be made in such a way that input and responsibility are extended to the lowest level appropriate to the decision being made". Results from all different data collection methods (especially combined with results on experimentation, knowledge dissemination and learning) can only lead to the conclusion this has not been the case so far, and that **the P in PRESENCE has not been materialised fully yet**, and should be further developed when evolving into a learning network. This is a pity, considering the fact that many respondents cheer about the open attitude of the net brokers towards input and new ideas. However, it seems that it is not too late yet as it was found that local communities are still eager to participate. For that reason, if PRESENCE wants to evolve into a learning network **it is now the moment to apply some of the theories suggested in this thesis and to reach out for more expertise in this field** (social / development experts, Another Way), **so that true participation on higher levels of all those potentially affected by project outcomes can truly commence**. This will be morally just, increase legitimacy, improve understanding amongst local community members on the project proceedings (including its possible delays) and may tackle some of the stakeholder burnout related to research. It is furthermore important that at least some of those experts are local (South African), because of sensitivities with regard to apartheid and empowerment that still play a role today – posing a serious risk for attempts to build capacity. It is very important here to be aware of and learn from the mismatches between legal framework and practice in South Africa as described by Holmes-Watts and Watts (2008), as set out in Chapter 2. The fact that so many (external) organisations are in some way involved with the local communities (especially Sewefontein and Zaaimanshoek) will probably complicate this process, and it seems salient that cooperation is sought to coordinate activities.

8.1.4 INTERACTIVE PARTICIPATION

The results show that only a small percentage of respondents has actually been sharing ideas and concerns on strategy issues. In Section 6.5 (Shared vision and approach) it was also revealed that respondents were not familiar with these issues. As set out in the theoretical framework, this is not in line with what academics on participation describe as higher levels of participation: on the scale of Mannigel it would mean C-D level (on an A-G scale). On the Pretty/Mowforth and Munt (2003) classification it would indicate Passive Participation or Participation by Consultation (level 1 or 2 on a 1-6 scale), although the PRESENCE operational model would suggest Functional Participation (level 4). The model of Gonsalves *et al.* (2005a) suggests Consultative Participation (level 2 on a 1-4 scale), whereas the theory set out by Friedman and Miles (2006) indicates a "Therapy" – "Placation" level (level 2-5 on a 1-12 scale). All models point into the same direction: if all stakeholders, or at least

representatives of each group, are not involved in strategy (and vision) issues, this usually indicates a performance that is below average. Based on these theories, **it is essential that this aspect should improve if the PRESENCE (Participative Restoration…) plaform wants to practice what it preaches** and further evolve into a learning network**.** In due course, it would mean involving multiple stakeholders in the process of formulating strategy or even higher levels of participation (transferring authority, self-mobilisation or stakeholder control, as set out in the previously mentioned theories). In order to achieve this, it is recommended to first bring all those groups physically together. This is also described in the section under learning in this chapter, however negotiating on strategic matters goes a step further than learning, involves more of a power struggle and for that reason is a lot more delicate. Edmunds and Wollenberg (2001) state for example that the benefits of multi-stakeholder negotiations to disadvantaged groups depend on *how* negotiations are undertaken. The authors believe that many approaches to multi-stakeholder negotiations mask abuses of power and more structural, enduring inequity. The authors advocate "a strategic approach to negotiations, with intellectual roots in radical pluralism and feminist post-structuralism, better reflecting the experiences of disadvantaged groups as they have interacted with other stakeholders over issues of forest management". It is recommended to consult their article, as well as the work of Regan *et al.* (2006), who have worked out a formal model for consensus and negotiation in environmental management. Also worth reading is the work of Wollenberg *et al.* (2007), who describe a "spontaneous order" of collaboration in a weak, uncertain institutional setting, and how this is facilitated. The bottom line here is that **before starting participatory negotiation processes, a well-developed framework guiding the debate and discussion processes needs to be in place based on previous research and experiences in similar cases**.

8.2 PERCEPTIONS AND ATTITUDES

8.2.1 OPENNESS AND EXPERIMENTATION

In order to understand more about openness, experimentation was assessed as an indicator. Overall, a large amount of experimentation takes place in the PRESENCE network, which is a very positive pointer. Strichman *et al.* (2007) for example describe how inquisitiveness and openness is a major indicator for understanding organisational readiness for adaptive capacity building, speaking about "rewarding curiosity, risk taking, and experimentation – a marketplace for new ideas […]". Earlier cited Jerez-Gomez *et al.* (2005) also indicate the necessity of concentrating on a learning level that requires an open mentality towards new ideas and a great deal of experimentation. However, when zooming in deeper onto the performance of the PRESENCE network on this aspect it is recommended to **seek an improved balance between the different types of experiments and the individuals and groups conducting them**. This concretely means that more scientists could be attracted to be involved experimenting in the field of social issues, tourism (stimulation of tourism development could indirectly benefit restoration to a large degree), water and fire management and that local inhabitants could be more involved in experiments in the biophysical/vegetation field. An opportunity that lies here is that in such way these experts can actually aid local inhabitants in improving and supporting their livelihood strategies. Plus, it might catalyse development of new knowledge, and stimulate mutual learning. For that reason, and since they provide the seeds of the network, it seems important to structurally monitor experiments that are conducted throughout the network to guarantee that a balance exists.

Results have shown that several tangible results were generated through experimentation. It is important to continue and further expand **monitoring and utilising the results and spin-offs mentioned** (in the form of economic models, educational programmes, future policies and strategies, protocols, best management practices and guidelines) since this is an important purpose of existence of the network. In order to achieve maximum gains here, these results should be **clearly**

communicated (and if necessary transformed/translated) to all stakeholder groups, and explained what purpose they serve.

Considering the fact that some issues between groups and cultures with regard to openness were found, it is recommended to **consciously stimulate and catalyse openness to new ideas on the local inhabitants side as well as on the governmental/science side**. This could mean searching for new ideas within the network from one group and translating them into comprehensible language for another, so convincing people about the good intentions of others and bridging gaps. Furthermore it is recommended to bring local communities and scientists together more often, and facilitate this process (which is further explained under section 8.3 on learning). Thereby, it seems important to make clear to all network members that PRESENCE is not only a scientific network, and that being member of a scientific expert group also implies being a member of the PRESENCE local area network and that receptiveness towards knowledge and ideas from local communities comes with it.

Concerning the nature of PRESENCE, a reward system for new knowledge and ideas in monetary terms is probably not very appropriate. However, perhaps **some incentives more tangible and direct could be invented to reward and so stimulate people** rather than solely support. Milne (2007) concludes in her article for example that reward and (non-financial) recognition programmes can positively affect motivation, performance and interest within a knowledge-based organisation. She furthermore writes that there is a large body of literature focusing on the effects of rewards on task interest and performance, found in literature concerned with motivation, both intrinsic and extrinsic. It might be worth exploring this literature and finding out what the options are.

