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UNIVERSITY OF CAPE TOWN

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# Collaborative Environmental Governance in Agriculture

A Case-study from the Upper Breede Valley

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Dissertation submitted to the Department of Environmental and Geographical  
Science, University of Cape Town, in partial fulfillment of the requirements for  
a Master of Philosophy in Environmental Management

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## **Acknowledgements**

I would like to thank my supervisor, Dr. Richard Hill, for his advice and valuable input whilst writing this dissertation. I would also like to thank Charl de Villiers, Rudolph Rösscher and Garth Mortimer who gave up so much of their time to assist me and offer a response whenever requested. Additionally, I would like to thank all the respondents for their time, willing help, continuous feedback and for contributing to this research. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily shared by all the members of the Upper Breede Collaborative Extension Group

Finally, I would like to thank my friends and family for their never-ending patience, support, time spent proof-reading and motivation. I would especially like to thank my parents without whom, none of this would have been possible.

University of Cape Town

## **Abstract**

The focus of this research is in the area of collaborative environmental governance, specifically analysing the Upper Breede Collaborative Extension Group (UBCEG) as an operational example of collaboration. Collaboration is one approach of governing whereby various agencies consult with one another and work together to resolve a common issue or achieve a mutual goal. The research adopts a case-study approach, exploring the collaborative group UBCEG.

Firstly, the research aims to improve understanding of collaborative governance in natural resource management in the context of UBCEG in the Upper Breede Valley. Secondly, the study aims to investigate the role of collaboration in practice, by analysing two environmental assessments projects influenced by UBCEG within the study area. The first was a soil conservation works project in six foothill rivers, which gained consent approval through a combined environmental assessment in 2011. The second project is an environmental assessment that includes a wetland study, which may lead to a combined environmental assessment. The second project is in the early stages of the assessment, and the outcomes were not known at the time of completion of this research. Nevertheless, the collaborative governance involved in setting up this second environmental assessment, provides further evidence for analysis of the functioning of the UBCEG group.

The methods employed to collect data for this study were that of semi-structured interviews, participant observation of group and project meetings and review of documents, specifically minutes of meetings. The findings of this research highlight the attributes and aspects of UBCEG which were important for collaborative environmental governance. Stakeholder perspectives and opinions were explored, as well as the drivers and strengths of the collaboration. The findings were evaluated and referenced against two collaborative governance theoretical frameworks.

Assessing the two projects provided a greater understanding of the context in which combined environmental assessments can be used as tools. The findings from this research provide evidence that collaborative governance is an approach to deal with environmental issues within an agricultural district. While the focus is on the activities of the collaborative

group, UBCEG, the intention is to highlight aspects of collaboration within agricultural settings that can hopefully be applied to future collaborations in this sector.

The main conclusions drawn from this study are that UBCEG is one such collaboration that is an effective example of collaborative governance. From this research it can be concluded that without its dedicated leaders, UBCEG would not have persisted for the last 6 years, and the quarterly meetings constitute a most valuable aspect of UBCEG in facilitating information sharing and the development of meaningful working relationships among members. Additional conclusions drawn from this research are that further benefits will accrue if all members contribute more outside of meetings, the UBCEG collaboration has had positive outcomes in the Upper Breede Valley and combined environmental assessments are an effective tool which should be used for agri-environmental projects-particularly under a collaborative structure such as UBCEG-in striving to improve the sustainable resource management of an area.

The recommended improvement areas for UBCEG are to: reduce dependency on the leaders namely the chairman and secretary, provide greater definition of substantive roles and delegation to members, ensure leaderships succession planning, streamline meetings, develop greater commitment to attend meetings by the local municipalities, use combined environmental assessments for more agri-ecological projects in the future

This dissertation recommends that collaboration between agencies and departments should be used in all agricultural districts, as a way to minimize conflict between conservation and agriculture, and improve the management of the natural resources of the area. Combined environmental assessments can be used as a tool by agricultural collaborations to gain authorisation for agri-ecological projects. It is a management tool which will save time and money if done properly. Combined environmental assessments can be considered a management tool because they can ensure sustainable use or correct use of the natural resources of an area.

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## List of Acronyms and Abbreviations

BOCMA	Breede-Overberg Catchment Management Agency
BWI	Biodiversity and Wine Initiative
BWT	Breedekloof Wine and Tourism
CREW	Custodians of Rare and Endangered Wild Flowers
DAFF	Department of Agriculture, Forestry and Fisheries
DEADP	Department of Environmental Affairs and Development Planning
DoA	Department of Agriculture
EIA	Environmental Impact Assessment
NEMA	National Environmental Management Act
UBCEG	Upper Breede Collaborative Extension Group

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# Chapter One: Research Focus

---

## 1.1 Introduction

South Africa is a country with exceptional biological diversity and several different biomes. The Fynbos Biome, which is endemic to South Africa and occurs within the Western Cape Province, faces many threats; one being the conversion of natural habitat to agricultural land (Brownlie, 2005).

Within the Western Cape, wine farming contributes greatly to the Gross Domestic Profit and employment, but at the same time is responsible for the conversion of natural habitat to agricultural land. Within the Breede River Valley region specifically, wine grape cultivation represents 65% of the total surface area (Kirchner *et al.*, 1997). Although agriculture is responsible for a loss of biodiversity within the Cape Winelands, the significance of such losses can be minimised if managed correctly and if the conversion of natural habitat is done in a strategic and coordinated manner (Bothma, 2011; de Villiers, 2007; Jones, 2011; Settle, n.d).

Environmental management is conducted by various governmental departments, across all areas of South Africa. The various governmental departments, at all spheres of government, such as those dealing with water affairs, environmental affairs, agricultural, fisheries, tourism and development planning all play a role in managing the environment. In addition there are the individuals, private organisations and non-governmental organizations (NGOs) who also contribute to management of natural resources. With so many different bodies all playing a role it is easy to see why management can be uncoordinated. Furthermore, conflict can arise between organisations, as each organisation has their own mandate that they aim to achieve.

Specifically within natural resource management in agricultural areas, there can be major conflict between landowners who wish to develop their land and conservation authorities who aim to conserve biodiversity. Therefore one approach to deal with problems in an area is for authorities, private sector organisations and NGOs to collaborate; so as to share expertise, costs and coordinate their actions.

Such collaboration between authorities and stakeholders is exemplified in the case of an agricultural district, called the Upper Breede Valley in the Western Cape. Collaboration occurs amongst various government departments and private organisations who undertake area-wide planning within this agricultural region in efforts to solve the development-environment problems evident in the area. The collaborative group call themselves the Upper Breede Collaborative Extension Group (UBCEG).

There is a range of environmental legislation that regulates agricultural practices within South Africa. Two of the main acts controlling activities in agriculture are the Conservation of Agricultural Resources Act (No. 43 of 1983) and the National Environmental Management Act (NEMA) (No. 108 of 1998). NEMA makes provision for a tool known as an Environmental Impact Assessment (EIA) which is used to assess the outcome or impact on the environment of listed activities. Unfortunately this project-level assessment tool is thought by many to be ineffective in agriculture as it does not consider the greater landscape and foresee cumulative impacts that are evident in the agricultural sector (Brownlie, 2005; Thérivel *et al.*, 1994).

The collaborative group, UBCEG, is attempting to move away from project-level impact assessments and allow area-wide planning to influence their decision making. They also influence environmental assessments to foresee and avoid cumulative impacts. Combined environmental assessments as a tool of collaborative governance, defined in section 4.3.4, are investigated in this dissertation and are explored in two projects. The one is a soil conservation works project in Foothill Rivers and the other an environmental assessment that includes a wetland study.

The aims of this research are two-fold. Firstly, I attempt to understand collaborative governance in natural resource management in the context of a collaborative group (UBCEG) in the Upper Breede Valley. Secondly, the study aims to investigate the role of collaboration in practice, by analysing two projects of environmental assessments within the study area. The second project, a wetland study, is in its early stages, and all the outcomes will not be known by the end of this research. Nevertheless, the collaborative governance involved in setting up the second combined environmental assessment, provides more

evidence for analysis of the functioning of the UBCEG group since its inception to the present.

Although collaboration is a well researched topic of study around natural resource management (Borrini-Feyerabend, 1996; Conley & Moote, 2003; Daniels & Walker, 1996; Hoffman, 2008; Imperial, 2002; Kallis *et al.*, 2009), there is limited literature relevant to collaboration in agricultural settings in developing countries. Therefore this research highlights aspects of collaboration within agricultural settings that can hopefully be applied to future collaborations in this sector, although the conditions under which this collaboration operates are unique to this case study and the findings which arise are context specific (Yin, 2009).

In summary, the focus of this research is to examine collaborative governance through a case study- the Upper Breede Collaborative Extension Group (UBCEG) - in the Upper Breede River Valley agricultural area, and analyse two combined environmental assessment projects that this group has undertaken and initiated. This dissertation evaluates the activities of this collaborative group in the context of theoretical concepts and principles of collaborative governance to provide information on how this group has operated, its successes and its failings, which can inform future such collaborations.

## **1.2 Motivation and Rationale for Research**

As mentioned, agriculture is an important industry within the Western Cape, which contributes to the GDP of the province and, more importantly, enables job creation. Unfortunately, nonstrategic conversion of natural habitat to agricultural land has, however, meant that there has been a tremendous loss of biodiversity within the province. The collaborative group, UBCEG, has been formed to deal with the unregulated loss of biodiversity, and similarly, the agricultural problems in the area. This research assesses the mechanisms that operate in the UBCEG collaboration and the role these environmental assessments have in agriculture. The intention of undertaking combined environmental assessments is that activities are done in a coordinated manner with fewer delays and more comprehensive information than if applicants were to do their own individual studies, thereby saving time, money and facilitating the conservation of natural resources.

By exploring the mechanisms within this collaboration, the elements which make it a functioning collaboration could inform practice in other agricultural districts in order to improve service delivery by departments and ensure there is no unregulated loss of biodiversity. Combined environmental assessments are also explored in this study and could be a potential tool for other collaborative groups who wish to gain environmental authorisations.

### **1.3 Aim and Objectives**

This dissertation aims to describe and evaluate the role of collaborative governance in the functioning of the Upper Breede Collaborative Extension Group (UBCEG), through exploration of two projects influenced by this group, entailing environmental assessments.

In order to achieve the above research aim, the objectives of the research are to:

- Review and develop theoretical frameworks from the literature that encapsulate the concepts and characteristics of effective collaborative environmental governance
- Review and evaluate the efforts of UBCEG, according to theories and concepts of collaborative governance
  - Assess the influence UBCEG had on the two projects explored in this research
  - Assess how suitable combined environmental assessments are for agri-ecological projects
- Explore stakeholder perspectives and opinions related to aspects of collaboration, including strengths and weaknesses of the collaboration
- Identify and evaluate what principles and factors were fundamental for effective collaborative governance and identify the challenges that the collaboration encountered with reference to the theoretical frameworks
- Reflect on the theoretical implications of the UBCEG case study
- Formulate recommendations based on reflections of the theory, for improving the functioning and effectiveness of this collaborative group.

### **1.4 Research Strategy & Methodology**

#### **1.4.1 Introduction**

This study examines the use of collaboration as a strategy to improve agri-environmental governance around rivers and wetlands where there is involvement by multiple actors. The research uses an explanatory, case-study research strategy (Yin, 2009), employing qualitative data from interviews, personal observation and document analysis. This approach is preferable in situations where one wants to obtain an account and explanation of events, and uses logical rather than statistical or quantitative analysis to assess findings (Pfueller, 2008). A case-study analysis falls largely within the domain of qualitative research. It is the preferred option for this study because it brings understanding to a complex issue and places emphasis on gaining a contextual in-depth understanding of the case study. Two projects will be analyzed, both are projects initiated by UBCEG in order to conserve argi-ecological systems. They are described further in Chapter 3.

To determine the role of collaboration and the role it plays, I conducted interviews with all involved and relevant actors and used the participant-observation technique while attending collaborative and decision-making meetings. Two projects were chosen as it allows a comparison and contrast to be made. The reason the two specific projects were chosen to be studied, is that they are both projects which were influenced by the collaborative group which is being discussed in this research, and will thereby be explored to see the role collaborative governance played.

## **1.4.2 Data Collection**

### **1.4.2.1 Participant observation and document review**

A major opportunity with participant observation is the ability to perceive reality from the viewpoint of someone 'inside' the case study rather than external to it (Yin, 2009). By attending UBCEG and project meetings the researcher was able to see how such a collaboration functions and therefore, ascertain what principles of collaborative governance were evident at these meetings. A list of attended meetings is available in Table 5.2. It allowed the researcher to feel part of the group and can see how the processes within the collaboration worked. Kawulich (2005: p. 1) notes that "*participant observation is the process enabling researchers to learn about the participants under study in the natural setting through observing and participating in those activities*". It is a method that allows a researcher to gain a better understanding of the context in which the collaboration

operates, and to witness the aspects which are evident during collaborative meetings. In conjunction with other data collection methods, such as document analysis and interviews, participant observation can add validity to qualitative methodology (Kawulich, 2005).

Within participant observation, a researcher acts as the instrument for data collection, which can therefore be prone to bias (DeWalt & DeWalt, 2002). This bias was minimized in this research by using complementary data collection techniques such as semi-structured interviews and document analysis.

All available meeting minutes of UBCEG were reviewed, to gain insight into the group's aims and what was discussed at each quarterly meeting. By analyzing the minutes, the projects and achievements of UBCEG could be tracked. The meeting minutes allowed the researcher to see the points raised at each meeting, who attended the meeting, and how the format of the minutes changed through the years. Review of the meeting minutes also provided an understanding of the characteristics upon which the collaboration is based and allowed the researcher an overview of what had been discussed during past meetings, for the years the collaboration has operated prior to undertaking this research.

#### *1.4.2.2 Semi-structured interviews*

Semi-structured interviews were conducted with member parties of UBCEG, including two farmers, representing the water users associations involved in the combined environmental assessment for the soil conservation works, and the co-ordinator of the environmental assessment application process. Questions were asked to gain insight into factors underlying the creation and development of UBCEG and the extent of participation in this group. Information on the people interviewed is contained in Table 5.1. Fourteen interviews were conducted with individuals from various member organisations of UBCEG, or with individuals who were involved in one of the projects which UBCEG conducted.

Each interview was recorded to be sure that no valuable information was missed, and the recordings were then transcribed. A transcribed interview was sent back to the interviewee to allow them to check their responses, and edit and make any changes to their answers before returning the transcript to the researcher. Allowing interviewees to edit their responses meant that they were able to express themselves better, and be sure their

responses contained accurate and sufficient information. Another ethical consideration which was implemented was that Chapter 5, the chapter containing the findings of the research, was sent back to all the respondents who were referenced or quoted within the chapter. This gave them an opportunity to see if their words were misrepresented or misunderstood, and therefore an opportunity to agree or disagree with the researcher's statements. Comments on the findings were received from 5 of those interviewed, and these comments were incorporated into the relevant sections of the dissertation.

The questions for the interviews were sourced and adapted from Thomson *et al.* (2007) and other collaborative governance literature, as discussed in Chapter 2. The interview questions are contained in Appendix B: the interviews were semi-structured and questions varied slightly depending on the interviewee's response and involvement with UBCEG.

#### **1.4.3 Framework for Data Analysis**

The data that was collected was then analyzed, and substantive statements from the transcripts were identified. These recurring statements or ideas were used to create categories. An analysis grid was created and the substantive statements were placed on this grid under the appropriate category as proposed by Gillham (2000). Interviewee names were placed along the y axis and the categories were placed along the x axis. Each substantial statement made by an interviewee was placed on the grid with the corresponding category and respondent name. This analysis grid helped to group relevant information, making for an easier and quicker analysis of the data sourced from the interviews. The analysis also allowed interviewee responses to be compared and contrasted, thereby enabling the researcher to distinguish different stakeholder perspectives.

#### **1.4.4 Limitations and Difficulties**

While Project 1, which focused on soil erosion along rivers, was concluded prior to the initiation of this research, Project 2, the environmental assessment incorporating the wetland study, had not been completed by the time this research was concluded. Tracking a current combined environmental assessment meant that the process of this project was not completed by the time this research was written up, primarily because the full wetland assessment is to be undertaken over two spring seasons in 2012 and 2013. Nevertheless,

given the focus on collaborative governance within UBCEG, the case study analysis incorporating Project 1 and aspects of Project 2, has shown evidence of the functioning of this group. The information on the first combined environmental assessment is complemented by evidence obtained during the planning stages of the second environmental assessment.

Face-to-face interviews are enormously time-consuming (Gillham, 2000) in comparison to a survey or questionnaire, but the richness of data gained can be much more valuable than that from a simple survey. Due to the large amount of time required to conduct, transcribe and then analyze interviews, not every individual from each organisation could be interviewed. Therefore, members were interviewed who had attended the majority of the meetings, or who were referred to me by other members of UBCEG.

The majority of the individuals who were interviewed were active members of UBCEG, which can conversely make the empirical data one-sided. As these individuals are actively involved in UBCEG, they obviously feel there is value in such a collaboration, and their views may tend to be favourably inclined towards the collaboration. To compensate for this bias, questions were quite extensive and detailed, and some of the same issues were raised in more than one question to try and elicit from the interviewees a number of different perspectives. For example, the three following questions were asked to an interviewee:

1. How are decisions made in UBCEG?
2. Do all partner organisations have to agree to a decision before it is made around activities of the UBCEG?
3. Would you say decisions are made by those who best understand the issues rather than relying on a hierarchy of authority?

The questions, although very similar, have slight differences, and responses from the interviewees were therefore detailed and contrasts between responses were noted.

Another limitation of my data collection is that a few individuals who were interviewed spoke Afrikaans as their first language and some of their answers were not particularly articulate or well-described during the interviews. At times I had to prompt the interviewee

by suggesting a word they were looking for as they were unsure of the English translation. Language barriers constituted a minor limitation to data collection.

Because UBCEG is a functioning collaborative group, which is made up of various government officials and busy individuals, there were occasional procedural challenges faced by the researcher. These challenges included rescheduled UBCEG meetings, interviewees not responding to e-mails and phone calls, government officials being too busy to meet and lastly, one or two individuals, who the researcher hoped to interview, saying that they had no involvement with UBCEG, although their names appeared on the attendance register of meeting minutes.

The main limitation of this research is that of time constraints. Due to it being a short dissertation, there was only six months in which to undertake field work and collect data, which was not long enough to allow for sampling over at least two seasonal cycles, as is the situation for the second environmental assessment (Project 2).

## **1.5 Value of this Research**

This research highlights aspects of the functioning and effectiveness of a collaborative group in the agricultural region of the Upper Breede Valley, which may aid other districts who wish to form a collaborative group to deal with similar problems within their area. The research also explores the different stakeholders' opinions of the collaborative process, which may be of value in facilitating understanding among stakeholders involved in the UBCEG collaboration.

## **1.6 Outline of Chapters to Follow**

Chapter 2 of this research provides a review of relevant literature on collaborative environmental governance, to provide a theoretical framework for evaluating the collaborative governance observed in the case of the Upper Breede Collaborative Extension Group. Chapter 2 begins by exploring the definition of collaboration, and the reasons put forward in motivating collaboration. Thereafter, two frameworks for collaborative governance literature are described, followed by a review of the various aspects of collaboration found within the literature, including aspects such as trust, power, support and leadership.

Chapter 3 provides background to the Upper Breede Collaborative Extension Group. The two environmental assessment projects are also briefly explained to provide contextual background to the topics of this dissertation.

Chapter 4 places this research in a geographical context. It describes the region in which this research took place and outlines the legislation that directs the actions of the UBCEG. The chapter begins by describing the conditions of the region within which this study took place, with reference to the Cape Winelands and agriculture within the region. The study site, the Upper Breede Valley, is thereafter briefly described to give some background to the area. This is followed by some information into the state of South Africa's aquatic ecosystems, because both of the two projects of UBCEG explored within this research involve aquatic systems. The major legislation relevant to the regulation of agriculture is briefly described the second half of Chapter 4, as it has been influential in shaping the current state of the environment and will continue to do so in the future. The description of relevant legislation is followed by the shortcomings of environmental authorisations in agriculture. Special attention is given to the context of combined environmental impact assessments (EIAs) which occur under the National Environmental Management Act (No. 107 of 1998).

The research findings revealed by conducting the semi-structured interviews and participant observation of meetings are described in Chapter 5. Chapter 6 focuses on a discussion of findings in the context of the collaborative governance literature of Chapter 2. Chapter 7 provides conclusions followed by my recommendations for how UBCEG can improve the identified challenges facing the collaboration.

# Chapter 2: Collaboration in Environmental Governance

---

## 2.1 Introduction

This chapter reviews the literature on collaborative governance. The chapter begins by broadly defining governance and environmental governance before describing the notion of collaborative governance, in particular focusing on the principles that facilitate collaboration and the reasons for collaborating. The purpose of Chapter 2 is to discuss the definition of collaboration and explore the characteristics of collaborative environmental governance outlined in the research literature. The conditions for effective collaboration are described, as well as aspects which may improve collaboration.

No literature was reviewed that specifically referred to collaborative governance in agriculture, although there was literature on collaborative governance in natural resource management. Although the collaboration being studied operates in a relatively small, specifically delineated agricultural area, the principles and components within collaboration are consistent across sectors, and there are reoccurring elements within the literature that are applicable to this research. Two frameworks by two different authors are discussed to highlight important aspects of collaborative governance. These two frameworks are used to analyze the case-study of this research (UBCEG) in subsequent chapters. Finally in this chapter, important aspects as confirmed in the literature are discussed, including trust in collaboration, power imbalances, support, leadership, complexities of collaboration and capacity building.

## 2.2 Defining Governance and Environmental Governance

The notion of governance came about after the recognition that there are other ways of dealing with problems than just by depending on government, the state and its agencies (Sampford, 2002). Keeping in mind that the definition of governance is contested within the social sciences (Carmona-torres *et al.* 2011), Sampford's (2002: p.80) definition of governance, inspired by the work of Young (1994), states that governance is

*“The combination of ethical standard setting, formal rule making and institutional design by which organisations attempt to ensure that they live up to the values by which they justify themselves to the community in which they belong.”*

Many different organisations can play a role in governance, including governmental, non-governmental, corporate, media, activist, educational and scientific bodies (Sampford, 2002), in short, a range of state to non-state actors. The report compiled after the international workshop on Regional Environmental Governance held at the University of Geneva on 16-18 June 2010, states that

*“The concept of governance points at more or less formal arrangements adopted for dealing with public issues and involving a wide range of participants, States being only one among them.”* (Balsiger & Debarbieux, 2011).

As can be seen from both definitions above, governance is the ruling or rule-making by various organisations, not top-down regulation by government. Although the government may be one player within any form of governance, there are various other actors who also have a role.

Environmental governance refers to management of a natural environment or natural resources of an area, by various agencies or sectors, again government being just one actor.

Within environmental governance specifically, there are a variety of different approaches which are used for managing environmental resources. These approaches can include cooperation, partnerships, collaboration and co-management, but within each, there is a noted shift in natural resources management from being predominantly the responsibility of government, to one that is the shared responsibility of government and civil society (Plummer & Fitzgibbon, 2004). In other words, there is a shift from being a top-down approach by government, to a governance approach. The government urge civil society to take responsibility and be involved in natural resource management.

Co-operative management is a generic term meaning the sharing of rights and responsibilities by the government and civil society (Plummer & Fitzgibbon, 2004). Within co-operative environmental management the terms collaboration, partnership and co-

management are reoccurring, but have slightly different meanings which are elaborated on below.

Partnerships are when more than one party have a shared undertaking to achieve mutual objectives (Brinkerhoff, 2002), whereas collaboration is when multiple parties pool resources to solve problems (Borrini-Feyerabend, 2001; Bramwell & Lane, 2000; Daniels & Walker, 1996; Gray, 1985; Hoffman, 2008; Meadowcroft, 1998; Ostrom, 1991; Selin & Chavez, 1995). Although there is much literature on collaboration there is very little understanding on what it is to collaborate and how to support and improve collaboration (Patel *et al.*, 2012). There is also a lack of consensus among scholars over the definition of collaboration, but Thomson *et al.* (2007: p.25) have analysed various definitions and suggest that collaboration can be characterised as follows,

*“Collaboration is a process in which autonomous or semi-autonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial interactions”.*

Co-management is the final term associated with co-operative natural resource management and involves the sharing of rights and responsibilities between the state and local users (Berkes, 1994; Plummer & FitzGibbon, 2004).

Kinnaman & Bleich (2004: p.311) feel that concepts like *“cooperation, coordination, compromise, and teamwork”*, which are synonymous with collaboration, make collaborative research and practice challenging. These authors agree with Gray (1989) that collaboration should be distinguished from the terms cooperation and coordination, even though they often occur within collaboration. Although both cooperation and collaboration both involve active, respectful negotiations, they differ because cooperation negotiations occur in professional boundaries and in cultural practices, unlike collaboration (Kinnaman & Bleich, 2004). Another distinction is that, within collaboration, participants are internally motivated whereas within cooperation individuals or organisations are externally or internally motivated (Kinnaman & Bleich, 2004). Although collaboration, partnership and co-management have similarities and distinctions, this research focuses on the qualities of collaboration.

## 2.3 Collaborative Governance

Collaborative governance is a relatively new strategy of governing whereby *“one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-orientated and deliberative and that aims to make or implement public policy or manage public programs or assets”* (Ansell & Gash, 2007:p. 544). A public agency refers to public institutions such as governmental bodies at local, provincial and national spheres. Ansell and Gash (2007) chose the term ‘consensus-orientated’ not ‘consensus’ very specifically because consensus is not always reached in engagements, even though there generally is an attempt to reach common areas of agreement.

Collaborative governance came about as an alternative to the previous ineffective governance approach of top-down implementation, which was partly due to the high cost of this type of regulation (Ansell & Gash, 2007; Gunningham, 2009; Katz & Martin, 1997). Collaboration is a strategy used to improve governance and implement policies in inter-organizational settings (Imperial, 2002). As Gunningham (2009: p.149) says so effectively about collaborative governance, *“This emerging approach to environmental regulation assumes that there are more gains to be made through cooperation, dialogue, and utilizing multiple sources of knowledge and abilities than by adversarial and government-dominated modes of regulation.”* Collaboration is typically an interdisciplinary approach to address social, environmental and technical problems (Bammer, 2009), and is currently used by many institutions around the world.

Collaboration is explored in many disciplines (Kinnamon & Bleich, 2004), such as: nursing (Alpert *et al.*, 1992; Arslahian-Engoren, 1995; Henneman *et al.*, 1995; Hoffman, 1998; Kinnaman & Bleich, 2004; Zimmerman, 1999), teaching (Montiel-Overall, 2005), tourism development (Erkus, 2010), industrial scientific research (Yates, 2007), technology research (Sonnenwald *et al.*, 2001; Tyndale, 2003; Willaert *et al.*, 1998; Flanagan, 2004), academic research (Bammer, 2008; Kats & Martin, 1997; Margolis & Runyan, 1998), intergovernmental unions (Munthali, 2007) and environmental governance (Bruce, 2006; Conley & Moote, 2003; Gunningham, 2009; Hoffman, 2008; Kallis *et al.*, 2009; Pohl, 2005; Seekamp *et al.*, 2011; Sampford, 2002; Prager *et al.*, 2012). More specifically within

environmental governance, collaboration is used in natural resource management such as watershed or land management projects (Borrini-Feyerabend, 1996; Conley & Moote, 2003; Daniels & Walker, 1996; Hoffman, 2008; Imperial, 2002; Kallis *et al.*, 2009).

## 2.4 Reasons for Collaboration

Collaborations occur for various reasons but generally the point of working with others is that each individual contributes something to resolve the issue at hand (Thomson *et al.*, 2007), particularly when there is a common aim or goal (Kinnamon & Bleich, 2004). The contribution can be that of perspective, resources, skills or knowledge (Bammer *et al.*, 2007; Lynn *et al.*, 2000). Various stakeholders will have different incentives for collaborating and these incentives are often related to whether the collaboration will yield a result which is worth the time and energy of participants (Ansell & Gash, 2007). Logsdon (1991) showed that a stakeholder is more willing to participate if they perceive the achievement of their goals to be directly related to their involvement with other stakeholders.

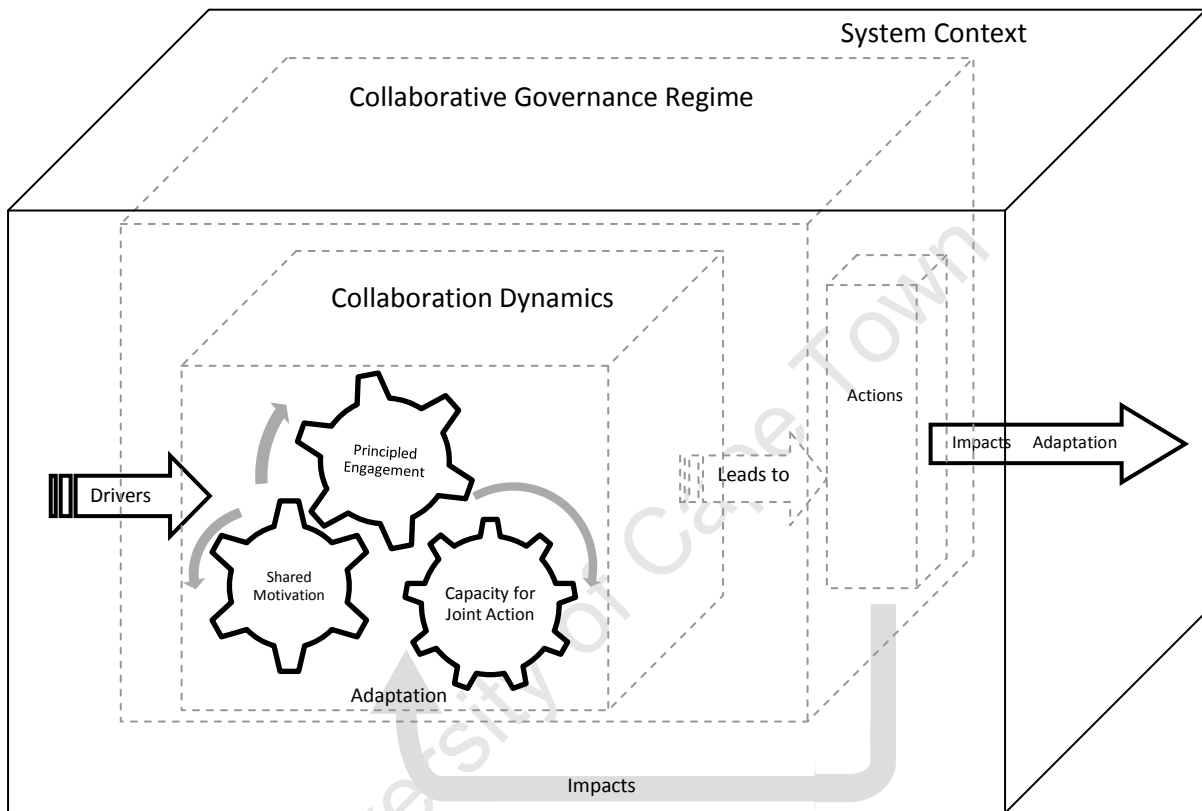
## 2.5 Frameworks of Collaborative Governance

Emerson *et al.* (2011) looked at frameworks from various collaborative settings and found expected overlaps and considerable differences amongst them. Based on their findings they developed an integrative framework for collaborative governance, as shown in Figure 2.1. There are three boxes (the dashed-line boxes) which represent the three nested dimensions of a collaborative governance regime. These three boxes are within the solid box which is the systems context or as Emerson *et al.* (2011: p.5) state the “*host of political, legal, socioeconomic, environmental and other influences that affect and are affected by the collaborative governance regime*”. From the system context emerge drivers (shown by the solid-outline arrow on the left) that influence the dynamics of the collaboration. These drivers can be factors such as leadership, consequential incentives, interdependence or uncertainty (Emerson *et al.*, 2011).

The three interactive components (depicted by the wheels) are principled engagement, shared motivation, and capacity for joint action. As implied by the wheels, the three components of collaborative dynamics work together to create traction. The ensuing actions lead to impacts, both within the regime and outside of it. The two arrows extend from the

action box to impacts, either within the collaborative governance regime (arrow without black outline) or the system context itself (shown by the solid-outline arrow on the right). Notice both arrows have the potential to create adaptations, which is “*the transformation of a complex situation or issue*” (Emerson *et al.*, 2011: p. 6).

**Figure 2.1. Integrative Framework for Collaborative Governance (Emerson *et al.*, 2011)**



Specific elements of the components within the integrative framework for collaborative governance follow in Table 2.1 below, which adds detail to the information contained in Figure 2.1.

**Table 2.1. A Diagnostic or Logic Model Approach to Collaborative Governance (Source: Emerson *et al.*, 2011)**

		Collaborative Governance Regime (CGR)						
		Collaborative Dynamics			Outputs Collaborative Action	Collaborative Outcomes		
Dimension & Components	System Context	Drivers	Principled Engagement	Shared motivation		Capacity for Joint Action	Impacts	Adaptation
Elements within Component	<ul style="list-style-type: none"> <li>•Resource conditions</li> <li>• Policy and legal frameworks</li> <li>• Prior failure to address issues</li> <li>• Political Dynamics/ Power Relations</li> <li>• Network Connectedness</li> <li>• Levels of Conflict/Trust</li> <li>•Socio-economic/ Cultural Health &amp; Diversity</li> </ul>	<ul style="list-style-type: none"> <li>•Leadership</li> <li>• Consequential Incentives</li> <li>• Interdependence</li> <li>• Uncertainty</li> </ul>	<ul style="list-style-type: none"> <li>• Discovery</li> <li>• Definition</li> <li>• Deliberation</li> <li>• Determination</li> </ul>	<ul style="list-style-type: none"> <li>• Mutual Trust</li> <li>• Mutual Understanding</li> <li>• Internal Legitimacy</li> <li>• Shared Commitment</li> </ul>	<ul style="list-style-type: none"> <li>• Procedural/ Institutional Arrangements</li> <li>• Leadership</li> <li>• Knowledge</li> <li>•Resources</li> </ul>	Will depend on context, but might include: <ul style="list-style-type: none"> <li>• Securing Endorsements</li> <li>• Enacting Policy, Law, or Rule</li> <li>• Marshalling Resources</li> <li>• Deploying Staff - Siting/ Permitting</li> <li>• Building/ Cleaning Up</li> <li>• Enacting New Management Practice</li> <li>• Monitoring Implementation</li> <li>• Enforcing Compliance</li> </ul>	Will depend on context, but aim is to alter pre-existing or projected conditions in System Context	<ul style="list-style-type: none"> <li>• Change in System Context</li> <li>•Change in the CGR</li> <li>• Change in Collaboration Dynamics</li> </ul>

Table 2.1, lists various components which apply to the Integrative Framework for Collaborative Governance shown in Figure 2.1, as sourced from Emerson *et al.* (2011). Most of the conceptual elements mentioned in the table are self-explanatory, although a few need further explanation.

Within the system drivers, *consequential incentives* can be positive or negative, internal or external and induce engagement amongst the leaders and partners. Internal incentives can be aspects such as problems, resource needs, interests or opportunities, whereas external incentives are situational or institutional crises, threats or opportunities which drive collaboration (Emerson *et al.*, 2011). *Interdependence* is the fact that the partners are unable to accomplish something on their own, and require the collaboration to do so. *Uncertainty* is a driver which can be counter-collaborative. Uncertainties exist within all sectors and governance structures but may be an element which can negatively influence collaboration. Uncertainties may bring about unforeseen obstacles which may derail collaboration and could be anything from extreme weather events to a member's involvement being uncooperative - both of which cannot be foreseen and could be counterproductive to the collaborative process.

Within collaborative dynamics, *principled engagement*, *shared motivation* and *capacity for joint action* are the cyclical interactions as depicted in Figure 2.1. Principled engagement refers to stakeholders from different institutions who work together, across boundaries, to achieve their goals (Emerson *et al.*, 2011). This occurs over time through engagement and the repetition of discovery, definition, deliberation and determination. *Discovery* refers to the exploration of different stakeholders' values and concerns, as well as identifying and assessing relevant information. *Definition* refers to clarifying the purpose and objectives of the stakeholders, as well as discussing and describing problems, tasks and expectations of one another. *Deliberation* amongst stakeholders is a main ingredient for effective engagement as is "*reasoned communication*" so that challenges can be addressed and all opinions can be heard (Emerson *et al.*, 2011: p.12). *Determination* refers to the decision or agreements which are made over time. As Emerson *et al.* (2011: p.13) state so effectively about the four elements of principled engagement, namely, discovery, definition, deliberation and determination, "*the dynamic cycling [of them]...creates and reinforces shared motivation and builds the needed capacity for joint action*".

The elements of shared motivation and capacity for joint action are relatively self explanatory, although it must be noted that Emerson *et al.* (2011) feel that capacity for joint action can be considered an intermediate outcome of the other two interacting wheels, principled engagement and shared motivation. As capacity develops, it strengthens and improves the other two wheels.

The actions and outputs of the collaborative governance regime are dependent on the context of the collaboration and therefore a few conceptual examples are given in Table 2.1. The impacts and adaptations that result from collaborative governance are context specific and very much dependent on the actions of the collaboration. The Emerson *et al.* (2011) conceptual map is used to navigate the various dimensions and elements of the collaborative governance regime of UBCEG, which is further discussed in Chapter 6.

Selin and Chavez (1995) inspected research on collaborative processes and synthesized a process model of collaboration within natural resource management systems, as given below in Figure 2.2. Selin and Chavez (1995: p.190) emphasize that the model “*describes a set of ideal circumstances that are often attenuated by internal and external obstacles to collaboration*”. These authors note that because a host of social, economic, political and ecological pressures influence how a resource will be managed, environmental managers have to adjust to any such pressures. They also note that some of these pressures will work against the collaboration and others will bring stakeholders together. The outcome and feedback arrows (pointing back to each box) in Figure 2.2 below indicate that collaboration is both dynamic and cyclical.