8.2.2 SYSTEM INTERCONNECTEDNESS / THINKING

Many respondents familiar with PRESENCE (although still a minority) as well as the net brokers seem to be well aware of what interconnects the network. This in itself is an important conclusion, because it indicates that a certain kind of consciousness exists in this respect. It is **important to consider the replies on network interconnectedness provided by those respondents as fundamentals** that should always remain central to the activities of the net brokers. The finding that common goal/shared vision has by far been mentioned most frequently means that this dimension (discussed in section 8.5) should be regarded as an important indicator for the performance of the network, which is in line with theories as set out in the theoretical framework (e.g. Senge, 1990; Strichman *et al.,*2007; Huelsmann *et al.*, 2005).

8.2.3 VOLUNTARY LINKS BETWEEN INDEPENDENT YET INTERDEPENDENT NETWORK MEMBERS

It may turn out to be very useful to **inform people more about the benefits of being a member** of PRESENCE, and by doing so use all the advantages as mentioned by the respondents. As set out in the theoretical framework, Franke states in Manring (2007) that strong legitimacy is a prerequisite for the success of an ecosystem management network. Becoming more aware of these benefits will probably increase legitimacy. A salient way to build and increase legitimacy, it seems, is to make people aware of what they gain from the network. Considering the large amount of and variety in answers provided on what the benefits of a network such as PRESENCE are, it seems important to **raise awareness on how the goals of the PRESENCE network are directly related to the lives of people**. It is questionable whether everybody is conscious about this, especially within local communities (assumptions on such relations by “us” are not always self evident for others). It would be advisable to incorporate such knowledge into broader environmental education programmes, which are currently produced. Furthermore, it is important to find that respondents also think about what to contribute to the network, and that a certain awareness of the idea of reciprocity exists. Based on what the future

expectations of (potential) network members are, it seems recommendable to especially **continue and increase the effectiveness of collaboration, synergies and exchange of information**.

8.2.4 THE SPIRAL OF TRUST

Since trust appears to be one of the most essential pillars of a network such as PRESENCE, it is important to conclude that **trust is generally fairly good**. This is essential because "as the spiral of trust evolves, commitment to the partnership offers a forum of stability and heightened motivation for all collaborating organisations (Franke, 1999 in Manring *et al.*, 2003), and as cited in the theoretical framework, Cravens *et al.* (1996) stated that network formation relies on the development of trust between organisations – which is also confirmed and agreed upon by *all* respondents. Still, different trust issues appear to exist between different stakeholders (which have a history that goes further back in time than PRESENCE) and it is recommendable to closely monitor these issues. Recommendations on EarthCollective operating as a trust bridge are set out in the section on leadership and facilitation (§8.4.2).

8.3 LEARNING

8.3.1 INDIVIDUAL / STAKEHOLDER LEARNING

Based on the testimonies of respondents on learning experiences (twice as many related to social matters, when compared to technical learning experiences) it is important to be aware of the fact that probably **the biggest gain** of a network such as PRESENCE in terms of learning is not so much knowledge dissemination, but all the more **catalysing social processes**. It is furthermore important to realise that in this respect EarthCollective members play a crucial example role when carrying out their function as facilitators. Furthermore it appears that **a philosophy and plan on training and capacity building should be developed**, which should become one of the core activities of PRESENCE and high on the list of priorities if it wants to further evolve into a learning network. As set out in the theoretical framework, at least five out of ten authors on learning organisations consider individual learning (personal mastery, learning environment, "protean psychological contracts", enabling structures, informating and self-development opportunities) a crucial component of such organisation (or network). **Learning materials** on the operation of PRESENCE, restoration but also management and decision-making skills (those skills needed to allow higher levels of participation and decision making by all groups and communities) **should be developed and issued** in order to facilitate individual learning. Perhaps students in the field of pedagogy and education could be attracted to conduct a placement and help developing such material and/or provide teachings. **Scientists in the field of capacity building should become more involved**, and possibly new experts could be attracted. More details on this have been described in the previous section on participation (§8.1).

8.3.2 COLLABORATIVE LEARNING AND COMMUNICATION

Considering the findings that a learning gap between different groups (between local communities and scientists; between local communities) exists it is recommended **to organise meetings that facilitate collaborative learning between different groups (with different levels of power), especially local communities and government officials and scientists** to facilitate knowledge exchange and enhance mutual understanding. As previously stated, when the members of ecosystem management networks consciously commit to becoming a collaborative learning organisation, they change the culture of decision making (Manring, 2007). Since the fieldtrip and workshops so far have proved very successful, it is encouraged to continue organising such activities combining formal and informal aspects, and stimulating interactive behaviour. It is recommendable that experts from multiple disciplines and members from all communities are present. Gonsalves *et al*. (2005b) state that "participatory learning

that changes people's fundamental understanding of resource management processes, including their own behaviour, may be a means of empowering stakeholders, particularly the underprivileged, to take more control over resources important to them". These authors furthermore emphasise that participatory learning processes need to be designed with awareness of how they may affect and be affected by power relations since it cannot be assumed that they will definitely provide benefits to the less powerful. Bearing this in mind, different scholars suggest that especially the application of scenario planning/experimentation can be highly useful. McLain and Lee (1996) for example propose in their leading article how scenario models were functional because of their ability to allow users an opportunity to explore different "what if" scenarios, which can be highly constructive. Also Edmunds and Wollenberg (2001) and Wollenberg *et al.* (2000) provide hints on how to apply scenario planning. Again, the work of Gonsalves *et al*. (2005b, pp. 191) appears to be particularly useful. The authors describe how to determine the various skills and strengths stakeholders (local communities, government and external researchers) can bring to the learning process, and how to deal with this. Bouwen and Taillieu (2004) provide in their article on collaborative learning a useful scheme in which sequences of intertwined relational and problem solving activities within such processes are set out, which may also serve as a foundation for such meetings. The role of EarthCollective is crucial in such meetings: the net broker could play an essential role in developing scenarios illustrating the different available strategies and related (possible) outcomes. Organising such meetings may also stimulate collaborative learning processes between local communities.

In order to increase scientific efficiency and productivity, it is recommended to also **organise specific expert meetings.** It is important to make sure that those individuals specialised in a certain field of science regularly join in order to discuss current findings, opportunities, challenges, etcetera. Because knowledge transfer between researchers usually occurs through e-mail and articles, and since agendas seem to be overly full it is recommendable not to organise such meetings more than once a year – or in case of special events. It is recommended to also invite (a limited amount of) representatives from local communities to such meetings (possibly only as observers), in order to enhance their understanding in the broader research scheme – which may lead to more patience and understanding of the long-term character of some of these processes.

As one of the respondents suggested, it might prove beneficial **to organise meetings between sellers** (land owners) **and clients** (water users – governments, institutions in for example Nelson Mandela Metropolis) in a professional way. This will increase mutual understanding, awareness about water (problematics) and might provide new opportunities for funding.