**Figure 2.2. The Collaborative Process in Natural Resource Management (Source: Selin & Chavez, 1995: p.7)**

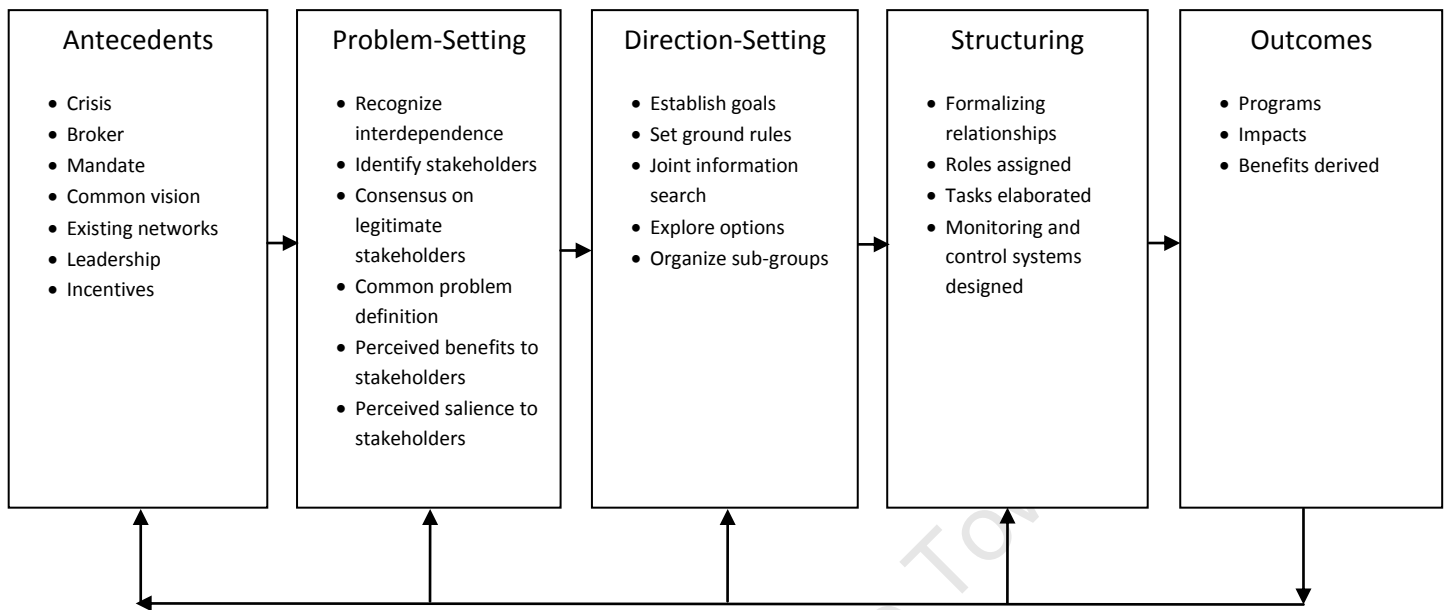


Figure 2.2 shows the various phases within a collaborative process, starting with antecedents, which are the circumstance or context that leads to collaboration. A problem-setting phase follows antecedents, which is a time when the stakeholders reflect on what they wish to achieve and who should be included in the collaboration. Next is direction-setting, which is the phase where the stakeholders decide which goals and aims to pursue. Structuring follows direction-setting, and is the phase where individuals are allocated roles and arrangements are set. Lastly, outcomes follow as a result of the structuring phase. Notice how the outcomes phase has feedback loops to every other phase, depicted by the arrows, reinforcing the statement above that collaboration is a cyclical process.

## 2.6 Aspects of Collaborative Governance

Within collaboration there are various aspects and components, which are reoccurring themes in the collaborative governance literature. Some such aspects are noted as trends by various authors, others are principles of collaboration that are vital for success. The following sub-sections highlight the themes and trends that are confirmed in the literature. The section begins by briefly mentioning the element of trust between stakeholders, which is confirmed as an important element within collaboration. Next, power imbalances are

briefly discussed as a trend that can be detrimental to collaboration. Support, leadership, complexities and capacity building are elements within collaboration which arise within collaborative governance literature, and are therefore discussed within this section.

### **2.6.1 Trust between Stakeholders**

There are various conditions identified by Ansell & Gash (2007) which are fundamental in determining the success or failure of collaboration. One such condition is the history between stakeholders. Any previous conflict or disagreement may discourage cooperation, whereas a history of cooperation may facilitate successful collaboration (Ansell & Gash, 2007; Imperial, 2002). Trust between stakeholders is repeatedly reported as a significant factor that nurtures a collaborative process (Vangen & Huxham, 2003). A study by these authors examined various collaborations across disciplines, and found trust to be an essential ingredient for success. Building trust takes time and requires a willingness to communicate through issues (Webb, 1991). Trust is one aspect which can be a means of coping with uncertainty (Butler & Gill, 1995), which is one of the listed aspects in Emerson *et al.*'s (2011) Logic Model Approach to Collaborative Governance that is counter-productive to collaboration. Therefore trust amongst stakeholders is one factor that is needed within a collaborative group.

### **2.6.2 Power Balances**

Another noted trend is resource and power imbalances, which are critical to the success of a group effort. Resources can be time, money, equipment, staff, technical expertise and legal authority (Imperial, 2002). By minimizing differences in power, mistrust can be reduced (Vangen & Huxham, 2003). A power imbalance is problematic when not all of the stakeholders have the capacity or resources to participate as equal stakeholders and the weaker stakeholders are prone to manipulation by the stronger ones (Ansell & Gash, 2007). For example, conservation supporters are often less organized and resourceful than representatives with economic motivations and they may therefore be less powerful in a collaborative process (Shuckman, 2001). Kinnamon & Bleich (2004: p.317) state that successful collaborative effort is "*marked by knowledge contribution, equal distribution of power, and a focus on achieving best outcomes without regard to discipline, hierarchy, or even organizational boundaries*". When different levels of government are involved,

bureaucracy and hierarchy can dominate militating against power-sharing, so it is important to emphasise equal distribution of power. Any collaboration should also have a broad spectrum of stakeholders involved, which in itself represents a form of dispersed power, so as to ensure all issues and concerns are addressed. The exclusion of just one important stakeholder can be a reason for failure (Ansell & Gash, 2007).

### **2.6.3 Support**

Patel *et al.* (2012) found that for successful collaboration amongst organisations there is a need for effective and appropriate support which can be in the form of various factors. These authors note that support offered to individuals can be in the form of tools, such as technologies, networks, resources, training, team building, knowledge management (to ensure knowledge exchange) and error management to prevent errors derailing the collaboration. Error management is a support structure within a collaboration which strives to prevent or avoid errors occurring. The type of collaborative task to be performed influences the amount of support the team requires and the amount of communication or coordination that needs to happen (Hoffman, 2008; Patel *et al.*, 2012).

### **2.6.4 Leadership**

Leadership is a vital ingredient needed to 'bring parties around one table' and give direction to the collaborative process. There is often one person who oversees the collaboration and he/she has two main purposes: being responsible for integrating the various relevant contributions and ameliorating the problems that prevent people from working together constructively (Bammer, 2008; Burger *et al.*, 2001). Facilitative leadership in collaborative governance is thought of as "*assisted negotiation*" and the individual's main aim is to direct the process so that consensus-building is done with integrity (Ansell & Gash, 2007: p.544). Vangen and Huxham (2003) feel that leadership has the important role of embracing, empowering and involving stakeholders so that collaboration can progress forward. The leader is responsible for the unfolding of the process and to ensure that decision-making is done in a credible, collaborative way (Ansell & Gash, 2007; Emerson *et al.*, 2011). Leaders should strive to control and coordinate individuals and organisations in order to advance the objectives to which these organisations contribute (Lynn *et al.*, 2000; Mandell & Keast, 2009). As Kinnaman and Bleich (2004: p.317) stated, the organizational leaders should

*“create a culture to support the collaboration”*. So the main role of a leader or leaders within collaboration is to assist in facilitating the process and providing an oversight role to ensure that collaboration works, through creating an environment in which the collaboration can operate more effectively.

Mandell and Keast (2009) emphasize that leadership is not necessarily referring to only one person, but is rather a process of getting all members to find their strengths. In a study focused on leadership in collaborative networks, these authors found that collaboration has unique properties not similar to cooperative or coordinative networks. They argue that leadership within collaboration should be different, by focusing on long-term benefits and building relationships between individuals instead of focusing on short-term goals. Furthermore, leadership within collaboration refers to those participants who are able to focus on the importance of knowledge sharing and relationship building, so consensus can be reached (Innes & Booher, 2000).

### **2.6.5 Complexities of Collaboration**

Collaborative work is complex and variable during the different phases of a project (Patel *et al.*, 2012). This is clearly represented in Figure 2.2 of Selin & Chavez’s (1995) Collaborative Process Model. Additionally, collaborative efforts will also be based on the extent to which stakeholders accept that collaboration represents a delicate balancing act (Bramwell & Sharman, 1999). Because environmental governance is a field which encompasses many diverse and sometimes conflicting disciplines, with social, economic and ecological foci, reaching a solution is very often not straight forward and compromise is required.

Each situation is also context specific, which makes decision-making rely *“on a blend of intuitive and analytical processes”* (Patel *et al.*, 2012: p. 9).

According to Bleich (1995), Hoffmann (1998) and Kinnaman and Bleich (2004), collaboration is the most complex and resource-intensive interdisciplinary behaviour. Collaboration is resource intensive because it requires participants to spend time together, forming relationships, learning to communicate, gaining respect for the other individuals and building trust (Albert *et al.*, 1992; Arslahian-Engoren, 1995; Webb, 1991; Zimmerman, 1999).

### **2.6.6 Capacity Building**

Within collaboration, the theme of resource distribution and capacity building is one that reoccurs (Bayer, n.d.; Bramwell & Sharman, 1999; Emerson *et al.*, 2011; Underdal, 2010). Himmelman (1994) suggests that capacity building within collaboration involves cooperative activities to enhance the capacity of both oneself and others to achieve a common goal. Capacity building allows the collaboration to better deal with challenges when they arise by increasing the response options (Underdal, 2010).

To increase the possibility of successful collaboration, all of the above mentioned elements of collaboration can be improved on, such as trust, power balances, support, leadership (Friedman & Foster, 2011), knowledge sharing and capacity building.

## **2.7 Summary**

Collaboration governance is an alternative approach to top-down management, and generally occurs because various stakeholders can all contribute something to resolve an issue (Thomson *et al.*, 2007). Collaboration is more likely to occur when it is more beneficial for each stakeholder to collaborate and work within a group, than to work alone (Ansell & Gash, 2007).

Collaborative governance in natural resource management has a few noted aspects which play a role in determining the extent to which it is effective. Since power and resource imbalances can negatively impact on collaborative outcomes, participants should aim for an equal distribution of power (Kinnamon & Bleich, 2004). In addition to equal power sharing, there should be a broad spectrum of stakeholders within a collaboration so that all issues are addressed (Ansell and Gash, 2007). Trust amongst members also enables stakeholders to address challenges, particularly uncertainties (Vangen & Huxham, 2003).

A support system may be needed, to assist stakeholders involved in collaboration (Patel *et al.*, 2012). Such support will, in turn, build the capacity of members and will help the collaboration to better deal with challenges (Underdal, 2012).

As has been shown in this chapter, collaboration in environmental governance is a complex matter and a balancing act is often required to reach accommodation between potentially diverging disciplines (Bramwell & Sharman, 1999). A key aspect of collaborative governance is the role and need for leadership, which is imperative to drive (Selin & Chavez, 1995; Emerson *et al.*, 2011), support (Kinnamon & Bleich, 2004) and advance (Lynn *et al.*, 2000; Mandell & Keast, 2009) any collaboration. Using the described frameworks and aspects highlighted in this literature review, the collaborative group UBCEG is analysed and evaluated in the final three chapters of this dissertation, to test for the presence of such elements as indicators of effective and enduring collaboration.

University of Cape Town

# Chapter Three: Background of the Upper Breede Collaborative Extension Group (UBCEG) and Two Environmental Assessment Projects

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## 3.1 Introduction

The purpose of this chapter is to give a brief background into the case-study of this research. The Upper Breede Valley Collaborative Extension Group (UBCEG) is explored as are two environmental assessment projects that the group has been, and is currently, involved in. UBCEG operates in an area known as the Upper Breede Valley, which falls within the Cape Winelands District of the Western Cape Province of South Africa. A map of the Upper Breede Valley is shown in Figure 3.1.

## 3.2 Background of the Upper Breede Collaborative Extension Group (UBCEG)

The Upper Breede Valley Collaborative Extension Group can be considered an example of collaborative governance, and was established in 2006 to resolve a variety of problems around land management in the Breede Valley (Mortimer & Röscher, 2009). UBCEG was initiated by CapeNature as well as the provincial Department of Agriculture (Sub-programme: LandCare). LandCare is an institution aimed at sustainable resource management; they concentrate on area-wide planning, land-use planning and farm planning throughout the Western Cape and specifically in the Breede Valley. CapeNature is a public institution responsible for biodiversity conservation within the Western Cape, as well as providing services and facilities for training and research. More specifically, two individuals within CapeNature and the Department of Agriculture, were responsible for the inception and development of UBCEG, namely, Garth Mortimer and Rudolph Röscher.

UBCEG was formed after the realization that the conservation and agricultural authorities should work with the landowners in the area to co-ordinate development and collaborate in

planning, using a bottom-up approach (Brownlie, 2011). As Prager *et al.* (2012) state, collaboration and coordination amongst individuals is the means to address issues when needing to make decisions that will include trade-offs in situations of uncertainty, such as UBCEG does. Some problems do not have a clear-cut solution and require trade-offs, particularly in an agricultural region such as the Upper Breede Valley, which has rich biodiversity but is also an important agricultural area. The problems UBCEG strives to resolve include:

- Poor agricultural service delivery to rural farmers in the area by government
- Little coordination between government departments
- Ineffective management of water resources
- Invasive alien species
- Wildfires
- Biodiversity loss
- Little community buy-in with regard to government projects and initiatives.

The following Table 3.1 lists the organisations who are members of UBCEG. Various spheres of government participate in UBCEG as well as environmental agencies, municipalities and non-governmental organisations.

**Table 3.1. The thirteen permanent members of UBCEG**

<b>National Departments and Organisations</b>
National Department of Water Affairs
National Dept. of Agriculture, Forestry and Fisheries
National Dept. of Environmental Affairs and Tourism
South African National Biodiversity Institute (SANBI)
<b>Provincial Departments and Organisations</b>
Provincial Dept. of Agriculture (LandCare)
Provincial Dept. of Environmental Affairs and Development Planning
CapeNature (provincial conservation agency)
<b>Municipalities</b>
Cape Winelands District Municipality
Witzenberg Local Municipality
Breede Valley Local Municipality
<b>Private Agencies and Non-Governmental Organisations</b>
Breedekloof Wine & Tourism (private sector)
Biodiversity & Wine Initiative (NGO)
Custodians of Rare & Endangered Flowers (NGO)

UBCEG was established to provide collaborative governance to address the social, economic and environmental challenges in the Upper Breede Valley (Mortimer & Röscher, 2009). Preceding the formation of UBCEG was the creation, of fine-scale biodiversity plans by CapeNature, to identify critical biodiversity areas. Area-wide plans were thereafter formulated, by CapeNature, to identify priority areas for agricultural production (Brownlie, 2011). These fine-scale and area-wide plans are used to inform UBCEG decision-making on developmental activities and direct development to areas that are suitable for farming or expansion.

UBCEG provides a forum where the different departments can discuss applications for agricultural development in the context of pressures on biodiversity conservation, socio-economic gains and agricultural production, before authorisation by the relevant local or provincial departments. UBCEG's role is thus to highlight the priority areas for environmental conservation and development and align decision making and resource use to that of a broader vision for the Upper Breede Valley.

### **3.2.1 Objectives of UBCEG**

The objectives of UBCEG, outlined in their terms of reference, are as follows (Mortimer, 2010: p. 7)

1. To build capacity and support each other where our initiatives and responsibilities overlap
2. To share knowledge and expertise
3. Explore areas for collaboration with regard to training, information sharing, data sharing and management, strategic planning and collaborative extension, and improved capacity and access to resources
4. To increase the opportunities to create jobs and give training to previously disadvantaged individuals, in order to reach our common goals to improve sustainable resource management for the valley

### **3.3 Outcomes and Achievements of UBCEG**

There has been a significant improvement in natural resource management with the establishment of the UBCEG, and this group has overseen the successful conservation of 2790ha of endangered habitats, the clearance of 3042ha of invasive plant species and the creation of training workshops and employment opportunities for local communities (Mortimer, 2010).

Another positive outcome of UBCEG is the improved communication and coordination between organisations and better service delivery by the member organisations. As shown above in Table 3.1, UBCEG involves collaboration between various private sector groupings and a range of public sector institutions in the different spheres of government. Thereby allowing coordinated actions between different spheres of government.

The UBCEG initiative is based on strategies around communication, the sharing of knowledge, strategic planning, collaborative extension and capacity building. UBCEG provides a platform for its member organisations to share information, combine funding and coordinate efforts so that activities within the region are done so in an agriculturally sustainable manner.

Not only does UBCEG create an information sharing platform, it is also a body that promotes job creation. For the 2010 financial year alone, 10 486 person employment days were

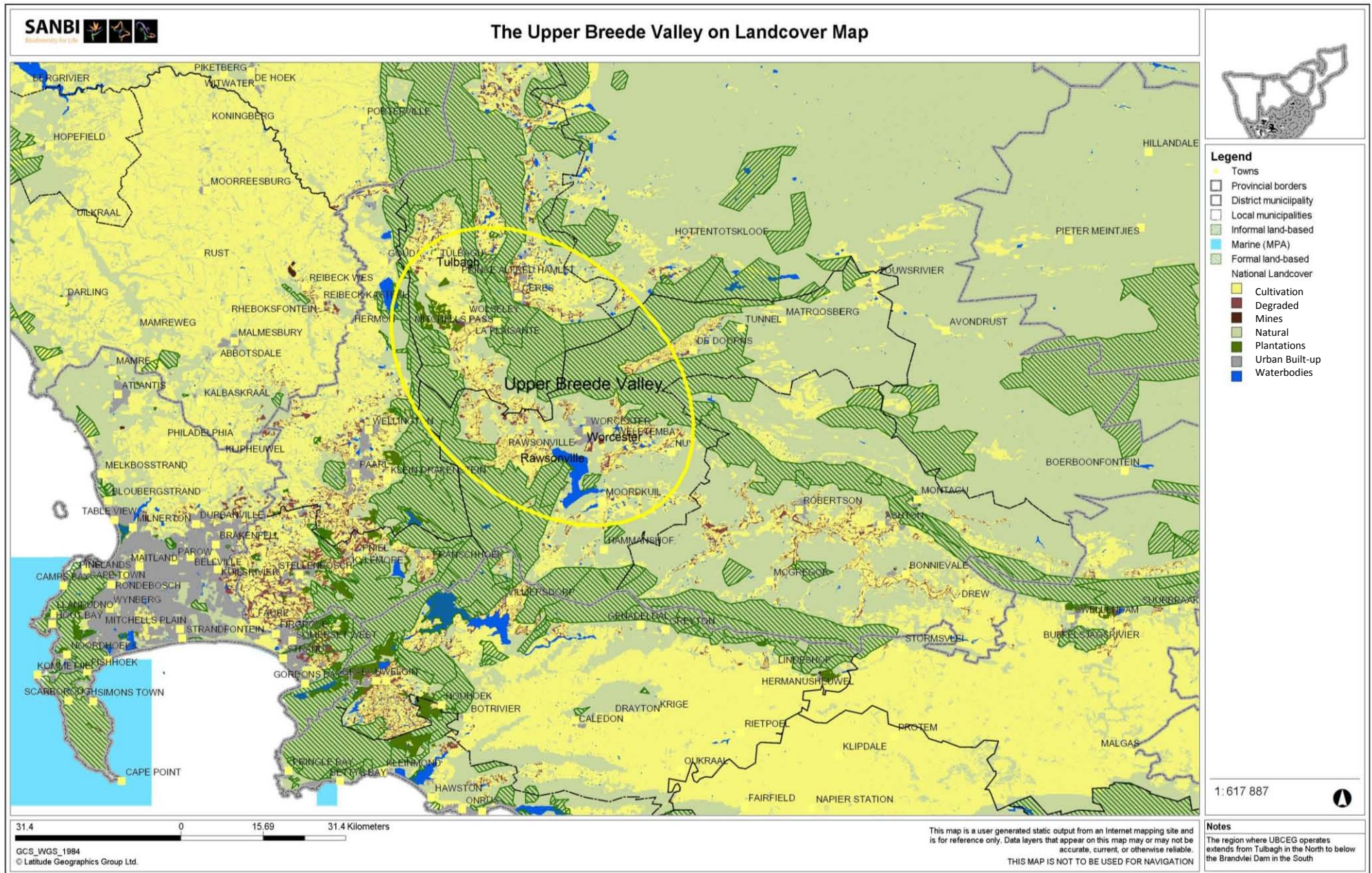
created (Mortimer, 2010). Another employment opportunity UBCEG generates is through team leader training, so individuals can work as independent contractors; contractors in natural resource management such as for; alien clearing, fire breaks, controlled burns, fencing, road and foot path maintenance. UBCEG has also been involved in youth environmental awareness training, by having Junior LandCare camps. Over 800 children have had the opportunity to learn about the importance of caring for the environment (de Villiers, 2011).

In summary, UBCEG seeks to improve service delivery by creating communication amongst various agencies and departments of the Upper Breede Valley Area, which in turn aims to improve the capacity and resource sharing amongst the agencies (Mortimer, 2012).

The Upper Breede Valley District is situated in the Western Cape Province extending from Tulbagh to Rawsonville in the South, constituting an area of approximately 1000km<sup>2</sup>. Agriculture is prominent in the area, which is valued for wine farming but also for the production of fruit, dairy products and grain. The amount of vineyards has increased largely in the Worcester and Bredekloof districts from 2000 to 2010; wine grape vineyards of the Upper Breede Valley represent 20% of the total South African wine grape vineyard surface area (Whitehead & Uren, 2010).

Figure 3.1 below represents the general area where UBCEG operates and where most of UBCEG activities are concentrated.

Figure 3.1. Upper Breede Valley Area, delineating the region where UBCEG Operates (map courtesy of SANBI biodiversity GIS; [www.bgis.sanbi.org](http://www.bgis.sanbi.org))



### **3.4 Background of UBCEG Projects**

This section gives a brief introduction to the two projects explored in this research, namely, a combined environmental assessment for a number of soil conservation works in six foothill rivers (Project 1) and an environmental assessment, which includes a wetland study, funded by the Table Mountain Fund (Project 2).

The spatial extent of both projects goes beyond individual properties or farms, and they are constituted at a broader landscape scale. The landscape scale is defined as the “*spatial scale above the field, farm and local scale; it can be a catchment, an area of coherent landscape character or a sub-unit of a natural region*” (Prager *et al.*, 2012: p.244). It is the scale which is preferred for decision-making and planning in order to ensure the maintenance of ecosystem services (Prager *et al.*, 2012). One such method devised to work at the landscape scale is the combined environmental assessment: UBCEG has completed one such environmental assessment (Project 1) and is in the process of undertaking another (Project 2).

#### **3.4.1 Project 1: Soil Conservation Works in Foothill Rivers of the Cape Winelands District Municipality**

During 2008, the Western Cape experienced heavy rains and subsequent floods, which caused extreme erosion along many foothill rivers. In response to this crisis, UBCEG, representing various water users and irrigation boards, gained authorisation to construct multiple soft structures in 6 river channels which had eroded, and were continuing to erode, as a result of the 2008 flooding. These rivers are the Jan du Toits, Hartebees, Nonna, Nuy, Vink and Keisie Rivers, which can be seen on the map which follows (Figure 3.2). A combined application for an environmental authorisation was submitted to the relevant provincial environmental authority, the Department of Environmental Affairs and Development Planning (DEA&DP), to gain consent approval to rehabilitate all six rivers. The sites surrounding all six rivers are wine farms, except the farm adjacent to the Keisie River which is a wine and fruit farm. Authorisation was granted in June 2011 by DEA&DP. To date, construction of the gabion weirs and groynes has only taken place in one of the six rivers, being the Keisie River.

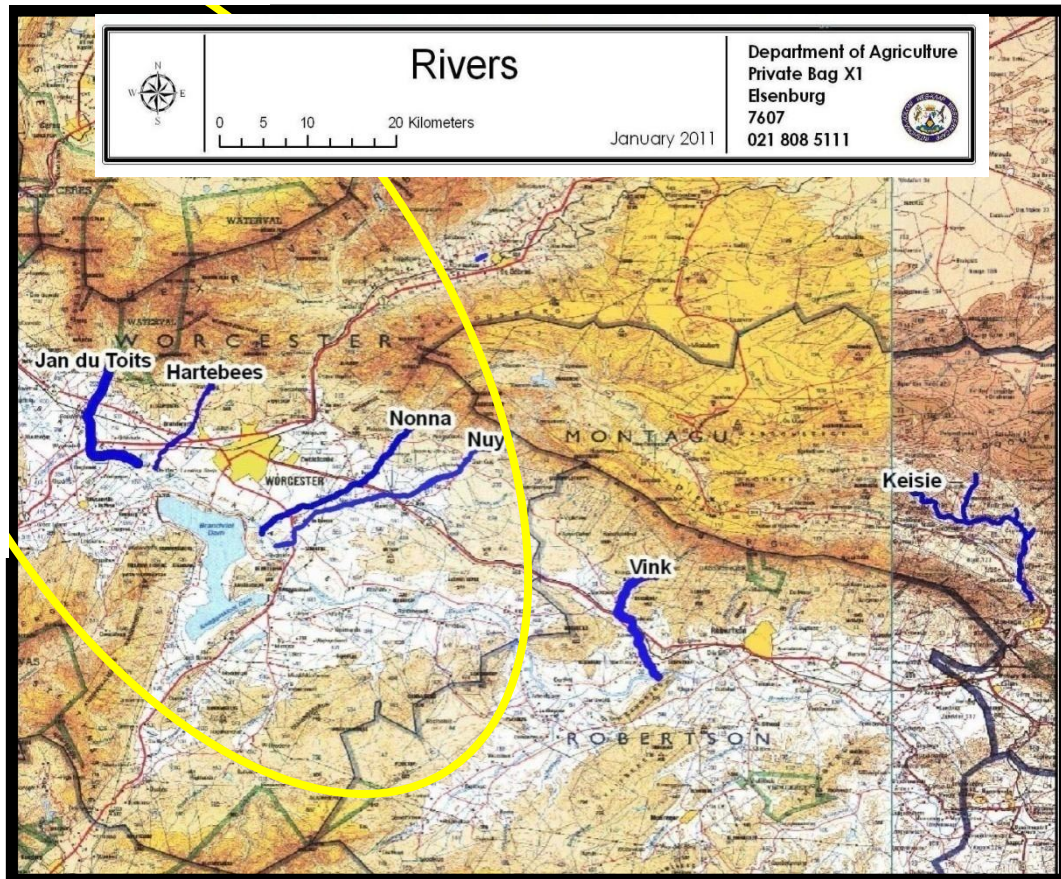
Heavy rainfall and the concomitant flooding in river courses causes erosion along river banks and riverbeds; because erosion occurs at the water-soil interface when flow velocities are high (de Villiers, 2011). Flooding mitigation measures are as follows: flow attenuation by building a dam that holds back water, increasing the width of the river channel to allow more water through flow, or construction of groynes that provide flood protection and prevent erosion (King, 2009). Groynes are constructed from gabions, which are geometric wire baskets packed with rocks. These structures are generally placed perpendicular to the river flow and concentrate water flow towards the middle of the river as well as aid deposition of sediments along the river bank (de Villiers, 2011). Groynes are a more ecologically-friendly erosion prevention measure than previous techniques such as river channelization and hardening, with concrete linings. Groynes allow restoration of riparian vegetation which also aids in stabilising the river banks whereas channelization makes it difficult for riparian vegetation to re-establish (King, 2009).

Rivers in the Western Cape have become greatly modified due to agriculture and development. Many foothill rivers have been transformed due to practices associated with viticulture, involving activities such as clearing of indigenous vegetation, removal of rocks and stones, the excavation of drainage ditches, the erection of trellises, the installation of irrigation infrastructure and the establishment of vineyards (de Villiers, 2011). Flood plains of foothill rivers are often cultivated which interferes with the drainage patterns and hydrological connectivity between the floodplain and river channel (de Villiers, 2011), further exacerbating erosion in high rainfall periods.

Figure 3.2 below indicates in blue the six rivers for which a combined environmental assessment was prepared, in seeking authorisation for rehabilitation measures via the construction of gabion weirs and groynes. The yellow ellipsoidal shape is to indicate the Upper Breede Valley region as was similarly marked on Figure 3.1.

You will notice two river systems occur outside of the Upper Breede Valley region. The river project was initiated by the Provincial Department of Agriculture and they identified which river systems needed to undergo rehabilitation. Only then did UBCEG become involved in the project and assist in the application process, the reason why 2 river systems occur outside of UBCEG operational zone

**Figure 3.2. Map indicating the Cape Winelands District Municipality Rivers, which underwent Construction and Maintenance of Soil Conservation Measures (Source: de**



The mitigation measures stipulated in Record of Decision for the combined environmental assessment are the same for all six rivers. The conditions for authorisation require that solid waste be disposed of at a licensed landfill, adherence to relevant legislation, the use of suitable indigenous vegetation for riverine and riparian rehabilitation, that no construction be allowed during winter months, implementation of an environmental management plan, and that all existing alien clearing projects should be amended to include the rehabilitation works in the six river systems.

### **3.4.2 Project 2: UBCEG Environmental Assessment with Wetland Study**

UBCEG have undertaken to pilot a new way of approaching the process of applying for environmental authorisation that seeks to test and demonstrate the convergence between rural economic development and conservation by undertaking a broad scale environmental

assessment (Table Mountain Fund (TMF), 2012). In doing so they hope to identify areas that would be suitable for agricultural expansion and thereby assist farmers with expansion whilst ensuring minimum impact on biodiversity and at the same time promoting the economy of the region.

This second project aims to address problems in the area such as ploughing of virgin soils and wetlands. Areas of natural vegetation and wetlands in particular, provide important ecological support services that contribute to the long term sustainability of agriculture in an area. Unfortunately farmers undertake unauthorized activities in high biodiversity and conservation worthy areas without applying for authorisation, because of the high cost of application, and the long waiting periods during processing of applications (Bothma, 2011).

UBCEG is undertaking an environmental assessment that should result in updated area-wide plans and of a wetland that is 20km long by 4km wide, situated on both sides of the Breede River. The wetland can be considered one continuous wetland, which has become fragmented due to development, or could be considered as numerous, small, independent wetlands along the river. I refer to it as one continuous wetland, but because it is fragmented into patches each section will have a different conservation status. The wetland begins just outside Rawsonville and extends all the way to Worcester.

The wetland is adjacent to the Breede River and is classified as a floodplain wetland (Job *et al.*, 2008). Floodplain wetlands can be further classified as arid floodplains or Cape alluvial floodplains. This wetland assessment will be done at a bioregional scale (Pfueller, 2008) and each fragment will then be classified accordingly. Additionally to the wetland study the environmental assessment will include botanical and hydrological studies, also funded by the Table Mountain Fund. The information generated will be used by CapeNature to upgrade their existing Critical Biodiversity Area Maps, and contribute to the development of a provincial wetland classification framework.

Depending on the wetland assessment findings, the collaborative group will decide on which areas would be suitable for preservation or restoration, and which areas could be declared as land for agricultural use. A social and economic impact report will then be completed to inform decisions, either for or against agricultural expansion onto virgin soils in the study area. Finally UBCEG will assist farmers who wish to expand their land onto highly degraded

wetland, by helping them with a combined environmental assessment, explained further in section 4.2.4. The environmental assessment will also identify mitigation measures to reduce impacts on natural systems caused by agricultural expansion.

### **3.5 Summary**

The chapter has described briefly the case-study of this research, a collaborative group called UBCEG. This group has been operating in the Upper Breede Valley area since 2006. They have been successful in improving agricultural and conservation extension service delivery to landowners of the area, and in creating jobs through alien vegetation clearing initiatives. UBCEG influenced a soil conservation works projects in six foothill rivers which gained authorisation in 2011. The role UBCEG play in the project is further described in section 5.3.1. Environmental authorisation was granted for the construction of gabion weirs and groynes, in order to stabilize six rivers and prevent further erosion and damage when there is flooding. The second project briefly described in this chapter is currently underway and aims to inform land use decision-making in wetland areas along the Upper Breede River.

The following chapter provides some background on the environmental conditions of the area in which UBCEG operates and thereby, gives context to the importance of the collaboration.

# Chapter 4: Background to Case-study Site and Current Relevant Legislation around Natural Resource Management

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## 4.1 Introduction

The Upper Breede Valley is the area in which the collaborative group UBCEG operates. This chapter begins by giving background of the Cape Floristic region, wherein the Upper Breede Valley falls. Then, as the Upper Breede Valley is predominantly an agricultural area, a brief description of the significance of agriculture within the Western Cape follows, to emphasize the importance and scale of agriculture, particularly wine-farming. Next, some geographical information is described pertaining to the Upper Breede Valley. General information about the current state of rivers and wetlands, within South Africa, follows, in order to emphasise the importance of the Projects 1 and 2, described in 3.3.1 and 3.3.2.

The relevant South African legislation around natural resource management is briefly described, as this is pertinent to the two projects that UBCEG influenced. One of the acts outlined in this chapter, the National Environmental Management Act (No. 107 of 1998), makes provision for Environmental Impact Assessments (EIAs). This chapter outlines the provisions pertaining to EIAs and combined environmental assessments as tools to assess potential impacts on the environment caused by particular projects. The final section discusses the shortcomings of EIA implementation in agriculture, and suggests that combined EIAs may have a more appropriate role in agri-ecological projects.

## 4.2 Setting the Context of the Conditions in the Upper Breede Valley: where UBCEG Operates

### 4.2.1 Cape Floristic Region

Since South Africa's adoption and involvement in the Convention on Biological Diversity (1992), the ecological importance of biodiversity within South Africa has been given

considerable attention, resulting in the adoption of a central policy, 'The Biodiversity White Paper' (1997) by Cabinet (Wynberg, 2002). Various legislations followed, including the National Environmental Management Act (NEMA) (No.107 of 1998), and government institutions at local, provincial and national levels became responsible for implementation of this policy (Wynberg, 2002). Policies for addressing environmental protection and conservation of natural resources have existed for many decades, although the current state of the environment suggests that there may be institutional limitations, such as capacity, around the use and conservation of biodiversity. The state of the environment was analyzed in the National Spatial Biodiversity Assessment, first released in 2005, which found that 34% of South Africa's 440 vegetation types were threatened, with the largest proportion of threatened plants occurring in the fynbos biome (Department of Environmental Affairs and Tourism (DEAT), 2009).

The fynbos biome falls within the Cape Floristic Region (CFR), one of the six floristic regions of the world, which is home to the highest concentration of non-tropical higher plant species (Mittermeiers *et al.*, 2007; Wynberg, 2002). It is a sensitive biome with a high proportion of endemism- the ecological condition of being unique to a defined geographic location- and is composed of fire-dependent shrub lands called fynbos (Cowling & Hilton-Taylor, 1997; Manning & Paterson-Jones, 2007). Fynbos represents 70-80% of the vegetation within the CFR, with the other prominent vegetation types being rhenosterveld, karroid thicket and various other thicket types (Manning & Paterson-Jones, 2007).

The largest proportion of threatened vegetation types within South Africa occur in the fynbos biome of the CFR (DEAT, 2009). Unfortunately, the biggest threat facing terrestrial ecosystems is the clearing of natural habitat for alternative land-uses (DEAT, 2005; Reyers & McGeoch, 2007; Rouget *et al.*, 2004; Wynberg, 2002). Specifically, the most common land-use change in South Africa is for agriculture and cultivation. Agriculture represents 89,3% of the total land-use of the Western Cape (Department of Agriculture, Forestry and Fisheries (DAFF), 2011).

#### **4.2.2 Agriculture in the Western Cape**

Wine-farming is an important component of agriculture in South Africa and more specifically in the Western Cape. There are almost 5000 grape farmers in South Africa who cultivate

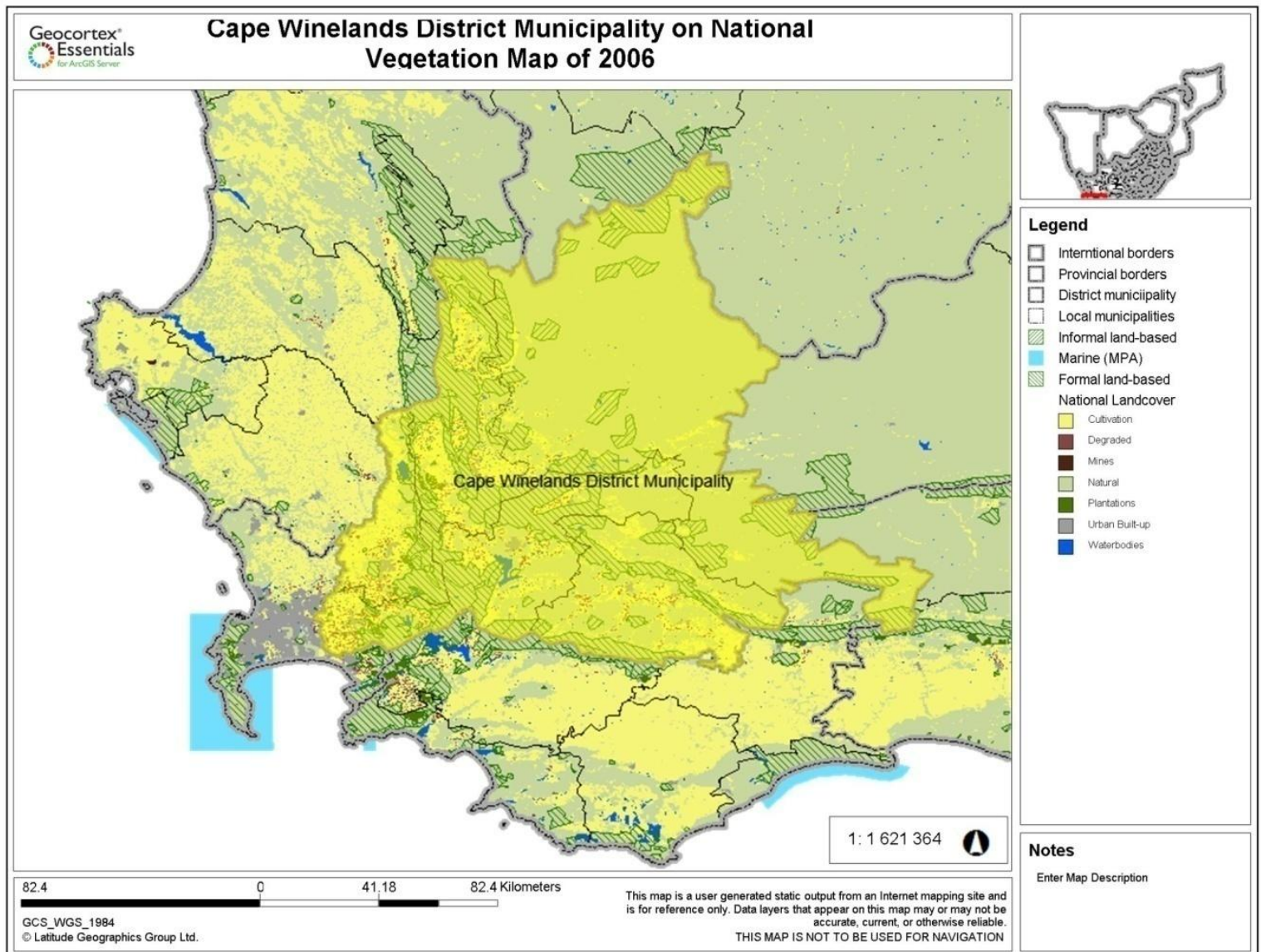
over 288 million vines on 103 000 hectares of land (Muirhead, 1998). The wine industry is an important economic sector, and generates R26 223 million annually towards the South African Gross Domestic Product (GDP), excluding tourism, and is responsible for 8,8% of the total employment in the Western Cape and 2,2% for the whole of South Africa (South Africa Wine Industry and Systems (SAWIS), 2006).