In order to arrive to profound and deep learning experiences, it is important to **organise specific evaluation meetings**. Hobbs, Editor-in-Chief of the scientific journal Restoration Ecology states: "I am willing to guess that for every successful restoration project and every published study with significant effects resulting from a restoration treatment, there is at least one project and one study that failed utterly" (Hobbs, 2009). He furthermore mentions how "success" was discussed ten times more frequently in recent restoration history than "failure", wonders how this is possible and concludes how learning opportunities are missed here. Considering the open attitude of the net brokers, an opportunity lies here to show the importance of successes *as well as* (and probably even more) failures not being hid but openly discussed during evaluation meetings. This is especially relevant since PRESENCE Baviaanskloof is meant to serve as a case for other projects to come. So in this respect, it is not only important to utilise Best Management Practices (BMPs) but also have the courage to showcase what could be referred to as "Worst Management Practices" ("WMP"s), for which it is necessary to structurally evaluate. Such evaluation meetings could actually be split up into two different types: "single loop evaluation meetings" (assessing methods, how things are done) and "double loop evaluation meetings" (assessing basic assumptions, norms, strategies), as discussed in the theoretical framework. Both types of meetings should involve representatives from all groups, however the emphasis of participation of certain partners may differ on the basis of efficiency

arguments. It was concluded that only a very limited amount of (potential) network members do share their thoughts with regard to strategy issues (while there are ideas and suggestions, which will hopefully increase with empowerment), and such meetings could enhance this.

Since issues were identified concerning the fact that especially academic members might withhold information for self interest, it is important to **keep encouraging partners, especially those from research institutes, to continue sharing knowledge.** It seems salient to show understanding about the fact that knowledge might be a commodity, but emphasise that the success or failure of a network such as PRESENCE is strongly related to the mutual conveying of knowledge. Although not easy, it might be beneficial to launch an attempt to monitor to some degree whether all partners equally continue contributing knowledge (a balance between give and take) and if necessary, taking appropriate action. In order to stimulate these processes, it seems furthermore important to create formal agreements on intellectual property rights, as is discussed further in §8.6.1 (knowledge dissemination).

In order to enhance collaborative learning, especially when involving local coloured communities, it is important to have basic facilities on location. For that reason (and as further explained in §8.6.1) it is recommended to **prioritise the development of a learning village within the Baviaanskloof valley.** Such village would offer major learning facilities and opportunities for local communities. Since a student researcher is currently dealing with the topic of environmental education, no further specifics will be provided here.

8.3.3 CONTINUOUS ORGANISATIONAL LEARNING

"Challenging your own norms and assumptions is difficult. As the terms imply, these everyday structures of individual and corporate lives are taken for granted, not noticed, in effect, invisible to those who follow or hold them" (Pedler *et al.,* 1991, pp. 54). Following the positive results with regard to this issue, it is recommended to **continue operating with an open and dynamic attitude and apparent flexibility, also with regard to ideas, knowledge or information which may prove that altering basic goals and strategies of PRESENCE is the better thing to do**. It seems salient to remain conscious about the importance of double loop learning ("learning that results in a change in the values of theory-in-use, as well as in its strategies and assumptions", as set out in the theoretical framework), while at the same time not to lose direction. This also means not to stick to certain terminologies and basic frameworks and/or theories used, which – as a respondent stated, and which was observed – apparently sometimes appears to happen. Argyris (2005, pp. 261) provides some very clear and practical theories-in-use that could be used as a guidelines to achieve double loop learning. These theories-in-use can also be used to form the basis for a method to realise more structural, recurrent evaluation.

8.4 LEADERSHIP AND FACILITATION

8.4.1 LEARNING LEADERSHIP

Following the preferences of respondents and explanations of the net brokers, **Facilitative/coordinative leadership, or stewardship, appears to be the way forward**. This is in line with Manring's recommendation to lead learning organisations and networks through stewardship, in the spirit of "servant leadership" (Manring, 2007), guiding the network to transformational learning. However, as many respondents mention it seems at the same time important to take leadership and provide clear guidelines when necessary – which means making sure that everybody sticks to what has been appointed collectively. As mentioned in the theoretical framework, besides the serving and facilitative tasks it is also important to take disciplinary action, if necessary. EarthCollective is

considered by a large majority to be the leader of the PRESENCE network. Facilitative leadership also appears to be most suitable for what is essential in learning leadership: a continuing tendency and willingness to change course on every level, which is closely related to what was just discussed in continuous organisational learning. Learning leadership also involves stimulating learning with the organisation or network, and as was concluded previously in the section under learning it is important that when further building the learning network **EarthCollective pays attention to especially individual learning** in order to fortify the entire learning performance of the network. Manring (2007) underwrites this by stating that the leaders' sense of stewardship operates on two levels: stewardship for the individuals who compose the network and stewardship for the larger purpose or mission that underlies the enterprise, as was explained earlier in this thesis.

8.4.2 MULTIPLE LEADERS AT INTEGRATED LEVELS

It is not always the case that the net broker is automatically considered as the leader, witnessing Manring (2007) who states that "power that is embedded in ecosystem collaboration is driven by the institutional fields of the dominant stakeholders. Hence, those with greater formal authority (the recognised right to make decisions), those who control scarce or critical resources (capital, expertise, etc.), and those who have discursive legitimacy (the ability to speak legitimately for issues or other organisations) are apt to assume the initial leadership roles". Although there have been instances that ECPB (formal authority) has threatened not to allow research activities if communication would not improve, and even though it is commonly known that DWAF and GIB are controlling capital, whereas some knowledge institutions control critical knowledge, no single group or organisation seems to be acting exceedingly dominant. Perhaps it is *for the reason that these different assets are spread over different groups* that this is not happening, and for the same reason that people recognise their interdependency. Being aware of this, it is very important that **EarthCollective monitors the power balance in the future network so that possible "kidnapping" of power and/or increase of dominance is immediately identified** (see also Figure 6). This could imply that over time, EarthCollective's role might slightly shift from facilitative to authoritative – an issue to bear in mind. Possibly, over time the net brokers will have to show different skills as the network passes through its various stages. There are many tools available for conducting power/interest analyses and it might be useful to apply those or focus future research on this aspect, which would not only provide insight in potentially dominant groups, but also in marginalised and vulnerable groups, possibly with high interests. Knowledge on this matter is available within the network through DLG. Now that it has been concluded that EarthCollective is considered being the leader of the network, it might also be worth looking into management/leadership literature to understand what facilitative leadership further implies, and how this form positions itself in relation to other forms of leadership. For example, a frequently used matrix for leadership is the leadership grid, in which consideration issues (concern for people) are placed in relation to structural-initiation aspects (concern for production), leading to certain leadership styles (Stoner *et al*., 1999).

8.4.3 NET BROKER

EarthCollective appears to be doing generally well on stimulating debate and leading the dialogue and the net brokers involved in this seem to be consciously applying certain methods, which should be continued when evolving into a PRESENCE learning network. Again, the net brokers' natural tendency of being receptive and inviting to participants during meetings results in open dialogue in which many participate. However, it was concluded that some meetings appeared to be so fully-planned that the time for discussion was reduced to a minimum. It also appeared that sometimes the input of certain participants was somewhat disproportional. For that reason, it is recommended that **more time is available during meetings for discussion, and that different workshop structures are experimented with to encourage an equal contribution**. One can think of working in subgroups, or using discussion methods such as the so called "fish bowl", where a demarcated group is discussing, and people can actually physically enter or be asked to leave the discussion floor in a dynamic manner.