So, although agriculture is responsible for most of the habitat transformation within the CFR (Brownlie, 2005), it is a necessary and important industry.

Within the Cape Winelands District specifically, 65% of all agriculture is constituted of wine-grapes (Kirchner *et al.*, 1997). Due to the Mediterranean climate of the Cape (Cowling & Hilton-Taylor, 1997) and a great variety of soil, topographic and climate conditions, parts of the CFR provide optimal conditions for viticulture, and grape cultivars therefore flourish. Therefore, since 1994, there has been a large expansion of the wine industry, which has led to the destruction of huge areas of fynbos (McEwan & Bek, 2009).

Figure 4.1 below indicates where the Cape Winelands District Municipality(CDWM), an excellent viticulture region, occurs within the Western Cape Province of South Africa.

Figure 4.1. Map of the Cape Winelands District Municipality within the Western Cape of South Africa



(Source: SANBI biodiversity GIS; [www.bgis.sanbi.org](http://www.bgis.sanbi.org))

Figure 4.1 shows that, the CWDM, shaded in bright yellow, is a vast area overseen by this municipal authority. As mentioned, it is an important agricultural area, consisting of wine-grapes.

The acknowledgement that viticulture was, and is, encroaching on endangered biomes in the Western Cape, has led to the expansion of farm-level guidelines around biodiversity conservation, (Allsopp *et al.*, 2007; Biodiversity and Wine Initiative, n.d.). A partnership was also created between the wine industry and conservation sector, with the Biodiversity and

Wine Initiative (BWI). This initiative strives to: conserve areas of high biodiversity value, prevent further loss of critically endangered and threatened habitats, and promote sustainable agriculture practices (BWI, n.d.). Every farm that subscribes to this initiative is required to have an environmental management plan, in order to ensure the conservation of threatened habitat and advance the cause of sustainable wine-farming. The Integrated Production of Wine (IPW) guidelines, also try to minimize other environmental issues associated with the wine industry, such as the use of pesticides and fungicides, as well as minimizing the production of acidic waste water. The IPW guidelines are a voluntary environmental sustainability scheme, which was introduced in 1998 by the South African wine industry. The guidelines incorporate all relevant environmental legislation regarding farms and wineries (Allsopp *et al.*, 2007) and have a section on conservation and improvement of the farm and vineyard environment. The guidelines specify good agricultural, manufacturing and packaging practices. Wine farms voluntarily adhere to the IPW guidelines, which informs a buyer, that the wine was produced with due consideration of the environment (Wine and Spirit Board, 2012).

Although viticulture is a threat to ecosystems, it also has to contend with pressures which make farming exceedingly difficult. The threats and challenges, as outlined by the Cape Winelands District Municipality Environmental Management Framework status quo report (2011), were; a lack of additional water for irrigation, the presence of high biodiversity areas impeding expansion, poor water quality used for irrigation, the need for land reform, climate change, rezoning of agricultural land for other uses and the mining of sand and gravel (Jones, 2011). Wine-farming is becoming exceedingly difficult under new conservation legislation (Biodiversity Act, No. 10 of 2004), and with the added challenges of climate change, profitability has been reduced in many divisions, requiring farms to expand and diversify their produce to include crops like olives and tea (Jones, 2011).

In the Western Cape, applications for agricultural expansion are regulated by the National Department of Agriculture, Forestry and Fisheries (DAFF), on the basis of recommendations provided by the Western Cape Department of Agriculture (DoA) (de Villiers, 2007). Expansion of agricultural lands does not have to result in loss of biodiversity; if monitored and properly managed such losses could be minimised. Agriculture can be practised in a

responsible, less-harmful and more strategic manner by coordinating farming activities at the landscape level (Bothma, 2011; de Villiers, 2007; Jones, 2011, Settle, n.d.).

#### **4.2.3 Upper Breede Valley**

The Upper Breede Valley is an area within the Cape Winelands District, which includes the towns of Worcester and Rawsonville. It extends from the Lateganskop Mountain range in the North, to just South of the Brandvlei Dam and, similarly, from the du Toits Kloof pass in the West to Worcester in the East. The most striking features of the area are the majestic mountains and fertile valleys. It is a rich agricultural area due to the abundance of rivers and tributaries supplying water, and the alluvial soils that are excellent for crop cultivation. The two main types of farming are grape and olive production. Grape farming consists of both viticulture and table grape farms. There are 27 wineries in the area which are mostly located around Worcester and the Breedekloof area; this includes the areas of Goudini, Slanghoek and Rawsonville (January, 2010).

#### **4.2.4 Rivers and Wetlands**

South Africa is considered a water-scare country and there are substantial pressures on inland aquatic ecosystems, largely because they are heavily utilized and dammed for the purpose of water provision. Of the 102 river ecosystems within South Africa, 82% are threatened, with 42% of these classified as critically endangered (Department of Environmental Affairs and Tourism (DEAT), 2005). In fact, riverine ecosystems are considered to be in a worse state than terrestrial ecosystems (Roux *et al.*, 2006). Wetlands often accompany rivers, and play an important supportive role in the functioning of riverine ecosystems. A wetland is defined as *“Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil”*

(Department of Environmental Affairs (DEA), 2010: sec. 21(1)c).

Wetlands are important ecological areas that provide ecosystem services, such as filtering of water- slowing down the rate of flow of a river- and ameliorating flooding in high rainfall periods by providing detention areas that absorb floodwaters. They also play an important

role in the carbon cycle, and therefore also assist in climate change mitigation. The associated riparian vegetation further provides important habitat, and a similar regulatory function as wetlands - such as acting as a flood buffer and therefore assisting in climate change mitigation (de Villiers, 2011). South Africa has many wetlands of which 20 have been declared Ramsar sites (the convention on wetlands which is an intergovernmental agreement for conservation and wise-use of wetlands) and therefore have global importance (Ramsar, 1971)<sup>1</sup>.

### **4.3 Relevant Legislation in South Africa around the Protection of Natural Resources**

The legislation pertaining to the protection of natural resources in agriculture is briefly described below, in the chronological order in which these laws were promulgated, to provide background on the major statutes which have been, and are, currently operational in South Africa. One such described statute, NEMA (No. 107 of 1998), is the regulatory source of environmental impact assessments. The two UBCEG projects explored in this research are environmental assessments; more specifically combined environmental assessments, which is why NEMA is reviewed thoroughly, as background understanding of Project 1 and Project 2, referred to in sections 3.3.1 and 3.3.2.

#### **4.3.1 CARA and ECA**

The first statute established in South Africa that considered a more holistic approach to the use of natural resources in agricultural, was the Conservation of Agricultural Resources Act (CARA), No. 43 of 1983 (Department of Agriculture (DoA), 1983). There were specific acts that existed prior to this act, such as the Weeds Act (No.42 of 1937) and the Soil Conservation Act (No. 4 of 1971), which could be considered agricultural legislation, but CARA was the first act which promoted conservation of natural resources in agriculture. CARA was the main regulatory instrument controlling cultivation of virgin soil (defined as soil which has not been cultivated in 10 years). CARA was based around the maintenance,

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<sup>1</sup> The Ramsar Convention is the convention on wetlands, signed in Ramsar, Iran, in 1971. It is an inter-governmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. South Africa is among 146 contracting parties to this Convention.

recovery and reclamation of natural resources which would therefore maintain the production potential of the land. CARA aims to *“provide control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith”* (Act 43 of 1983, p.1). CARA is considered to be one of the most encompassing acts in South Africa around agriculture even by today’s standards.

The Environmental Conservation Act (ECA) (No. 73 of 1989) stipulated that the change of land use - from grazing to any other agricultural practice- required environmental authorisation (DoA, 1989) but the Act was not effectively enforced by authorities (de Villiers & Hill, 2008). The ECA did not stipulate environmental authorisations for the cultivation of virgin soil prior to May 2002, and it was only upon the 2002 amendments of the Environmental Impact Assessment (EIA) regulations under this Act, that authorisation was required. In summary, although these two bodies of legislation govern policies regarding agriculture, they have varying foci.

#### **4.3.2 National Water Act**

National Water Act (No. 36 of 1998) is the *“legal framework for the effective and sustainable management of our water resources”* (Department of Water Affairs and Forestry (DWAF), 1998: p.3). It states that water resource management should be an integrated process around planning and decision-making (DWAF, 1998: Sec. 6.1 (a)). Agriculture is dependent on inland water ecosystems, and if water systems are allowed to degrade, or are used unsustainably, agriculture will be compromised.

For water policies to be effective in conserving inland water ecosystems there needs to be coherence in the objectives of water policies, regarding the land use, environmental management, biodiversity and agricultural sectors (Roux *et al.*, 2006). The Water Act acknowledges the need for coherence by stating that environmental management strategies need to address human needs as well as socio-economic development.

#### **4.3.3 NEMA**

In 1998 the National Environmental Management Act (NEMA) (No. 107 of 1998) was promulgated as the overarching legislation governing decision-making on matters affecting the environment. This act states that attention must be given to management procedures concerning sensitive, vulnerable and stressed ecosystems (DEAT, 1998a). Within NEMA there are various prescribed environmental management instruments, (DEAT, 2009: Ch. 5 sec. 24, 5(bA)), one being an Environmental Impact Assessment (EIA). The EIA process is referred to in section 24(1) of NEMA where “*consideration, investigation, assessment and reporting... of potential impacts of policies, plans, programmes and projects*” is required such that potential impacts of any activity are, considered and investigated. (DEAT, 1998a). EIAs are aimed at regulating applications for environmental authorisations of activities, in order to avoid detrimental impacts on the environment or minimize impacts via mitigation, or management plans (DEAT, 2010).

NEMA states that all spheres of government must consult and support one another to create co-operative environmental governance (de Villiers, 2007). NEMA is the ‘umbrella’ legislation regarding the environment and if given authorisation under CARA, the activity still has to comply with NEMA. NEMA regulations ensure each proposed listed project is subject to an environmental assessment that includes consideration of alternatives, public participation and evaluation, and the formulation of mitigation measures (DEAT, 2006).

EIA regulations were improved and amended in 2006, and again in 2010 by the Minister of Environmental Affairs, and changes were also made around matters regarding impact assessments (DEA, 2010). In fact, only with these 2006 amendments, were EIAs made mandatory for agricultural applications.

The EIA application process requires the applicant to submit an application to the competent authority, and after acknowledgement that the application was received; either a basic assessment or environmental impact report must be conducted. The type of assessment required, is dependent on the activity that will be carried out. The lists of activities are available in the NEMA (No. 107 of 1998) listing notice 3: list of activities and competent authorities identified in terms of sections 24(2) and 24D (DEAT, 2010). An activity which causes the transformation or removal of 3ha or more, of indigenous vegetation, regardless of the condition of the vegetation, requires a basic assessment for

environmental authorisation to be considered (de Villiers & Hill, 2008). A basic assessment report will contain a description of the activity, location, environment, need for the activity, interested and affected persons, alternatives to the proposed activity and description of significant environmental impacts.

Any activity that transforms or removes 20ha or more of indigenous vegetation requires a full environmental impact assessment (EIA). An EIA is composed of firstly, a scoping report and thereafter, an environmental impact report. A scoping report will identify and document all the required information to have a proper understanding of the issues identified during scoping. An environmental impact report (EIR) is a more extensive report, which is required for certain activities, which are captured in NEMA (No. 107 of 1998) (DEAT, 2010). Each potential impact which may arise from the proposed activity must be identified, and assessed within the report. Within the report each impact should be assessed for: *“cumulative impacts, the nature of the impact, duration and extent of the impact, probability of impact occurring, degree of reversibility, degree to which impact may cause irreplaceable loss of resources and degree to which impact can be mitigated”* (DEAT, 2010: Ch. 3, sec. 31, 2(l)).

Within an application, specialist reports are also included as well as draft environmental management programmes, to address environmental impacts and state the mitigation measures which need to be undertaken. The type of specialist reports required for a particular activity, will be dependent on the proposed activity.

#### 4.3.3.1 *EIA process for Expansion of Agricultural Lands into a Wetland*

A farmer wishing to get authorisation to plough in a wetland area would have to submit an application to the relevant environmental department. The reason authorisation would be required is that any *“expansion of infrastructure which will occur in a watercourse or within 32 metres of a watercourse, measured from the edge of the watercourse”* (DEAT, 2010: sec 24(d)) requires an environmental authorisation (DEAT, 1998a). The applicant would thereby then have to commission a consultant to undertake a basic assessment report as highlighted in 4.2.3. If a landowner wishes to expand cultivation lands into a wetland which is classified as a critical biodiversity area, the authorities would not approve the application and the wetland should be conserved and its ecosystem functioning should

be restored to its natural state (RODEPlan, 2010). Whereas, if a wetland is degraded and not in a functional state, the farmer has to go through the correct environmental authorisation process as previously described.

Combined EIAs and class applications are described below because project 1 was a soil conservation works project (river rehabilitation) conducted as a combined class application and project 2 may result in a combined environmental application for farmers who wish to expand their arable land into degraded wetlands.

#### **4.3.4 Combined Environmental Assessments**

Combined EIA applications or a “*combination of applications*” are dealt with in Chapter 3 of NEMA (Act No. 107 of 1998), (DEAT, 2010: Ch.3, sec. 14). A combined application is when an activity may be exempt from the environmental authorisation procedure if the proposed activity is combined with another application. Combined applications also allow that one application be completed for several projects that are undertaking the same activity, thus gaining authorisation at various sites but for the same activity. The Environmental Impact Assessment Regulations of NEMA (Act No. 107 of 1998) state that “*the competent authority may, at the written request of the applicant, grant permission for the submission of a single application in respect of all those activities [more than one activity of the same type at different locations]*” (DEA, 2010: Ch.3 sec. 14).

Bothma (2011: p. 9) states that combined EIAs could be more readily used for “*repetitive activities in the same ecosystem that would have similar effects – such as the establishment of new lands, expansion of existing ones, or construction of channel protection works. Ideally, there should be a strategically-informed farm plan to guide development, provide land use guidelines, and include monitoring provisions to inform management decisions*”.

Class applications can be considered as “*expanded combined applications*”(Bothma, 2011: p. 9) in situations where a number of applications for the same activities in similar ecosystems, of which the activities are to address the same problem around environmental management and protection and “*can be managed through a single, expanded basic assessment process*” (Bothma, 2011: p.9). This sort of application is useful when a number of agricultural organisations or individual farmers (e.g. water users’ associations) wish to apply for

authorisation for the same activities in similar agri-ecological systems. The benefits of such applications include consistency with regard to assessment methods and specialist reviews, an accelerated process, and quicker decisions (Bothma, 2011). This is exactly what UBCEG did, as described in the background to Project 1 (section 3.4.1), the soil conservation works in six Foothill Rivers. Although submitted as a class application, it was not processed as such; this will be expanded on in section 5.3.1. UBCEG hope to eventually do a class application for the wetland assessment, Project 2 which is described in section 3.4.2. In summary, a combined application is when one applicant applies to do the same activity at several locations, whereas, a class application is when a few applicants apply to do the same activity at various locations.

Although all three pieces of legislation mentioned above govern concerns around agriculture, they are monitored by different spheres of government. The National Department of Agriculture, Forestry and Fisheries is responsible for implementing and enforcing CARA (No. 43 of 1983), while the Western Cape Provincial Department of Environmental Affairs and Development Planning is the body that enforces the NEMA EIA regulations and the previous EIA regulations under the ECA (De Villiers, 2007).

From the brief description of what an environmental application process entails, it is clear that environmental assessments under NEMA, whether a basic assessment or EIA, are project-specific. Each assessment refers, specifically, to the proposed activity and looks at the potential impacts that may arise from this activity. They do not consider the whole landscape and do not take into consideration similar projects within the region. Consequently this aspect as well as other factors, are felt by many researchers and individuals, to be shortcomings of the current EIA process in the agricultural sector.

#### **4.4 Shortcomings of South African EIA Implementation in Agriculture**

Every country has to forego natural habitat for agricultural land but it is the unregulated change of land to agricultural use that has led to the loss of so much natural habitat, resulting in the threatened state of many of South Africa's terrestrial ecosystems. Although environmental legislation pertaining to agriculture came in being in 1983, with the promulgation of CARA, it was not until mid-2006, with the amendments to the NEMA EIA regulations that an EIA procedure was made mandatory for agricultural activities. These

activities include; removal of natural vegetation, cultivation of virgin land, installing agricultural infrastructure and building reservoirs. Some feel that the major cause of the shortcomings of EIA in the agricultural sector, stems from the fact that environmental authorisation was only required for agricultural practices in 2006, later than that of other sectors (Bothma, 2011; de Villiers & Hill, 2008). Interestingly, it is commonly agreed that a different approach to that applied in other sectors is required to regulate agricultural activities (Bothma, 2011; de Villiers & Hill, 2008; Lochner *et al.*, 2003; Settle, n.d.).

Bothma (2011) argues there are features of the agriculture sector that distinguish it from other sectors, and it therefore requires unique management strategies. One such feature is that there is an inheritance in farming practices. Techniques such as ploughing river courses or planting right up to river banks are passed on from generation to generation. Although these practices are not environmentally acceptable, expansion of agriculture significantly contributed to the regional economy, and was important in job creation (Bothma, 2011). This meant that authorities accepted such practices for many years even though they are not environmentally sustainable. Another difficulty in agriculture is that the NEMA EIA system is an activity specific environmental authorisation and cannot deal with, nor predict cumulative impacts, which are apparent in the agricultural industry (Bothma, 2011; Brownlie, 2005; De Villiers & Hill, 2008; Thérivel *et al.*, 1994). Additional to concerns about cumulative impacts, is the issue around long-term and delayed impacts which are not dealt with in a project-specific EIA (Cowling *et al.*, 1999).

Another shortcoming noted in the environmental governance of agriculture is the inefficiency of the responsible authorities processing environmental authorisations (Brownlie, 2011), which can lead to major delays (Bothma, 2011). The departments involved often do not communicate or correspond with each other, and the approval process is drawn out further. South African environmental legislation is progressive and on a par with that in the first-world; it is the effective implementation of the statutes and regulations that is the challenge, "*In order to implement policy and legislation effectively, the constraints on institutional capacity at all levels in South Africa need to be addressed, especially at the local level*" (DEAT, 2005: p.27).

Another difficulty is that there is generally a shortage of environmental consultants outside urban areas to perform environmental assessments and it is therefore costly for farmers to pay for a consultant to drive from a town or city (Bothma, 2011; de Villiers & Hill, 2008). The last problem, not unique to agriculture, is that research and management actions in the past have been focused around finding solutions at the small-scale, and did not consider the broader social, economic and political dimensions of the problem (Musvoto *et al.*, 2009). Without addressing these other dimensions any management actions could be short-lived and ineffective.

In conclusion, there are many challenges facing the implementation of EIA in agriculture. These challenges include: access to environmental consultants, inefficiency of responsible authorities, EIAs becoming mandatory later than in other sectors, EIAs failing to predict cumulative impacts and farming practices being passed on from one generation to the next. Such challenges, have caused those involved in the environmental governance of agriculture to consider the EIA as an ineffective tool in this sector. It is not any one of the above challenges, in isolation, which causes EIAs to be less than effective, but rather the combination of these various challenges that, impedes the perception and use of EIAs in agriculture (de Villiers & Hill, 2008).

An attempt to overcome the above mentioned limitations of EIAs, is to develop area-wide development plans, informed by fine-scale biodiversity plans, to ensure that agricultural management is done at an ecosystem level and incorporates planning into decision making (de Villiers & Hill, 2008). LandCare and CapeNature, both active members of UBCEG, have developed area-wide and fine-scale plans for the Upper Breede Valley, respectively, which can be used to inform ground-level EIAs. Area-wide plans provide information about the agricultural resources of an area, and indicate to a proponent of an activity, which areas are suitable for certain activities, and which areas are inappropriate.

These area-wide plans also ensure that socio-economic considerations are taken into account, prior to the implementation of an activity. Conversely, fine-scale plans ensure that the natural environment and biodiversity of an area are identified and considered in forward planning. Therefore, a combination of both area-wide and fine-scale plans provide an excellent means to guide strategic planning.

These plans are not legally binding, as yet, and only need to be taken into consideration by a proponent. However, they seek to ensure that activities are assessed for compliance and suitability against broad ecosystem-level objectives, thereby allowing cumulative impacts to be foreseen and potentially prevented. This is why UBCEG constantly refers to the area-wide and fine-scale plans for the region, and updates them whenever new information is generated. The updating of existing fine-scale biodiversity plan is one aim of Project 2 (see section 3.4.2).

## **4.5 Summary**

The Cape Floristic Region and its unique fynbos vegetation, is under threat. A major threat is posed by agriculture and wine-farming specifically, an important industry that can be very harmful to the biodiversity of the Western Cape if not regulated in a strategic, coordinated way.

The Upper Breede Valley, in which UBCEG operates, is an important grape farming area surrounded by mountain ranges. Within the Upper Breede Valley there is a prominence of rivers, tributaries and wetlands that contribute, to the good conditions for grape farming. The CARA and NEMA (Act 107 of 1998) are the most important pieces of legislation around natural resource management that are pertinent to the two projects initiated by UBCEG. Both of these projects involve combined EIAs which represent one attempt to address the shortcomings of EIA implementation in agriculture. The agricultural sector is different to other industries, and a project-level tool such as EIA, does not sufficiently address issues of cumulative impacts and prevent biodiversity loss.

Another issue with EIAs is the inefficiency of the responsible authorities processing applications, which can cause major delays. Using combined environmental assessments as a tool, the collaborative group, UBCEG, hopes to alleviate some of these mentioned problems with EIAs in agriculture.

Chapter 5, which follows, discusses the findings of this research. The information collected from semi-structured interviews and participant observation of meetings, was analysed and consolidated in order to find reoccurring aspects and strengths of UBCEG, as exhibited in their two projects.

# Chapter 5: Empirical Research Findings

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## 5.1 Background

This chapter describes the empirical findings of the case-study explored in this research, namely, the collaborative group UBCEG. The data was collected from semi-structured interviews and through participant observation, as described in section 1.4.2. The data was transcribed and then transferred to a framework for data analysis.

The chapter begins by listing in Table 5.1 the details of the individuals who were interviewed. Then a description is provided, theme by theme, of the data collected from the interviews. The findings are grouped, according to evident features of UBCEG, as highlighted by the respondents. The features which are explored are as follows: reasons for the collaboration, collaborative meetings as an avenue for information sharing and communication, features of UBCEG pertinent to collaboration, collaboration in other agricultural districts and challenges facing UBCEG. Findings are discussed for both Project 1- soil conservation works in foothill rivers, and Project 2- the environmental assessment funded by the Table Mountain Fund, which includes a wetland assessment. The findings of these projects are discussed in general and then with reference to the influence of UBCEG. The chapter concludes with a section exploring the effectiveness of combined environmental assessments in agriculture.

## 5.2 Findings on the Upper Breede Collaborative Extension Group (UBCEG)

Empirical data was collected by conducting semi-structured interviews with stakeholders and UBCEG members, as well as through participant observation of UBCEG and project meetings that took place during the period of this research. The list of interviews conducted and details of the interviewees are contained below in Table 5.1. The list is presented in chronological order, based on the dates on which the interviews were conducted. Additionally, Table 5.2 contains the details of the meetings which the researcher attended. Citations for personal communications during interviews are given in brackets, with the name of the individual who provided the information, followed by the organisation they are

affiliated with: for example, information from the first interview listed in Table 5.1 is referenced as follows (Ebrahim, CREW). It should be assumed that each reference, without a date refers to personal communication, all of which took place in 2012. Citations referenced as normal Harvard style (with name and date) are therefore not personal communications and can be found in the reference list at the end of this dissertation.

**Table 5.1. Conducted Interviews and Individuals' Details**

Name	Affiliation	E-mail	Date
Ismail Ebrahim	Custodians of Rare and Endangered Wildflowers (CREW)	<a href="mailto:I.Ebrahim@sanbi.org">I.Ebrahim@sanbi.org</a>	23 January 2012
Jeanne Gouws	CapeNature	<a href="mailto:jgouws@capenature.co.za">jgouws@capenature.co.za</a>	7 February 2012
Rupert Koopman	CapeNature	<a href="mailto:rkoopman@capenature.co.za">rkoopman@capenature.co.za</a>	14 February 2012
Nelis Grobbelaar	Chairman of Water Users Association (Robertson) (WaterAssoc.)	<a href="mailto:Dieeike@barvallei.co.za">Dieeike@barvallei.co.za</a>	16 February 2012
Melody Botha	Breedekloof Wine and Tourism (BWT)	<a href="mailto:melody@breedekloof.com">melody@breedekloof.com</a>	16 February 2012
James Southey	Chairman of Brandwacht Irrigation Board (Irrig. Brd)	<a href="mailto:jmsouthey@mb-net.co.za">jmsouthey@mb-net.co.za</a>	16 February 2012
Elkerine Rossouw	Brede-Overberg Catchment Management Agency (BOCMA)	<a href="mailto:erossouw@bocma.co.za">erossouw@bocma.co.za</a>	16 February 2012
Charl de Villiers	Independent Environmental Consultant (Env. Cons.)	<a href="mailto:skua@mweb.co.za">skua@mweb.co.za</a>	20 February 2012
Marbé Herbst	Provincial Department of Environmental Affairs & Development Planning (DEA&DP)	<a href="mailto:Marbe.Herbst@pgwc.gov.za">Marbe.Herbst@pgwc.gov.za</a>	21 February 2012
Quinton Balie	CapeWinelands District Municipality (CWDM)	<a href="mailto:quinton@capewinelands.gov.za">quinton@capewinelands.gov.za</a>	20 February 2012
Joan Isham and Martin Albertus	Biodiversity Wine Initiative (BWI)	<a href="mailto:jishma@wwf.org.za">jishma@wwf.org.za</a>	5 March 2012
Derek Malan	Working for Water (Department of Environmental Affairs & Tourism) (WfW)	<a href="mailto:MalanD2@dwa.gov.za">MalanD2@dwa.gov.za</a>	6 March 2012
Garth Mortimer	CapeNature	<a href="mailto:garth@breedekloof.com">garth@breedekloof.com</a>	16 March 2012
Rudolph Röscher	Provincial Department of Agriculture/LandCare (DoA)	<a href="mailto:RudolphR@elsenburg.com">RudolphR@elsenburg.com</a>	22 March 2012

**Table 5.2. List of Meetings Researcher Attended**

Meeting Attended	Purpose of Meeting	Date and Place
Wetland Field work	For all UBCEG members to have a site visit of the floodplain wetland, which will be studied in project 2.	8 September 2012, Rawsonville
TMF Environmental Assessment Meeting	For stakeholders to raise any concerns about the environmental assessment. Opportunity for two farmer representatives to hear about project.	6 March 2012, Wellington
UBCEG Quarterly Meeting	To discuss recent projects and findings of each member organisation. Discuss latest TMF environmental assessment.	5 April 2012, Slanghoek

### **5.2.1 Reasons for the UBCEG Collaboration**

Within the Upper Breede Valley, it was apparent to the provincial (Western Cape) Department of Agriculture and CapeNature (the authority responsible for biodiversity conservation in the Western Cape) that there is a need for more strategic area-wide-level planning. Area-wide planning aims to identify sustainable resource conservation and use, thereby optimizing agricultural planning and development (Mortimer, 2010). Accordingly, in 2003-2004, area-wide plans were developed for the Breede Valley region, which are used to guide development in the area. Because area-wide plans identify resource limitations, they can determine if an area is unsuitable for development and conversely, identify areas which are suitable and, additionally, may identify areas which require development.

Following the completion of the area-wide plans in December 2006, the provincial Department of Agriculture (sub-programme: LandCare) and CapeNature invited the Biodiversity and Wine Initiative (BWI) and Breedekloof Wine and Tourism (BWT) to come together to discuss ways to strengthen their work in the area, find overlaps and share resources and expertise. Working for Water, which was under the Department of Water Affairs at that stage, was also invited to join the small group of people around one table.

Thereafter, the district municipality and other members joined; some were invited and others became involved by virtue of working in the area.

By the end of 2006 various individuals were meeting every quarter to discuss and find solutions for the problems evident in the area. The problems included:

- Ineffective service delivery to farming communities by government
- No coordination between various government departments
- Massive alien invasive vegetation problems
- Limited job opportunities for seasonal workers
- Unauthorized farming activities, worsened by uncoordinated development planning by the different departments.

There was acknowledgement that developmental efforts needed to be coordinated among all the relevant authorities in the region, to save time, money and prevent duplication of work (Balie, CWDM; Botha, BWT; Ebrahim, CREW; Isham, BWI; Rösscher, DoA;). As suggested by the respondents below;

*Isham, BWI: We were working on the same farms and realized we were duplicating work and we could actually save a lot of energy and funding by combining our efforts. Working in the same area we realized that we could work together a lot closer.*

*Botha, BWT: One organisation would be clearing a piece of river [of alien vegetation] and another organisation would be clearing the same piece of river, and they realised they need to all start working together because they were wasting time.*

As Isham (BWI) and Botha (BWT) state above, energy, funding and time can be saved by coordinating efforts and working together. All interviewed individuals felt that by being a part of the collaboration, they were able to achieve their goals better than by working in isolation. Although the individual organisations do function towards achieving their goals if working alone, they all feel it is advantageous being part of such a group. One UBCEG member felt, that although their organisation, may at times, achieve their objectives quicker if they were not part of the collaboration, it was still better to be in such a group for the other associated benefits (Isham, BWI). The various member organisations are involved in

UBCEG, because they feel it is an effective way to address fiscal and structural service delivery constraints in the Upper Breede Valley. By communication happening amongst members, there is improved capacity and sharing of resources (Mortimer, 2010). Ultimately, the members of UBCEG have a shared vision for the valley (Mortimer, CapeNature), and feel that working together may be the way to achieve a sustainable agri-ecological valley.

UBCEG has been functioning as an informal collaborative group since its formation in 2006. Although the number of members has grown since then, from three initially to 13 currently, the collaboration has persisted as an informal structure with no funding. There are aspects of such a collaboration that have made it persist over last six years.

The reoccurring aspects of UBCEG which stood out in participant observation or were mentioned in the semi-structured interviews are captured in the sub-sections below.

### **5.2.2 Engagement: Collaborative Meetings, an Avenue for Information Sharing and Communication**

The collaboration has four meetings a year, which enable communication amongst member organizations. Communicating amongst each other, is a way for organizations to identify what the others are involved in, and as a result, learn where they can support each other (Röscher, DoA). Each interviewee/respondent made mention of how important UBCEG meetings are as a 'communication space,' where individuals can interact with members from other organisations.

Initially, the quarterly meetings were not particularly focused and not objective orientated, but in the last two years the meetings have become more purposeful and an effective platform where the different organizations can share information (Röscher, DoA; Rossouw, BOCMA).

*Rossouw, BOCMA: The initial meetings felt like a place where you go for coffee and cake and you knew that something said at the meeting will be said again at the next one. And if you missed a meeting you are not missing much. But in the last couple of*

*meetings, especially since the groyne construction<sup>2</sup> and the alien clearing along the river, [meetings] provide a focus and platform where we can raise our issues.*

Since the meetings became more objective-orientated and the number of attending members increased, quarterly meetings are more focused, and the role of the meetings has become more evident- as is explored in this section.

A majority of the interviewees made reference to the importance of the feedback session during the collaboration meetings. UBCEG meetings are structured to provide member organizations with an opportunity, to report back on projects they are busy with, or raise any issues they are facing or make known their needs for assistance (Röscher, DoA). Three interviewees used the term 'platform' when describing the feedback phase within meetings, each meeting "[each meeting] *provides a platform where we can raise our issues*" (Rossouw, BOCMA). This is an important aspect of UBCEG because without such a platform, each organisation would be attempting to deal with their issues in isolation and have no means to approach other authorities for assistance. Independent, uncoordinated planning can lead to a duplication of work, as various agencies and departments often conduct similar environmental management projects. Therefore, UBCEG provides a purposeful platform whereby, one agency can ask for assistance from another, who may have conducted a similar project in the past.

For a conservation programme such as CREW, the feedback time is important to make other members aware of their recent botanical findings. Such feedback time provides CREW representatives with an opportunity to pass on information, not only to conservation authorities, but to others such as development planning and district municipalities, who would not otherwise hear updates on floral findings.

*Ebrahim, CREW: We were able to feed our data directly into a structure where all partners that are involved are sitting around one table, and essentially whatever data we collect or important sites we visit, we can make a whole range of stakeholders aware of the importance of the site at one meeting.*

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<sup>2</sup> The groyne construction refers to project 1, which is explored in this research. It is the soil conservation works project, which was initiated by UBCEG, and successfully gained authorisation, in 2011, to construct gabion weirs and groynes in six foothill rivers in the Breede Valley.

Interviewees indicated that, collaboration through UBCEG, has provided a forum for people to get together and communicate, thereby, creating a space in which to share information. During meetings individuals ask questions directly to the concerned individual so that, every member can hear the reply; again allowing information sharing.

As many organizations receive funding for similar activities in a region, by communicating amongst themselves, they can find where similar work is being done and pool their funding so that the outcome is more effective. *“It has allowed them to work together and align their budgets”* (Botha, BWT). Particularly in strategic planning for alien vegetation clearing, various partners uniting their efforts would yield much more effective outcomes. Instead of alien clearing being done in a haphazard manner at various sites it can be combined, into a more extensive clearing programme. Therefore, UBCEG is a good mechanism to streamline funding from the different departments which is to be used for the same actions.

One of the aspects of UBCEG, highlighted by four individuals, was the strength of having minutes taken at each meeting (Albertus, BWI; Balie, CWDM; Isham, BWI; Mortimer, CapeNature) as a means of record keeping. Each meeting's proceedings were captured in minutes which were drawn up by the UBCEG secretary.

Initially the minutes were captured as a bullet point document, but this was found to be quite difficult to read and, subsequently, the minutes were then captured in a spreadsheet from the first meeting in 2009. The spreadsheet was well structured, and all discussed points were grouped under topic headings. Unfortunately, with time the document became lengthy and quite difficult to read. It was also thought that the spreadsheet took most of the discussion component out of meetings because it ended up being more of a reporting time (Rösscher, DoA). Consequently, in 2010, the minutes were once again converted to a document, but within a tabular format, and under similar headings as used in the spreadsheet. The headings include; matters arising, standard feedback, land use management, awareness/extension, collaborative planning, and general.

So after each meeting, once the minutes are distributed to all the members, it is easy for each person to find a relevant section. It also means that each document is specific to the content of the meeting (Rösscher, DoA). Such a system of capturing the meeting minutes was a good way for attendees to see what was discussed, who is responsible for a certain action,

and who is expected to report back at the following quarterly meeting. Therefore, record keeping is an important aspect of UBCEG which has contributed to the persistence of such a group.

*Mortimer, CapeNature: So when it came to the meeting, we could see what we were discussing and what the objective was and the role I am playing is. So you know to give your feedback in line with that. For a year there would be 4 columns [evident in spreadsheet minutes, pre-2010] so you could easily go back and see what was discussed in the last quarter. It also was a way to create some accountability where members were tasked with an action and we could go back and see 'was their action completed' or 'have we come along three quarters and there is no progress'. It is also a way to try create some feeling of responsibility but also of embarrassment- if you were actioned to do something and by the third quarter it still hasn't been done.*

It is evident that the record-keeping allows individuals to ascertain if they are responsible for an action, and who has a duty to be accomplished by the following quarter. By a sense of accountability being placed on individuals, it allows progress to be monitored with each meeting, and people are forced to come to meetings prepared (Isham, BWI). Accountability may ensure that individuals follow through with their commitments, which can indirectly result in progress. It also means feedback of the group follows on from the previous quarter.

### **5.2.3 Features of UBCEG**

The members of UBCEG raised many features about the collaboration. These reoccurring features are captured below, under sub-headings. These features are: relationships, range of skills, member contribution and decision-making, leadership and knowledge sharing as capacity building.

#### **5.2.3.1 Relationships**

It is safe to say that an aspect of UBCEG which is certainly an asset to the collaboration is the relationships which exist between the members and the relationships between members who live in the region and the community. As stated by Koopman below,

Koopman, CapeNature: *It boils down to relationships. If you are an official that doesn't live in the area and you aren't accountable to those people. Whereas, a lot of UBCEG members live in the area and they see locals every day, their kids go to the same schools; they go to the same churches and so forth- so it is peer accountability.*

The individuals, who are locals to the area, feel a sense of peer accountability and trust, because of the informal relationships which exist between them and members of the community. Informal discussions happen more often than just at the quarterly meetings as local members see one another and they see firsthand what is happening on the ground (Koopman, CapeNature). The local officials are more actively involved in UBCEG and are important for the running of the collaboration. Thus, the locals are vital members of this collaboration: *"If one of the local members left it would have a huge impact on access and accessibility of knowledge. Whereas, if it was someone from Cape Town, it would not make as big a difference"* (Röscher, DoA).

Additionally, the members who live within the area are familiar faces amongst the local community and may bridge the divide between local farmers and the authorities, as was stated by an individual from the district municipality below.