Senge (1994) provides many hints on how to realise dynamic discussion and debate. Furthermore, some very useful instruments that can be used here are provided by Plunkett and Fournier (1991, pp. 223-239), who present a participative leadership model, a group process observation guide and a decision making model specifically directed at leaders. These models can also be of great help to gain more insight in one of the issues that was identified, namely the consideration of when to take the lead and decisions during debate; so when to allow the collective to make decisions or when this should be done by the facilitator.

EarthCollective appears to be highly trusted by all respondents and has so far been operating as a trust bridge properly, it appears. It seems recommendable to **continue the way the net brokers have been acting so far to further build trust**. Whether or not to act as a trust bridge depends on the situation and is mainly related to the nature and history of the trust issue. This is a very difficult concern, because on the one hand refraining from intervening in a critical situation could lead to disturbances in relations in the network, whereas on the other hand too much involvement could lead to annoyance and might be experienced as intrusion in the affairs of others. Either way, it is fair to say that affective/emotional skills are important here, and that intuition in this sense plays a major role. Furthermore, as Bass and Steildmeier (1999) state: "the trust so necessary for authentic transformational leadership is lost when leaders are caught in lies, when the fantasies fail to materialise, or when hypocrisies and inconsistencies are exposed". Although transformational leadership has many similarities but is not equivalent to facilitative leadership, it seems reasonable to assume that this statement is applicable to the latter as well and probably every form of leadership. This is not to insinuate that the current net brokers show any of these behaviours – on the contrary: so far they seem to have exhibited an open, sincere and credible way of acting, which should be maintained. At the same time, a potential challenge lies here. Since the initial plan of EarthCollective members was to step out after three years and have the network run by solely local people, it might be difficult to find replacement. Their relation of trust is (as is common with trust) based on a very personal basis. As previously concluded, trust is one of the most essential prerequisites of a well-performing network, and since trust is so closely related to person(ality) it seems that members of the net broker cannot just be replaced in a way like a receptionist is replaced by another (with due respect) in a company. It can hardly even be compared with changing a manager within a company, particularly in this situation since EarthCollective was also the initiator of the network. During the interviews, questions were raised by respondents and net brokers on whether a learning network might be able to perform without the involvement of a net broker over time. Manring believes that "some sort of net broker, whether an individual or a steering committee-entity is needed through the life of the network" (personal communication).

One of the biggest achievements of PRESENCE it seems is improved collaboration and the fact that people from different disciplines have become partners, sharing information and meeting each other regularly. When further evolving into a learning organisation, this should be continued: **more, and more profound partnerships should be aimed at, bearing in mind that there are limits**. As different respondents indicated, the best way of doing so is to actually bring people together physically, so the best way forward would logically be to organise more meetings such as the PRESENCE strategic workshops, and to pay special attention to the informal sections of such meetings since this appears to be the moment when social bonds are laid and tightened. As mentioned previously in §8.1 and §8.3, more partnerships between different groups (not only scientists and government officials) should be aimed at.

8.5 SHARED VISION AND APPROACH

8.5.1 SHARED VISION

The vision of PRESENCE and EarthCollective is known and/or understood by only a small amount of respondents, which actually means that the probability of it being shared amongst a large group of people is low, if not impossible. This is a crucial conclusion because as previously concluded, according to many respondents and net brokers a shared vision is one of the most important pillars that interconnects a network such as PRESENCE. Those who are confronted with the vision generally like it, but remarks are made about its complexity and some terms ("mainstreaming", for example) are questioned. At this point it is not clear whether the current vision relates to the PRESENCE umbrella network or PRESENCE Baviaanskloof network. Mainstreaming is described by Cowling *et al.* (2008) as "to internalise the goals for safeguarding resources into economic sectors and development models, policies and programmes, and therefore into all human behaviour". If PRESENCE Baviaanskloof is regarded as a separate (sub)entity, it is questionable whether this broad term can be applied in such a local setting. For this reason, it is important to make decisions on how to approach this, and consequently it is recommended to **(jointly) revise and simplify the vision(s) while retaining its original meaning, so that it is better understood by all**. Plunkett and Fournier (1991) describe how a vision should have five characteristics: it has to excite people and create a fierce desire to be part of that vision; it should challenge people; it should describe a state of the "preferred future"; it must reflect the beliefs and values of those who create it – "walk the talk"; and it must be communicated so that it is pervasive in the organisation. Regarding the current phase of the network, and as the authors also remark, it is of utmost important that this vision is created with and communicated to *all stakeholders*, together with the strategies so that the difference is understood.

8.5.2 UNIFYING STRATEGIES

Restoration is the key concept of the vision and explains through which strategies the vision should be reached, but currently it is probable that since respondents have a very different interpretation and conception of restoration, also the expectations of PRESENCE vary to a great extent – which may lead to disappointment in some cases. For this reason, and in order to build a strong foundation of PRESENCE as a learning network, it is recommended to **plan a special meeting dealing with questions on what restoration exactly is and what types are strategically focused on so that no misunderstandings continue to exist about it**. Such meeting could also help in understanding which of the functions (social, economic and/or ecological) are important for whom, and so which of them require emphasis. During such meeting also other strategy issues could be discussed, and again it is recommended to make formulations more simple, coherent and specifically related to either PRESENCE umbrella or the PRESENCE Baviaanskloof. It is furthermore recommended to create a basic document in which EarthCollective is described, including its vision and strategies since this kind of information was not found; even the website does not contain this specific information. If the vision and strategies of both PRESENCE and EarthCollective are explained simultaneously and differences set out (again, preferably with simple models) there are better chances of people understanding both. If these essentials are known amongst a wide group of (potential) network members, it also reduces the chance of one group pushing the vision or parts of it into their own direction.

8.6 NETWORKED KNOWLEDGE DISSEMINATION

8.6.1 NETWORKED KNOWLEDGE DISSEMINATION

Although knowledge dissemination at first sight might appear a straightforward and uncomplicated dimension, it certainly is not. In spite of the positive conclusion that overall sufficient knowledge is

disseminated throughout PRESENCE, several trends can be observed that should be paid attention to before evolving into a learning network. What we generally see is a gap between cultures when it comes to knowledge exchange. Superfluously and following the theories as set out in the theoretical framework (six out of ten scholars emphasise the importance of this dimension in a learning organisation), it is of utter importance that this deficiency needs to be fixed. It seems very important here to recognise the vulnerable position of certain groups and understand that difficulties may arise in terms of value systems, language barriers and literacy problems. Rikowski (2007) describes how knowledge is often not recorded in indigenous populations, which will make it more difficult to share from one perspective; it will for example be more difficult to house in a library and information resource centre. The author furthermore describes that on the other hand, it will probably be easier for companies to just appropriate this knowledge, patent it and make money out of it without giving due compensation to those communities (Rikowski, 2007). At this point, it is recommended that **further research on knowledge dissemination is conducted**, based on a research agenda such as set out by Michailova and Husted (2002). This research could focus on ethical and moral considerations of transferring knowledge, intellectual property rights, interfaces between culture and knowledge, cultural barriers to knowledge management, the role of symbols, myths and metaphors in knowledge management, the relation between tacit and explicit knowledge, formal and informal knowledge exchange and the relation between trust and knowledge. An interesting project in this respect is conducted by tt30 – "the young think tank of the Club of Rome" and labelled "Knowledge Transfer Across Cultures: A Comparative Analysis of the West, South East Asia and West Africa". It aims to review the methods and mechanisms by which knowledge is transferred between and within cultures, with a specific focus on how this impacts upon development trends (Garza *et al.*, 2003).

Considering the notions of caution by several respondents and regarding the fact that the network is now swiftly expanding with large and influential organisations and formalising further, the issue of intellectual property rights with regards to scientific knowledge appears to need further clarification. As long as uncertainties exist in this field, organisations and/or individuals might be hesitative in sharing their knowledge, which is often regarded as a commodity or asset. It is important that **a declaration is formally adopted wherein clear agreements are established with regard to property rights** between organisations and groups, in which student activity is also documented.

Clearly, an imbalance appears to exist with regard to types of scientific knowledge that are disseminated throughout the network. This is in line with previous conclusions on participation, and it seems this is an important element that should improve since the PRESENCE network has been proposed as "an innovative transdisciplinary learning organisation […]" (EarthCollective, 2008a). Transdisciplinarity in other words should be the core business of the future network. However a very limited amount of involvement from social scientists was found as yet, especially when compared to engagement of experts in the field of biophysical/vegetation sciences. This is partly compensated by the fact that student researchers have had a more social orientation in their studies, however this seems insufficient. It is recommended for that reason that **more experts from universities/departments specialised in community based conservation are attracted**. Michelle Cocks (Rhodes ISER) has declared to be willing to be more involved, and one of the respondents mentioned Andrew Ainslie, from Khanya, African Institute for Community-Driven Development as a suitable person to be included. Besides, local expert knowledge in the Baviaanskloof is at hand and it is recommended to strengthen ties with Another Way (Linden Booth), the only local community empowerment project.

The interactive knowledge sharing portal seems to be a very positive way forward in facilitating and enhancing knowledge dissemination and an important basis for the future network. The many suggestions as provided by respondents can be taken in mind when further developing it, and important is that many mentioned avoiding a potential overkill of information: a to-the-point and concise way of communication should be strived for. However, it seems extremely important to be

aware of the possible complications of the development of such portal, and how it can dilate power disparities and lead to further inequality if nothing is organised or done besides it. Local coloured communities in the Baviaanskloof do not have internet, white land owners do so to a limited extent. Practically all those using the internet appear to have arrears when it comes to skills on how to use it, compared to for example academics. This means that more knowledge may become accessible for an exclusive selection of people within the network, widening the gap in availability of one of the most important resources – a general global trend that can already be observed and rings the alarm bells in the world of development aid and studies ("**the digital divide**", see for example Ya'u (2004) who speaks of the resurgence of imperialism, which is this time represented by knowledge dependence). It is of crucial importance that this **is realised and dealt with by the net brokers, and reemphasises the need for other measures such as the development of the learning village in the Baviaanskloof**. Besides, capacity building in the field of technology, computers and internet seems crucial here, and the necessary infrastructure needs to be put in place. Possibly collaborations with local municipalities (who have been organising computer courses previously) and Another Way in order to achieve this might be a fruitful way forward.

Since no standard process and/or procedures are in place yet through which data is entered, gathered, disseminated, or through which it is determined how to deliver new knowledge and ideas, it is recommended to create and further develop these. Earlier cites James (2003) for example explains how communication processes and policies ("integrated mechanisms") enhance the sharing of knowledge and learning across business units, and are dominant in learning organisations. The author furthermore explains how these systems go beyond information systems: they include people, systems, and processes that link the organisation. Probably, the knowledge sharing portal will help with enforcing certain standard channels and procedures, but this will not cover the such entire mechanism. **It is important that procedures (mechanisms) are developed and recorded** for two reasons: as the network further develops, knowledge flows will amplify which will prove increasingly difficult to manage without any procedures. Secondly, if the net brokers on the longer term wish to hand over their tasks to others these kind of procedures are indispensible and should be part of the basic management documents of an organisation.

The net brokers appear to have started to **utilise GIS and graphical mapping systems** to increase the understanding amongst (potential) network members, and **it is recommended that this is continued and further expanded**. As Manring *et al.* (2003) state: "Access to the GIS information enables citizens to take informed positions on environmental considerations that should enter into the decisions of their elected officials. With such information available to the public, local officials can ill afford to ignore it". Again, if no internet accessibility is available other ways should be sought to guarantee that local inhabitants have the chance to get and stay familiar with the GIS products that are created. Participatory GIS, as put forward by the net brokers, seems to be an excellent way forward in this respect.

8.6.2 EXTERNAL FOCUS

Generally it can be concluded that the external focus of the PRESENCE network is in order. There are many connections rather evenly distributed to a large range of external parties through which knowledge is exchanged. However, regarding the fact that coloured communities only receive external knowledge (and aid) while not conveying any, **net brokers should closely monitor the deficiency in knowledge exchange concerning these communities**, and remain aware of the many external organisations that are somehow involved with those communities. This point actually goes beyond the sole issue of knowledge exchange, as was discussed in the section on participation. Furthermore, it seems again important that **net brokers keep track of a certain balance within the network** so that the types of external scientific knowledge flowing into the network is also more even. Whereas sufficient knowledge on ecosystem management and technological trends may be entering the

network, it appears that a lack of knowledge on social trends and issues flowing in appears to exist here (virtually non-existent if student researchers are not included). This is in line with previous findings on a imbalance in experimentation, involvement of specialists in the field of social and development issues, and internal knowledge dissemination.

8.7 FINAL CONCLUSIONS

The current section does not allow for in-depth and nuanced elaborations but aims at providing the major overall trends and conclusions. For that reason, conclusions drawn here are to be read in conjunction with results, and with respective contextualisation for each conclusion. Taking into account the short time of existence of PRESENCE and operational activity of the net brokers, overall a lot seems to be achieved and this is highly appreciated by many of the network members. However, it appears that performance on certain dimensions is generally stronger than others, which should be improved when further evolving into a learning network. This is not something unique, witnessing Manring's comment after evaluating several learning networks in ecosystem management that these processes are truly time-consuming learning experiences, and that each of those projects took years to develop (personal communication).

In our specific case we see that room for improvement appears to exist in the field of **stakeholder inclusion and participation**. This entails the further development of the nature and structure of the network(s) as a basis, raising awareness and understanding on these network(s), the application of empirically based identification and classification tools, and most importantly the realisation of higher levels of participation of local stakeholder groups.