Balie, CWDM: *I think UBCEG is a good platform because it is difficult for a government department to liaise with agricultural community because the farmers are not willing to engage in formal government meetings. If you have engagement through guys within the area they are comfortable with the structure and open for discussion. Rudolph [Röscher, DoA] has a good relationship with the farmers so he can get them involved. With most farmers you need to have a strong knowledge base of what they like, and don't like to understand them and that has been where UBCEG is good.*

Indeed, the UBCEG members, who live in the area, have relationships with some of the landowners and this, furthermore, is a benefit of having UBCEG members living within the area, as stated by Balie (CWDM) above, and Botha (BWT) below.

Botha, BWT: *Because you are living within the community you are involved with everybody, the famers etc. So yes, you see what is happening on the ground and you*

*are getting to know the people on a different level which helps with work and projects.*

#### 5.2.3.2 *Range of Skills*

Because UBCEG is made up of a host of different member organisations, there is a range of skills and different expertise among the collaborative group. As mentioned in section 3.1, UBCEG has members from conservation organisations, such as CREW and CapeNature, who are concerned with conservation of biodiversity. Therefore, these agencies have skills in conservation, monitoring, mapping and the rehabilitation of landscapes.

Departments such as Environmental Affairs & Tourism (DEAT) and Development Planning (DEA&DP) are skilled in the environmental authorisation of development applications, to ensure sustainable development and create jobs.

BOCMA and DWA have specific skills around water management, to ensure that water resources are sustained. BWI and BWT have skills around viticulture, wine-farming and tourism promotion. The Department of Agriculture is concerned with sustainable use of agricultural resources and assists farmers in maintaining ecological balance in the area. The district and local municipality is most commonly concerned with infrastructure maintenance and job creation.

To summarise, amongst the members of UBCEG are various skills, including conservation, development, agriculture and water management, which can be utilised during UBCEG projects in contributing to achieving UBCEG's objectives. As Ebrahim (CREW) says about such a collaboration, it *"Allows cross-pollination and collaboration in making sure whatever work is done on the ground is done by the best people"*. Certainly, having a diversity of members is one such aspect of UBCEG, which has added to the persistence of this collaboration.

#### 5.2.3.3 *Member Contribution and Decision-making*

One principle, mentioned by both the chairman and secretary of UBCEG, is that the collaboration does not intend to make extra work for any of the members; it is a means to help each member do a better job (Mortimer, CapeNature; Röscher, DoA). A strength of the

collaboration is that, although the different organizations have different mandates, they have more to gain from being in such a group, than by not being members. It is a means through which, each organization can collaborate in areas that would benefit them, or else allows them to gain insight in other areas, which thereby helps them to perform better, within their mandate (Herbst, DEA&DP). Five of the most involved organisations, feel very strongly, that being involved in UBCEG helps them reach their objectives. Each one of these organisations felt that if they pulled out of UBCEG, their lack of presence would be noted, and would negatively impact the group. A few members mentioned that they knew what the major players such as CapeNature, BOCMA and LandCare brought to the collaboration but weren't sure what the lesser involved members contributed. This is an indication that not every member is making their presence felt. This is not to say that they are not contributing in other ways.

Within the meeting minutes, is captured what resources each member brings to the collaboration, including; a GPS machine, transport funding for a Junior LandCare camps (mentioned in section 3.2), area-wide maps developed by CapeNature, which enables individuals to learn more about the natural resources of the area. These maps should be taken into consideration before any developments or land-use changes occur.

Although it is recorded in the minutes which resources each organisation contributes, there is some discrepancy around what every member can contribute to the collaboration. The secretary mentioned that he feels that not every member knows how, and what, they can contribute (Mortimer, CapeNature). This is not to imply that all members could do more, but some could potentially contribute more; although they may be unsure of how to contribute or what to contribute.

Limited contribution by an organisation can be as a result of individuals not attending meetings (Botha, BWT; Isham, BWI); individuals not knowing what role they can play (Rösscher, DoA), or because some agencies send junior officials to meetings who do not know what UBCEG is about (Rösscher, DoA).

Decision-making is an aspect of UBCEG which was explored in the interviews. All members feel that decision making within UBCEG, is done by those who best understand the issues rather than relying on a hierarchy of authority. In fact, decision-making amongst members

of UBCEG only occurs when there is a proposed project that needs to be raised at a meeting. Once an issue is tabled, all present members give their opinion and raise any potential qualms they may have about the project. In this way, critical questions are addressed before any paper work begins (Rossouw, BOCMA). Hierarchy in decision-making is minimized during the discussions within meetings, and members engage with each other rather than resorting to a vote (Rösscher, DoA), making for democratic decision (Koopman, CapeNature).

Not every member is involved in all discussions, because it depends on what the decision is about (Mortimer, CapeNature). For example if the discussion is around a development proposal, the Biodiversity and Wine Initiative may not be involved in the decision-making as their organisational mandate is not around development. As each organization has different mandates, not every partner will be involved in each decision made.

#### 5.2.3.4 Leadership

The UBCEG collaboration is very dependent on two strong individuals who are dedicated to the cause. Every interviewee made mention of how important these two individuals are as the drivers of the collaboration, namely, the secretary (Mortimer) and chairman (Rösscher), who are from CapeNature and the Department of Agriculture, respectively. The leaders “*speak the same language as the farmers*” (Herbst, DEA&DP) which makes them accessible to the people on the ground.

They also organise the UBCEG meetings and therefore “*create an enabling environment for collaboration*” (Koopman, CapeNature). These two leaders of the group enjoy engaging with their partners (Ebrahim, CREW) and act as the middle men between the farming community and the departments (Rossouw, BOCMA). They are dedicated to making the Upper Breede Valley a sustainably farmed area, as both have vested interest because they live within the area (Botha, BWT; Koopman, CapeNature; Rösscher, DoA).

#### 5.2.3.5 Knowledge Sharing as Capacity Building

Capacity building is a term with many different definitions in various contexts (Alemny et al. 2005). Although in general, capacity building is thought of as the development of skills, knowledge and abilities of individuals and the collective group, so as to perform functions, solve problems and achieve objectives (United Nations Development Programme (UNDP),

2007). Knowledge sharing amongst individuals and organisations is one means of building capacity within UBCEG. Within the UBCEG collaboration, capacity building varies among the organisations as well as the Individuals. Capacity building for one individual, may occur as a result of talking to other role-players and discovering new aspects of environmental management, and accordingly, becoming more knowledgeable (Röscher, DoA). Whereas, capacity building for another individual, may be the networking that is so valuable (Balie, CWDM). By networking, individuals learn who the experts are in certain matters and thus, who is the right person to approach for specific expertise (Isham, BWI).

UBCEG participates in the LandCare field days and annual farmer days, which allows members to have practical field training that can be considered a means of capacity building. In addition to the practical field training sessions, there is also informal capacity building at the field days, due to the knowledge sharing during discussions with between the various stakeholders (Albertus, BWI).

Communicating and listening to the other members, builds personal capacity. One member mentioned how his knowledge of legislation from another sector around natural resource management has grown since being in UBCEG (Röscher, DoA).

Therefore the capacity building is not formalized; there is no 'organized capacity building' with workshops between partners, but more typically information sharing during meetings (Herbst, DEA&DP). This informal capacity building is due to knowledge sharing and skills transfer (Rossouw, BOCMA).

*Röscher, DoA: A lot of junior personal that were part of the meetings could just sit and listen to senior guys who had been in the system for 20 years. By just sitting and listening, they get to know the area; there is no other platform that provides that.*

Knowledge sharing is a quality of this collaboration that is invaluable. As one interviewee said "there is so much I have learnt about the Upper Breede [region] I wouldn't have known if it wasn't for UBCEG" (Rossouw, BOCMA). Therefore learning from other members during meetings and the sharing of information is a vital aspect of UBCEG.

#### **5.2.4 Can Collaboration Work in other Agricultural Districts?**

The interviewees were asked if the collaborative approach, contributing to the success of UBCEG, could be used in other areas, or if the setting within the Upper Breede valley is unique. There were varying opinions, although most of the individuals felt it could be replicated in other areas, but under certain conditions; one condition being that members would have to be localized to the area. Difficulties might arise if there are various collaborative groups for all the different agricultural districts, as individuals who represent provincial organisations like CapeNature, would then be required to attend meetings of 4 or 5 collaborative groups. Provincial officials would be over extended and attending many collaborative group meetings would take up too much of their time.

Two interviewees made reference to the fact that a collaborative group could work in other districts but that there needed to be effective role-players or drivers for it to be successful. Another comment was that collaboration could be used in other agricultural districts, but that one success of UBCEG is that the area in which it operates is relatively small.

*Mortimer, CapeNature: I think it can be used in other agricultural districts. What makes it unique here is that we have a very well defined boundary or area, which is completely circled by mountains all the way around. It is a relatively smaller area and isn't a full agricultural district [i.e. the Cape Winelands District]-it is a portion- a focus area.*

One interviewee suggested that similar collaborations should be used in all agricultural districts but did acknowledge that the individuals within the collaboration play a major role.

*Rösscher, DoA: I think it is absolutely a requirement for everywhere in South Africa because it is different departments talking to each other, knowing who is doing what and where they can support each other. I think there is a big need for it and there is no better way of doing business then this collaborative way. However I do think it is very dependent on individuals.*

A similar comment was made by another partner, about existing collaborations “Although a similar grouping may exist in other areas, if you don't have a champion driving it, it won't work” (Isham, BWI).

Therefore, it requires certain passionate, persistent individuals to make a collaboration work. Even with similar conditions existing in other agricultural districts, collaboration may not work without dedicated individuals driving the collaboration forward.

### **5.2.5 Challenges facing UBCEG**

There are a few repeatedly mentioned challenges that UBCEG contests. The challenges explored are, the long quarterly meetings, uncommitted members, over dependence on leaders and lastly, bureaucratic differences between member organisations of criteria used to determine projects.

#### **5.2.5.1 Streamlining Meetings**

On three occasions, it was noted that certain members felt the group was too big. The average attendance of each meeting, over the last five years, is 15 people. Interestingly, the meeting size has increased from 2008 to the present. Originally meetings were not more than 9 people, whereas meetings in 2011 were an average of 20 people. This may be an indication that members have noticed the value in attending meetings.

Sometimes meetings can go on for half a day, which is a long time for senior management, whose time is precious (Mortimer, CapeNature). Reducing the size of group may thereby streamline the meetings (Botha, BWT; Mortimer, CapeNature; Rösscher, DoA). Nevertheless, when there are a large number of people attending a quarterly meeting, it is not always the situation that each person contributes to the discussions.

Sometimes government officials cannot attend and have to delegate to other people who are not always familiar with UBCEG and who do not bring anything to the table (Botha, BWT). While one aspect of this issue is problematic, there is also a positive side: attendance by junior officials exposes them to a valuable learning experience through their contact with seniors, who are experts and have been working in the field for many years (Rösscher, DoA).

*Mortimer, CapeNature: So having a big group makes it more difficult, so we are trying to find a way to reduce the number of people coming to meetings, by asking them what they are getting out of the meetings and what they are contributing to the meetings, because our feeling is a lot of people attending meetings aren't*

*contributing. But they are getting something out; even if it is just learning from discussions, and getting to know important role-players.*

In summary, the UBCEG meetings have become large and as a result, can be lengthy. Therefore, one solution may be to reduce the size of the group attendance, which will subsequently streamline the meetings. Of course, fewer people does not necessarily mean meetings will be shorter.

Clearly, although there are individuals attending meetings who are not familiar with the area or aims of UBCEG, and therefore, may not contribute to discussions, they are learning just through attendance. Additionally, decision-making may also take longer with a bigger group, but this too has associated benefits. As suggested by one respondent *"I think since it has grown to such a big number it does slow decision making down but it is a more informative decision in the end- because you have all the different experts here"* (Isham, BWI).

So although a big group may make meetings continue for longer, there are indirect benefits such as junior officials learning from others by just attending, and the decision in the end may be a better informed one, because every partners' opinions have been heard and taken into consideration.

#### *5.2.5.2 Uncommitted Members*

Conversely to the challenge of streamlining meetings, another noted challenge is that of uncommitted members, who do not attend meetings (Botha, BWT; Albertus, BWI), or do not fulfil their duties (Koopman, CapeNature). Uncommitted members are not fully involved, and at times do not know where they can assist the collaboration (Mortimer, CapeNature). It is also unproductive for someone to only attend one quarterly meeting and then not come again. It therefore ends up being the same people doing the work (Malan, WfW). As indicated earlier, meeting attendance has grown during the last five years, but it is not conducive to progressive decision-making, if at each meeting a portion of the attendees are first time attendees, without the knowledge of the institutional history of decision-making. In short, it would be beneficial to decision-making if the same representatives from

organisations could attend each meeting, or at least representatives who are informed about UBCEG role and aims.

#### 5.2.5.3 *Dependence on Leaders*

A major challenge in the functioning of UBCEG is that there is too much dependence on two individuals by the rest of the group. Although the two leaders play such an important role in the functioning of UBCEG, it would be detrimental to the group if one of these two individuals were to leave. Both these leaders have also become busier over the last few years and there is a lot of pressure on them to organize UBCEG, some of the pressure could be transferred to other members. Delegation of roles to other members may take some pressure off the already busy leaders.

#### 5.2.5.4 *Bureaucratic Differences between Member Organisations*

The last noted challenge facing UBCEG is that the various partners have different mechanisms to acquire funding and different criteria for how they delegate their funding. This means, there can be disagreement amongst members about where the funding should be directed. This is particularly the case with alien vegetation clearing. One department will have criteria to determine where clearing should be done, which may differ from another organisation's standards, of where clearing would be most effective. That is the challenge when working with different members, who have different ways of doing things, and have higher authorities to whom they have to report. This difficulty was referred to by one respondent who felt that bureaucracy can never fully be taken out of decision making and certain individuals will have greater influence in decision making (Balie, CWDM). So, although discussions take place within UBCEG, about where to direct funding, each organisation has criteria which they need to adhere to, and there may be contrasting bureaucratic rules amongst member organisations, which cannot be eliminated.

Certainly, there are challenges which hinder UBCEG's progress towards their objectives. These challenges include a large group of people attending quarterly meetings, which makes the meetings lengthy, uncommitted members, too much dependence on the leaders and differences which exist in the bureaucracy of organisations. Although, the size of the group

was mentioned by four respondents as a challenge of UBCEG, it has associated benefits, such as being a learning space for junior officials.

### **5.3 Findings of Projects 1 and 2: Factors Fundamental for Effective Collaborative Governance**

The following section explores the findings of Projects 1 and 2 and thereafter the influence of UBCEG that contributed to environmental governance in each project. Finally, combined environmental assessments are investigated, to determine how suitable they are for agricultural projects.

#### **5.3.1 Findings of Project 1: Soil Conservation Works in Six Foothill Rivers**

To recap, project 1 is the soil conservation works which consisted of constructing gabion weir and groyne structures in six rivers in the Upper Breede Valley region. This project received funding from the National Department of Environmental Affairs, was processed by, and received Environmental Authorisation in 2011 from the Department of Environmental Affairs and Development Planning, with implementation being overseen by the Department of Agriculture. The environmental application was done as a combined basic assessment whereby five applications in six similar river systems, were investigated and reported on by means of a single combined basic assessment process. However, for legal and administrative reasons, each of the five applications was authorised independently. As the six rivers were found to share similar geo-morphological characteristics, they could be grouped into one combined assessment. There was not a material distinction between the rivers to affect the assessment. As stated by the independent environmental consultant, who conducted the combined assessment, below,

*de Villiers, Env. Cons.: There was ecological difference in so far as the rivers were located on a west-east gradient that was characterised by a reduction in rainfall to the east, changes in the seasonality of precipitation, some geological variation, and changes in vegetation. But, at the level of specific river reaches that shared very similar geomorphological characteristics, there was not sufficient difference to affect the impact assessment.*

Therefore, the lack of unique properties made a combined basic assessment feasible. A combined application was also possible as there was one applicant per river system, applying to undertake one or more activities in the river (Herbst, DEA&DP). Each applicant per each river system was either, a water users association or an irrigation board, which made the application, to construct several structures at various sites, possible. Similar combined environmental assessments have been used to construct various cell phone masts at a number of locations because there would be one applicant, such as a network service provider (de Villiers, Env. Cons.) constructing structures at various sites across a landscape.

The river rehabilitation project was submitted as one basic assessment, on behalf of five applicants applying for approval of similar activities at different locations. The Department of Environmental Affairs and Development Planning opened separate files for each applicant's record of decision, even though each application was addressed by the one basic assessment with the same supporting information (de Villiers, 2012). Along each river there were 2 to 6 different sites, which come to a total of 24 different structures at various sites. Requiring an application for each of these river rehabilitation structures individually, would have been unfeasible. As depicted by the project's environmental consultant,

*de Villiers, Env. Cons.: It would have been entirely unproductive to have approached each project individually. It would have also been far more expensive. If each groyne field had to go through a separate basic assessment process, it would have cost the state close on R2.5-million, if not more, to apply for the requisite environmental authorisations.*

The soil conservation works were different to other development applications in that they were uncontroversial and necessary to prevent further degradation and erosion. The project was also relatively inexpensive because CapeNature's Scientific Services were involved, and outside studies were not necessary, saving costs (de Villiers, Env. Cons.). The project ended up being more cost effective than other similar river rehabilitations (de Villiers, Env. Cons.; Röscher, DoA). The gabion weir structures, which have been constructed, to date, worked out to be R900/m<sup>3</sup> which is significantly more cost effective than the same structures built by Working for Water (DEAT), who spend R4500/m<sup>3</sup> on gabion weir structures (Röscher, DoA).

There is no doubt that Project 1 was carried out quickly due to the fact that it was conducted within a collaborative setting. The basic assessment took three months to compile and once it was submitted to the provincial department was authorised within a further six months. Various aspects within the collaboration, such as cordial relationships, knowledge sharing, and discussions amongst members, facilitated a smooth and quick process of authorisation. For example, the soil conservation works project was able to get letters of support from interested and affected parties (IAPs), like CapeNature and the Breede-Overberg Catchment Management Agency (BOCMA) in a short period of time: *“We get support letters in 3 or 4 days which can take 40 days to respond”* (Röscher, DoA). Generally, IAPs like CapeNature, have up to 40 days in which to comment on a development application (NEMA, Act 107 of 1998), but due to the cooperative relationships existing between the members of UBCEG, letters of support were received quickly.

Another relationship which benefitted the soil conservation works project, was that between the environmental consultant and the official representing the Provincial Department of Agriculture. They executed a focused planning process and impact assessment, which facilitated the submission of the application. Credit must be given to the provincial Department of Agriculture who carried out a swift planning and public participation process for the project (de Villiers, Env. Cons.).

Such a support network amongst members is important because it meant that even the provincial environmental decision making authority was familiar with the project before the paperwork arrived to be authorised (Herbst, DEA&DP). Particularly in such a project, which is a relatively new way of doing environmental applications, there was a needed consensus among involved organizations, about what this combined assessment would entail.

Although the Department of Agriculture was the main authority responsible for rectifying the damage caused to the river systems by the floods, their involvement in UBCEG made it possible for them to ask for assistance from CapeNature, BOCMA and the Department of Environmental Affairs & Development Planning. So while the project implementation was done by the experts (in the Department of Agriculture), the application was written and processed quickly due to the influence of UBCEG.