Performance on **perceptions and attitudes** varies per dimension. With regard to openness and experimentation the network appears to perform fairly well: generally a lot of experimentation takes place, which is an important indicator for openness. However, attention should be paid to the fact that types of experimentation are not evenly distributed across different stakeholder groups. Openness between these different groups could also be improved. Reward and recognition systems, preferably non-financial have the potential to further stimulate experimentation and openness. Many respondents familiar with PRESENCE seem to be well aware of what interconnects it, and mention a common goal and shared vision as the most important aspect. Respondents seem aware of their position when asked about issues measuring voluntary links between independent yet independent network members, since they are able to mention a large amount of and variety in benefits and contributions. Trust appears to be fairly good in the network, however some trust issues appear to exist often having a history that goes further back in time than the existence of PRESENCE.

Overall **learning** has greatly improved with the emergence of PRESENCE: different stakeholders that were never before even communicating now do so and also learn. However, it appears that this process is still in its early stages, especially with regard to individual learning. Although different respondents mention to have learned socially from PRESENCE it seems that no well-developed philosophy or plan on individual learning and capacity building has been applied, leading to a situation that local communities have not, or to a limited extent been able to learn. This caused a learning gap between different communities, and although collaborative learning has occurred, this is where room for improvement exists so that different groups can actually learn more from each other. Scenario planning and evaluation meetings are examples of options to achieve this and the development of a learning village within the Baviaanskloof seems of major importance, especially with the recent development of the interactive knowledge sharing portal. Continuous organisational learning seems to be realised, which is a positive indicator. Nevertheless, a more structural approach on single- and double loop learning could be applied,, and a point of attention here is not to stick to certain terminologies and frameworks.

Performance on dimensions related to **leadership and facilitation** appears to be good. Generally, all sources point towards facilitative/coordinative leadership as being the most appropriate form for managing PRESENCE as a learning network. Currently, no single group or organisation appears to be acting exceedingly dominant, and in order to avoid this from happening it seems salient to structurally keep track of power and interests of the different network members. EarthCollective appears to be operating properly regarding the most important basic tasks a net broker is expected to fulfil. The net broker appears to be doing well on stimulating debate and leading the dialogue, although sometimes more time could be available for actually realising this and attention could be paid to certain decision-making processes during debate. The net brokers also appear to have built deep relationships and trust with members from most groups and organisation, which seems to be a particularly respectable achievement considering the short period of actually being operational. Simultaneously, this brings with new challenges on future facilitation of the network, when tasks and responsibilities will be handed over to new (local) individuals. EarthCollective has been performing well in building partnerships and improving collaboration, a process that should be continued and further deepened.

Shared vision and approach appeared to be particularly relevant issues, since respondents and net brokers specifically mentioned that this is the major factor interconnecting PRESENCE, so it is somewhat unfortunate to conclude that this is one of the weaker points in the performance of the network. The vision and strategies are known and/or understood by only a small amount of respondents, and as was previously concluded only few have actually made suggestions or delivered ideas on either of both. It is recommended and deemed very important to further develop, clarify and possibly revise vision and strategies through a joint process in which all stakeholders are involved.

At first sight, **knowledge dissemination** appears to be very good, however when zooming into details it appears that sometimes it is unbalanced: exchange between science/government and local communities is limited, some local groups only do receive knowledge without conveying it (which is obviously related to conclusions on lower levels of participation of these groups, and limited individual learning) and biophysical knowledge appears to be significantly more conveyed than social knowledge. Furthermore it seems important that a declaration is formally adopted wherein clear agreements are established with regard to intellectual property rights. The creation of an interactive knowledge sharing portal appears to be a major step forward in enhancing knowledge dissemination, however care should be taken not to exacerbate the digital divide. In addition, the development of standard procedures and mechanisms for knowledge dissemination seems important, as well as the further utilisation of GIS and graphical mapping systems. External focus of the network appears to be in order, however again an imbalance exists in the types of knowledge flowing in and out the network: whereas sufficient knowledge on ecosystem management and technological trends are being transferred, this is not the case for knowledge on social trends and issues. Furthermore again an imbalance in knowledge exchange of certain local communities appears to occur, who are receiving a great deal of aid and knowledge without conveying it, which once more is in line with earlier identified trends.

8.8 CONCLUDING REMARKS

As was set out in the Zandvlakte Agreement (EarthCollective, 2008a), PRESENCE is now at a point where it wants to further evolve into a learning organisation, or more appropriately a learning network. The different themes with its dimensions rooted in previous experiences and empirical research could be used as guidelines to achieve this aim. Expectantly and hopefully, through an in-depth analysis this thesis has contributed to identifying which of the themes are already established and at place, and which require further attention. Suggestions on which literature and resources to consult and proposals on further research have been provided to make sure that positive activities and developments are continued and shortages strengthened. Since it is early days for PRESENCE as a learning network, it is recommended that a similar analysis on the performance of the network is

executed in one or two years. Overall, it is admirable what has been achieved in such a short period of time, which raises positive expectations for future milestones and successes of EarthCollective and PRESENCE activities. Regarding the fact that performance on leadership and facilitation is generally standing out, it is probably a matter of time before those dimensions requiring improvement will be enhanced. This thesis has shown that besides the current accomplishments and despite the shortcomings, a thorough basis and a lot of potential exists to further develop EarthCollective into a learning network and collectively realise restoration of natural capital in the Eastern Cape.

LITERATURE

Agarwal, B (2001). Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework. *World Development, Vol. 29, No. 10, pp. 1623-1648*

African National Congress (1955). The Freedom Charter. *Adopted at the Congress of the People, Kliptown, 26 June 1955*

Argyris, C (2005). *Double-loop learning in organizations. A theory of action perspective. In: Great Minds in Management: the process of theory development. Smith, KG and Hitt, MA. Oxford University Press, 2005*

Armitage, DR; Plummer, R; Berkes, F; Arthur, RI, Charles, AT; Davidson-Hunt, IJ; Diduck, AP; Doubleday, NC; Johnson, DS; Marschke, M; McConney, P; Pinkerton, EW; Wollenberg, EK (2008). Adaptive co-management for social-ecological complexity. *Frontiers in Ecology and the Environment 2008; 6*

Arnstein, SR (1969). A Ladder of Citizen Participation. *Journal of the American Planning Association, Vol. 35, No. 4, July 1969, pp. 216-224*

Armstrong, A; Foley, P (2003). Foundations for a learning organization: organization learning mechanisms. *The Learning Organization, Vol. 10 No. 2, pp. 74-82*

Borgatti, SP; Foster, PC (2003). The Network Paradigm in Organizational Research: A Review and Typology. *Journal of Management 29(6), pp. 991-1013*

Borrini-Feyerabend, G; Taghi Farvar, M; Nguinguiri, JC; Awa Ndangang, VA (2000). *Co-management of Natural Resources. Organising, Negotiating and Learning-by-Doing. IUCN. Heidelberg, Germany*

Boshoff, A (2005). The Baviaanskloof Mega-Reserve. An environmentally, socially and economically sustainable conservation and development initiative. *Terrestrial Ecology Research Unit, Nelson Mandela Metropolitan University, Port Elizabeth*

Christopher, AJ (1994). South Africa: the case of a failed state partition. *Political Geography, Vol. 13, No. 2, pp. 123-136*

Cleaver, F (1999). Paradoxes of Participation: Questioning Participatory Approaches to Development. *Journal of International Development, Vol. 11, pp. 597-612*

Cowling, RM; Egoh, B; Knight, AT; O'Farrel, P; Reyers, B; Rouget, M; Roux, D; Welz, A; Wilhelm-Rechman, A (2008). An operational model for mainstreaming ecosystem services for implementation. *Proceedings of the National Academy of Sciences, Vol . 205, No. 28, pp.* 9483-9488

Cowling, RM; Procheş, Ş; Vlok, JHJ (2005). On the origin of southern African subtropical thicket vegetation. *South African Journal of Botany, 71(1), pp. 1-23*

Cowling, RM; Wilhelm-Rechman, A (2007). Social assessments as a key to conservation. *Four perspectives on conservation in Africa. Oryx, 41(2), pp. 135-139*

Contu, A; Grey, C; Örtenblad, A (2003). Against Learning. *Human Relations 56(8), pp. 931-952*

Cravens, DW; Piercy, NF; Shipp, SH (1996). New Organizational Forms for Competing in Highly Dynamic Environments: the Network Paradigm. *British Journal of Management, Vol. 7, pp. 203-218*

Davies, HTO; Nutley, SM (2000). Developing learning organizations in the new NHS. *British Medical Journal, 2000;320 pp. 998-1001*

EarthCollective (2008a). *Zandvlakte Agreement. PRESENCE the Growing Phase (2009-1015). Building an overarching learning organisation*

EarthCollective (2008b). EASTCARE – Baviaanskloof Case Study. Final Draft: 25 April 2008. *Unpublished*

EarthCollective (undated). www.earthcollective.net. EarthCollective, undated

Edmunds, D; Wollenberg, E (2001). A strategic approach to multistakeholder negotiations. *Development and Change Vol. 32, pp 231-253*

Fraser, EDG; Dougill, AJ; Mabee, WE; Reed, M; McAlpine, P (2006). Bottom up and top down: Analysis of participatory processes for sustainability indicator identification as a pathway to community empowerment and sustainable environmental management. *Journal of Environmental Management 78, pp. 114-127*

Friedman, AL; Miles, S (2006). *Stakeholders. Oxford University Press. Oxford, New York*

Fulmer, RM; Keys, JB (1998). A conversation with Peter Senge: New developments in organizational learning. *Organizational dynamics 27 (2), pp. 33-42*

Garvin, DA (1993). Building a learning organization. *Harvard Business Review 71 (4), pp. 78-91*

Garvin, DA; Edmondson, AC; Gino, F (2008). Is yours a learning organization? *Harvard Business Review 86 (3), pp. 109-116+134*

Garza, A; al-Hiyari, B; Lengsfeld, T; Tulbure, I, Vali, AM (2003). Tt30 – the young think tank of the Club of Rome. *3rd progress report (September 2002 – September 2003)*

Georges, A; Romme, L; van Witteloostuijn, A (1999. Circular organizing and triple loop learning. *Journal of Organizational Change Management, Vol 12 No. 5, pp. 439-453*

Gonsalves, J; Becker, T; Braun, A; Campilan, D; De Chavez, H; Fajber, E; Kapiriri, M; Rivaca-Caminade, J; Vernooy, R (eds) (2005a). *Participatory Research and Development for Sustainable Agriculture and Natural Resource Management: A Sourcebook. Volume 1: Understanding Participatory Research and Development. International Potato Center-Users' Perspectives With Agricultural Research and Development, Laguna, Philippines and International Development Research Centre, Ottowa, Canada*

Gonsalves, J; Becker, T; Braun, A; Campilan, D; De Chavez, H; Fajber, E; Kapiriri, M; Rivaca-Caminade, J; Vernooy, R (eds) (2005b). *Participatory Research and Development for Sustainable Agriculture and Natural Resource Management: A Sourcebook. Volume 2: Doing Participatory Research and Development. International Potato Center-Users' Perspectives With Agricultural Research and Development, Laguna, Philippines and International Development Research Centre, Ottowa, Canada*

Greenwood, J (1998). The role of reflection in single and double loop learning. *Journal of Advanced Nursing 27, 1048-1053*

Hobbs, RJ (2009). Looking for the silver lining: making the most of failure. *Restoration Ecology, Vol. 17, No. 1, pp. 1-3*

Holmes-Watts, T; Watts, S (2008). Legal frameworks for the practice of participatory natural resources management in South Africa. *Forest Policy and Economics. In press*

Huelsmann, M; Lohmann, J; Wycisk, C (2005). The Role of Inter-organizational Learning and Self-organizing Systems in Building a Sustainable Network Culture. *The International Journal of Knowledge, Culture and Change Management in Organisations, Melbourne, Australia*

Jamali, D; Sidani, Y (2008). Learning organizations: diagnosis and measurement in a developing country context, the case of Lebanon. *The Learning Organization, Vol. 15, No.1, 2008, pp. 58-74*

James, CR (2003). Designing learning organizations. *Organizational Dynamics, Vol. 32, No.1, pp. 46-61, 2003*

Janowicz-Panjitan, M; Noorderhaven, NG (2008). Formal and informal interorganizational learning within strategic alliances. *Research Policy 37, pp. 1337-1355*

Janssen, K (2008). Socio-cultural values of ecosystem services in the western Baviaanskloof and their relevancy to restoration planning and development. *A thesis submitted in partial fulfillment of the degree of Master of Science at Wageningen University and Research Centre, The Netherlands*

Jerez-Gómez, P; Céspedes-Lorente, J; Valle-Cabrera, R (2005). Organizational learning capability: a proposal of measurement. *Journal of Business Research 58 (2005) pp. 715-725*

Kerley, GIH; Knight, MH; De Kock, M (1995). *Desertification of subtropical thicket in the Eastern Cape, South Africa: are there alternatives?* Environmental Monitoring and Assessment 37, pp. 211-230

Kofman, F; Senge, PM (1993). Communities of commitment: the heart of learning organizations. *Organizational Dynamics 22(2), pp. 5-24, Autumn 1993*

Leeuwis, C (2004). *Communication for Rural Innovation. Rethinking Agricultural Extension. Third Edition. Victoria, Australia. Oxford: Blackwell Publishing Ltd.*

Levinson, NS; Asahi, M (2003). Cross-National Alliances and Interorganizational Learning. *Organizational Dynamics, Vol. 24, 2, pp. 50-63*

Lorencová, E (2008). Exploring and comparing organizational institutional capacity of carbon sequestration schemes in South Africa: Case Study of Baviaanskloof Subtropical Thicket Restoration. *A thesis submitted in partial fulfillment of the degree of Master of Environmental Sciences at Wageningen University and Research Centre, The Netherlands*

Lundahl, M (1989). Apartheid: Cui Bono? *World Development, Vol. 17, No. 6, pp. 825-837s*

Mandela, N (1994). *Long Walk to Freedom. The Autobiography of Nelson Mandela. Olympus*

Mannigel, E (2008). Integrating Parks and People: How Does Participation Work in Protected Area Management? *Society & Natural Resources, 21:5,498 – 511*

Manning, S (2008). Embedding projects in multiple contexts – a structuration perspective. *International Journal of Project Management 26, pp. 30-37*

Manring, SL (2007). Creating and Managing Interorganizational Learning Networks to Achieve Sustainable Ecosystem Management. *Organization Environment Vol. 20; 325*

Manring, SL; Moore, SB (2006). Creating and Managing a virtual inter-organizational learning network for greener production: a conceptual model and case study. *Journal of Cleaner Production 14, pp. 891-899*

Manring, SL; Rivkin, GW; Rivkin, MD (2003). The application of network and learning organization models to improve ecosystems management: Monroe 2020 Case Study. *Environmental Practice Vol 5, June 2003*

McLain, RJ; Lee, RG (1996). Adaptive Management: Promises and Pitfalls. *Environmental Management Vol. 20, No. 4, pp. 437-448*

Michailova, S; Husted, K (2002). Managing the dynamic interfaces between culture and knowledge: a research agenda. Working paper, WP 11/2002, May. *Department of Management, Politics and Philosopy, Copenhagen Business School*

Mills, AJ; Cowling, RM (2006). Rate of Carbon Sequestration at Two Thicket Restoration Sites in the Eastern Cape, South Africa. *Restoration Ecology Vol. 14, No. 1, pp. 38-49*

Milne, P (2007). Motivation, incentives and organizational culture. *Journal of Knowledge Management Vol. 11, No. 6, pp. 28-38*

Mitchell, RK; Agle, BR; Wood, DJ (1997). Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. *The Academy of Management Review, Vol 22, No. 4, pp. 853-886*

Moilanen, R (2005). Diagnosing and measuring learning organizations. *The Learning Organization, Vol. 12 No. 1, 2005, pp. 71-89*

Mowforth, M; Munt, AI (2003). *Tourism and Sustainability. Development and New Tourism in the Third World. Second Edition. Routledge, New York*

Moynihan, DP (2005). Goal-Based Learning and the Future of Performance Management. *Public Administration Review, March/April 2005, Vol. 65, No 2*

Noirtin, E (2008). Analysis of stakeholder interactions and involvement in thicket restoration, Western Baviaanskloof, South Africa. Who is willing to restore and why? *A thesis submitted in partial fulfillment of the degree of Master of Science at Wageningen University and Research Centre, The Netherlands*

Olsson, P; Folke, C; Hahn, T (2004). Social-Ecological Transformation for Ecosystem Management: the Development of Adaptive Co-management of a Wetland Landscape in Southern Sweden. *Ecology and Society 9(4)*

Pedler, M; Burgoyne, J; Boydell, T (1991). *The Learning company.* McGraw-Hill, Maidenhead

Plunkett, LC; Fournier, R (1991). *Participative Management. Implementing Empowerment. John Wiley & Sons. USA*

Porth, SJ; McCall, J (1999). Spiritual themes of the "learning organization". *Journal of Organizational Change Management, Vol 12, No. 3, 1999*

Powell, M; Mills, AJ; Marais, C (2006). *Carbon sequestration and restoration: challenges and opportunities in subtropical thicket. Multiple use management of natural forests and woodlands: policy refinements and scientific progress.* Natural Forests and Savanna Woodlands Symposium IV, May 15-18, Port Elizabeth, South Africa

Pretty, JN (1995). Participatory Learning for Sustainable Agriculture. *World Development, Vol. 23, No. 8, pp. 1247-1263*

Pretty, JN; Smith, D (2004). Social Capital in Biodiversity Conservation and Management. *Conservation Biology, Vol. 18(3), pp. 631-638*

Punch, KF (2005). *Introduction to Social Research. Quantitative and qualitative approaches. Second Edition. SAGE Publications ltd, London*

Ramutsindela, MF (1997). National identity in South Africa: the search for harmony. *GeoJournal 43, pp. 99-110*

Rebelo, TM; Gomes, AD (2008). Organizational learning and the learning organization. Reviewing evolution for prospecting the future. *The Learning Organization. Vol. 15 No. 4, 2008*

Reddy, ES (1985). The Freedom Charter and the United Nations. *An unpublished paper, May 1985*

Regan, HM; Colyvan, M; Markovchick-Nicholls, L (2006). A formal model for consensus and negotiation in environmental management. *Journal of Environmental Management Vol. 80, pp. 167-176*

Rikowski (ed) (2007). *Knowledge Management: Social, Cultural and Theoretical Perspectives. Chandos Publishing Limited. Oxford, Great Britain*

Romme, G; Dillen, R (1997). Mapping the Landscape of Organizational Learning. *European Management Journal, Vol. 15, No. 1, pp. 68-78*

Senge, PM (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization. Doubleday, New York, NY*

Senge, PM; Kleiner, A; Roberts, C; Ross, RB; Smith, BJ (1994). *The Fifth Discipline Fieldbook. Strategies and Tools for Building a Learning Organization. Doubleday, New York, NY*

Snell, R (2001). Moral foundations of the learning organisation. *Human Relations, 2001; 54; 319*

Stoner, JAF; Edward Freeman, R; Gilbert, DR (1999). *Management. Sixth Edition. Prentice Hall Inc., Hemel Heampsted, England*

Strichman, N; Bikcel, WE; Marshood, F (2008). Adaptive capacity in Israeli social change nonprofits. *Nonprofit and Voluntary Sector Quarterly 2008, 37; 224*

Thomsen, HK; Hoest, V (2001). Employees' Perception of the Learning Organization. *Management Learning 32(4); pp. 469-491*

Vos, JFJ (2003). Corporate Social Responsibility and the Identification of Stakeholders. *Corporate Social Responsibility and Environmental Management, Vol. 10, pp. 141-152*

Watts, S (2006). Strategic Developments in Natural Forest Conservation in South Africa. *Journal of Sustainable Forestry, Vol. 22(3/4), pp. 77-109*

Wenger, E (2000). Communities of Practice and Social Learning Systems *Organization, Vol. 7(2), pp. 225-246*

Wily, LA (2002). Participatory forest management in Africa: an overview of progress and issues. *Second International Workshop on Participatory Forestry in Africa. Arasha, the United Republic of Tanzania, 18-22 Febray 2002*

Williams, T (2005). Cooperation by design: structure and cooperation in interorganizational networks. *Journal of Business Research 58, pp. 223-231*

Wollenberg, E; Edmunds, D; Buck, L (2000). Using scenarios to make decisions about the future: anticipatory learning for the adaptive co-management of community forests. *Landscape and Urban Planning Vol. 47, pp. 65-77*

Wollenberg, E; Iwan, R; Limberg, G; Moeliono, M; Rhee, S; Sudana, M (2007). Facilitating cooperation during times of chaos: spontaneous orders and muddling through in Malinau District, Indonesia. *Ecology and Society Vol. 12(1):3*

Ya'u, YZ (2004). The new imperialism & Africa in the Global Electronic Village. *Review of African Political Economy No. 99, pp. 11-29*

Appendices