The main challenge which affected the project was massive time delays on the part of the National Department of Environmental Affairs. The Department of Agriculture waited for 18 months to receive funding from the national DEA for the project, and as a result, the structures could not be constructed in the funding time frame. It was a combination of getting funding approval so late by the national department, waiting for structural designs to be approved, and only being able to build at a certain time of year (due to constraints put in place by the hydrological specialists) that by the time building could begin, the time period to utilize the funding had expired (Róschler, DoA). Therefore construction was authorised in the six rivers and funding had been received, but time had run out. As a result, the DoA has requested their Chief Financial Officer carry the funds over, so that the DoA have access to them from September 2012, and can construct the structures in each river.

Project 1 was predominantly a Department of Agriculture project, but by the virtue of the fact that this department could draw on the UBCEG communication platform, comments by supporting authorities were received quickly. Additionally, approval was granted by the relevant provincial environmental authority quickly, as they were familiar with the project from its inception, as a result of their involvement in UBCEG.

### ***5.3.2 Findings of Project 2: Table Mountain Fund environmental assessment with a wetland study***

A major problem in the Upper Breede Valley is unauthorised ploughing of wetlands and virgin soils by farmers. This activity has led to conflict between agricultural landowners and conservation authorities, as farmers feel criminalised by conservation agencies (Bothma, 2011). Individual landowners do not gain proper authorisation for activities, because they feel environmental authorisations are expensive and decisions will be too delayed (Bothma, 2011). One attempt to deal with this problem is by creating farm-level area-wide maps, which contain information about the state of the region to inform decisions on development and biodiversity conservation (Table Mountain Fund (TMF), 2012). This information will be made available to landowners to be used for development applications. The relevant authorities are prepared to assist farmers with land-use change applications in order to prevent illegal actions in the future. For that reason, UBCEG approached the Table Mountain Fund to fund an environmental assessment for the region, which will feed into

the existing area-wide plans. Funding was granted to UBCEG to do such an assessment. The environmental assessment, is currently, in the beginning stages and will run over twenty-four months.

One result of this Environmental Assessment is an extensive study, of a floodplain wetland, which runs along both sides of the channels of the Breede River. The findings of this wetland assessment will be used to update the current area-wide plans, but more importantly, will be made available to individual landowners who wish to apply for authorisation to cultivate areas those areas which are deemed suitable for agricultural development (TMF, 2012).

The area-wide plans will provide specialist information, such as socio-economic plans which should prevent farmers feeling like they are unfairly treated by authorities, as they will be aware of the state of their land. Land will be compartmentalized into that which can be developed, and land which cannot. A challenge, which is of great concern to the authorities, is that there may not be involvement from the landowners of the area. There may be reluctance by some farmers to allow an assessment to be done on their land that will be used to produce fine-scale biodiversity maps. These farmers are reluctant to ascertain which parts of their farms are 'undevelopable land' from a conservation perspective, which they may not be allowed to farm.

Therefore, they need to be convinced about the value of the project in order to feel it is something worth participating in. There needs to be an economic incentive or a gain for the farmers, for having conservation land on their farms. One suggestion by a farmer was that if farmers could sell the 'undevelopable' land off at some stage, it would make it valuable and may make farmers willing to buy into the project. This conservation land could be used for eco-tourism or as retirement sites *"Not everyone can buy 100ha of land but many people can buy 3ha, therefore conservation land could be valuable if sold to a retired couple"* (Huyser, pers. comm., 2012).

It is the two leaders of UBCEG who were responsible for initiating Project 2. Without such individuals promoting the project and preparing the funding application, it may not have materialised. The project will now be a combined effort between various members of UBCEG. For example the project team will include members from the Department of Agriculture, CapeNature, BOCMA, Working for Wetlands, and potentially more. There will

also be a steering committee to monitor and evaluate the project, which will consist of a variety of stakeholders from UBCEG. Due to a platform like UBCEG, the project team and steering committee will be familiar with each other and because relationships already exist it will make working together easier. Project 2 may result in a combined assessment, as Project 1, prepared for farmers who wish to expand their land onto sections of degraded wetland.

There were a number of challenges for this project which were highlighted in the first stakeholder meeting. Farmers need to be persuaded that being involved in the project will contribute to their interests to ensure involvement of a substantial number of farmers. This may need to be achieved through providing economic incentives for farmers to cooperate with the project and, more importantly, to eventually become accepting of the notion that they own land which may be declared 'undevelopable'. If other economic opportunities are provided to the farmers, then owning undevelopable land will not be seen as a disadvantage and there could be greater support by the local farmers for the project. Therefore, there are complexities which exist within such a project, which need to be acknowledged and may make it a seemingly more challenging project than anticipated.

The strengths of the project are that there will be a steering committee to guide the project, an interactive project team who will assist in preparing the terms of reference, making specialist studies available to farmers, monitoring and evaluating the project. This means that the farmers will be informed of findings and the information will be freely available to them.

It will be interesting to see if a combined Environmental Assessment is commissioned after all the farm level information is collected, on behalf of all of the farmers who wish to develop on suitable land. The alternative would be that each farmer would have to commission their own environmental assessment if they wish to develop on land deemed suitable.

#### **5.4 Combined Environmental Assessments as a Tool within Agriculture**

Seven of the interviewees felt that a combined EIA is a better means to do agri-ecological projects than normal project level EIAs. Certainly, such combined EIAs were effective and

possible due to the collaborative context of UBCEG. There are various benefits of a combined EIA mentioned by UBCEG members. For example a combined EIA forces individuals to look upstream and downstream a river and across fence lines, which forces them to view all the parameters of a project (Koopman, CapeNature). A landowner will not just consider their farm in isolation, and this approach should bring farmers into a common thinking space (Albertus, BWI). Another way of describing such an approach to a project is that it is at the landscape level rather than site by site (Mortimer, CapeNature), which therefore hopes to maintain the biophysical and social integrity of the area.

As noted in the discussion on Project 1, authorisation for the river rehabilitation project was achieved more rapidly than for other similar projects. Because all involved authorities were familiar with the project from the start, authorisation was much quicker (Herbst, DEA&DP; Rossouw, BOCMA).

### **5.5 Summary**

There were various aspects of UBCEG, outlined in this chapter, which make it unique, and which have probably contributed to ensuring the persistence of the collaboration over a period of more than six years. Elements of UBCEG explored in the chapter are: the importance of engagement, which allows for communication amongst members, feedback sessions facilitating learning, and a platform to voice needed assistance. Also discussed are elements of UBCEG were leadership, contribution of members, decision-making within the group and lastly, capacity building.

Without the guidance and administrative work on the part of CapeNature and the Department of Agriculture, UBCEG would not exist nor would it still persist after six years. Such a collaboration is heavily dependent on these two organizations for administration and chairing. By ensuring there is an agenda, during every quarterly meeting, progress is maintained and the meetings allow discussion whilst ensuring the relevant issues are addressed.

Most of the individuals who are involved within UBCEG, highlighted how informal relationships exist between various members, which contributes to the collaboration. One interviewee mentioned that the relationships amongst the members of UBCEG are due to a

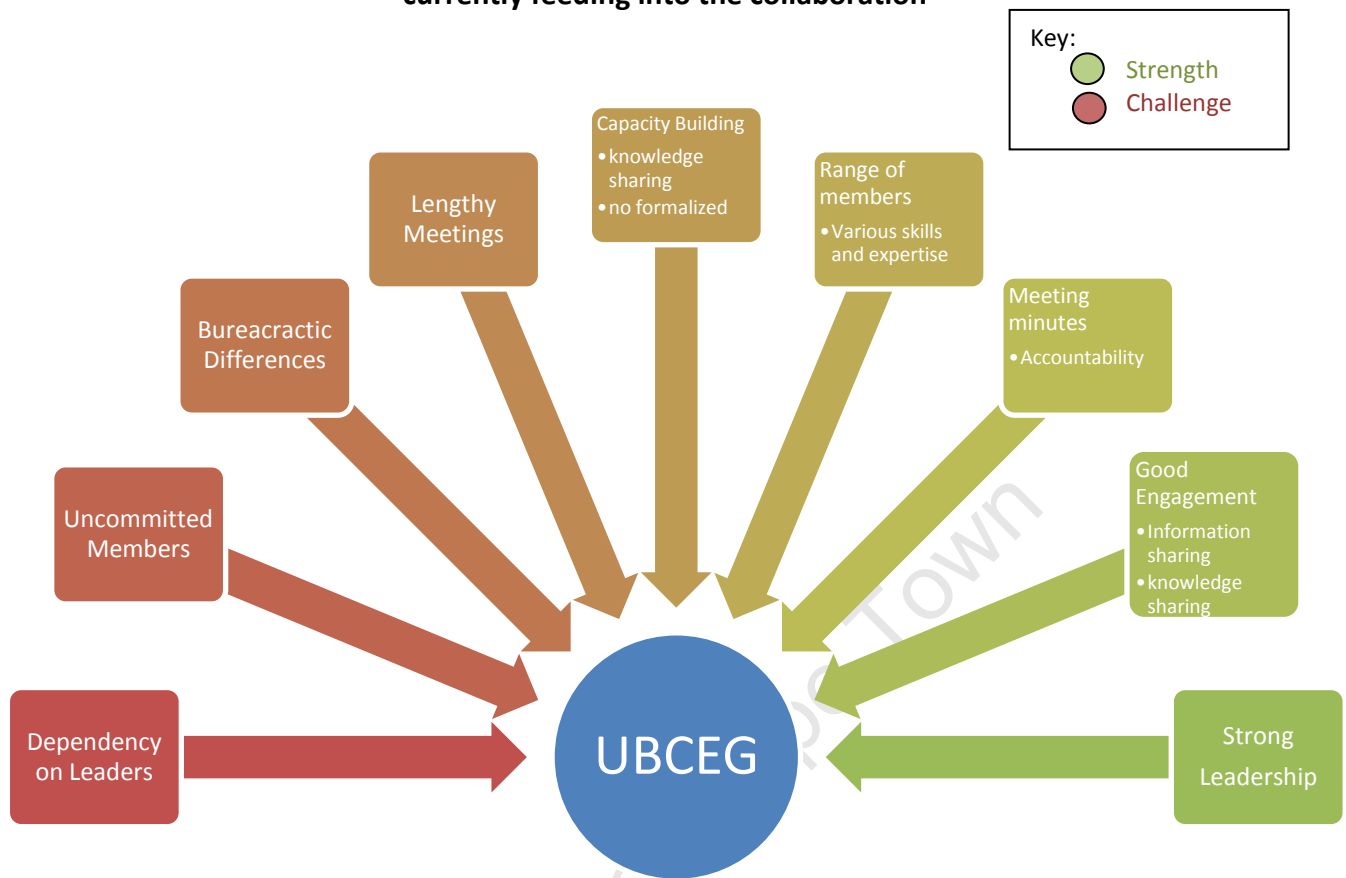
strong general agreement on objectives and management priorities for the area and therefore a strong mutual commitment for their achievement (de Villiers, Env. Cons.). Therefore, everyone has their different roles towards the same objectives, to make the area a sustainable and functional environment. Within a project, each member may have a different role; for example, during an alien clearing project, one organization may be supplying the funding, another may be implementing the alien clearing and another doing the monitoring and quality check. Member contribution could be improved within UBCEG; the leaders state that not all the members know how they can contribute.

Another attribute of UBCEG that was given credit is the meeting minutes, which have a greater role than just record-keeping. They have managed to create a sense of accountability amongst members so that each individual knows what to he or she is expected to achieve or report back on for the next meeting. This has allowed progress to be made towards UBCEG's objectives.

There were four challenges highlighted in the findings, namely, the length of meetings, uncommitted members, dependence on leaders and bureaucratic differences between organisations. These properties are aspects which UBCEG need to confront in the future.

The findings of this chapter are summarized diagrammatically in Figure 5.1 below.

**Figure 5.1. Diagrammatic representation of the various collaborative features of UBCEG currently feeding into the collaboration**



Two projects which have been enhanced due to the aspects and principles inherent in UBCEG, are the soil conservation works in Foothill Rivers of the Upper Breede Valley (Project 1), and the Upper Breede Valley environmental assessment funded by TMF (Project 2). Project 1 exhibited principles of leadership, information-sharing and used the UBCEG network to facilitate a relatively quick environmental authorisation. The combined environmental assessment was an effective means for such an agri-ecological project, and it brought about a more cost-effective means of building the river structures. Although Project 2 is only at the beginning stages, members of the UBCEG network have been fundamental in getting funding approval, and the members will continue to be important as partners of the steering committee and project team.

Although other cooperative landscape conservation groups exist in South Africa, such as the Agulhus Biodiversity Initiative and the Garden Route Initiative, UBCEG is different in that it is not focused on biodiversity conservation alone, but is aimed at sustainable agriculture in finding a compromise between conserving biodiversity and maintaining the agricultural

production potential of the region. UBCEG has proactive individuals in the group who use the relationships which exist to find project and funding overlaps and work together.

The succeeding chapter will compare UBCEG, and the findings about this collaboration, to the features highlighted in the collaborative governance literature. UBCEG will be analyzed against the Integrative Framework for Collaborative Governance by Emerson *et al.* (2011) and thereafter, the features of UBCEG explored in this chapter, will be placed within the Selin and Chavez (1995) Collaborative Process Model.

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# Chapter 6: Discussion- Contrasting and Comparing UBCEG to Collaborative Governance Literature

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## 6.1 Introduction

It is clear from the findings that UBCEG is an active collaboration, which aims to resolve the issues around natural resource management in the Upper Breede Valley area. There are aspects of UBCEG which concur with the collaborative governance literature and elements which are not mentioned by researchers in the field of collaboration. This discussion chapter reviews and evaluates the efforts of UBCEG, according to theories and concepts of collaborative governance. UBCEG is a relatively unique collaboration in that it receives no outside funding and is not a formalized institutional collaboration as are many which are explored in the literature. Although UBCEG is relatively unique, there are many components within UBCEG which are evident in many other investigated collaborations.

All the information acquired about UBCEG was sourced through semi-structured interviews with members of the collaboration and through participant observation. Similarly, information on the projects also initiated by UBCEG was acquired using the same two methods.

Due to the many aspects of collaborative governance observed in the different phases of UBCEG, a limited numbers of aspects were selected for discussion. These selected elements of UBCEG are analysed against the Emerson *et al.* (2011) Integrative Framework for Collaborative Governance and the accompanying Logic Model Approach to Collaborative Governance. The Emerson *et al.* (2011) models can also be found in section 2.5.

UBCEG is further represented in a diagram of the collaborative process, adapted from Selin and Chavez (1995). Thereafter the challenges evident in UBCEG are highlighted followed by a summary of findings and recommendations for improving this and other such collaborative efforts in future.

## **6.2 Comparing UBCEG to the Emerson et al. (2011) Integrative Framework for Collaborative Governance and the accompanying Logic Model Approach to Collaborative Governance**

### **6.2.1 Reasons for Collaboration: Description of System Context**

It is beneficial to this discussion to repeat the definition of collaboration which was presented in chapter 2:

*Collaboration is a process in which autonomous or semi-autonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial interactions (Thomson et al., 2007).*

The main features in the Thomson *et al.* (2007) definition of collaboration are that actors *negotiate*, *relationships* exist between these actors, there are *issues* or *norms* which brought these actors together and lastly, interactions are *mutually beneficial*.

Both issues and common connections brought members together, and resulted in the formation of UBCEG. There were land management issues within the area, due to inefficient and uncoordinated service delivery by some governmental departments. The result was that landowners were implementing developments without proper authorisation. For example, there was inadequate communication between the different authorities involved in the clearing of alien invasive vegetation and there was uncontrolled loss of biodiversity. UBCEG was established to address these issues.

The first action undertaken was to create fine-scale biodiversity plans, to identify critical biodiversity areas and area-wide plans to identify priority areas for agricultural production (Brownlie, 2011). With these plans, the state of the environment was known and decision making could, therefore, be more informed. The area-wide plans and fine-scale plans were a tool for UBCEG to use to decide on projects and assess developmental activities. With the establishment of UBCEG a platform exists, to allow different departments to discuss any projects or development proposals in the context of conservation objectives and socio-

economic gains pertaining to the agricultural sector. UBCEG has facilitated a process through which different departments can negotiate around natural resource management.

As discussed in Chapter 2, collaborations occur for a variety of different reasons, but generally because various individuals or organisations bring something to the table to resolve issues at hand (Thomson *et al.* 2007), or there is a common goal amongst the individuals (Kinnamon & Bleich, 2004). In the case of UBCEG, the collaboration occurs for both reasons. While the members represent different organisations with various expertise, they all work within the region, are concerned with the land management practices, and wish to work towards the goal of an agriculturally sustainable area. The different organizations come together to discuss ways to strengthen their work within the area, by coordinating their efforts and seeking assistance from other members when needed.

The *system context*, which existed and resulted in the formation of UBCEG, was due to the resource conditions of the area, prior failure to address issues, inadequate network connectedness amongst various agencies, and the socio-economic gains to be had, by collaborating. These elements of the system context are found within the Logic Model Approach to Collaborative Governance (Emerson *et al.* 2011). *Network connectedness* is required between the various organizations working within the same region, which is geographically a relatively small area. There were various conservation organizations and departments working within the region, with a degree of connectedness prior to UBCEG, due to existing networks. A few departments communicated amongst themselves, and the Breedekloof Wine and Tourism communicated with CapeNature as they shared premises. All of these elements resulted in the formation of UBCEG. Therefore, it was common issues and connections which brought the members together.

One attribute of collaboration which Kinnaman and Bleich (2004) feel differentiates it from other problem-solving behavioural strategies (such as partnerships, cooperation and co-management), as mentioned in Chapter 2, is that individuals within collaboration are internally motivated. A number of respondents noted that although there is a common interest in the state of the environment, each organization has their own mandates which they need to fulfil, which UBCEG allows them to do. By being in UBCEG they achieve their goals better than if working in isolation; all the interviewed members of UBCEG felt this to be true. As

the literature suggests, a stakeholder is more willing to participate in the collaboration if they perceive the achievement of their goals to be dependent on the involvement of other stakeholders (Logsdon, 1991; Ansell & Gash, 2007). This interdependency among members, is one important driver shown within the Logic Model Approach of Collaborative Governance (Emerson *et al.* 2011)

### **6.2.2 Drivers of UBCEG**

Leadership is a key driver that directs the collaborative dynamics evident in the Integrative Framework for Collaborative Governance (Emerson *et al.* 2011). Within collaboration there is a facilitator or leader who plays an important role in initiating or maintaining the progress, and who facilitates participation of the group (Bramwell & Sharman, 1999). Leadership is one element of UBCEG that is referred to by every interviewee, and plays an important role in the persistence of the collaboration. These leaders are responsible for organizing and chairing UBCEG meetings as well as engaging with members. As one interviewee said, the leaders “*create an enabling environment for collaboration*” (Koopman, CapeNature), which ultimately drives principled engagement, shared motivation and capacity for joint action (Emerson *et al.*, 2011).

The consequential incentives driving the collaboration are similar to the system context issues. The incentives evolve around the resource problems within an area, and collaboration being an opportunity to coordinate the actions, of the different organisations, to solve these problems. Another consequential incentive which drives UBCEG to function is tension between the conservation organizations, who wish to conserve land, and other organisations such as municipalities and agricultural associations who wish to develop on land. Tension was evident at the Table Mountain Fund meeting (on the 6 March 2012 in Wellington) whereby the farmer representatives present were very assertive that there needs to be an incentive for farmers to buy into the project. This ‘tension’ is a driver which induces leaders and members to engage together (Emerson *et al.* 2011). It is important to be aware of the factors which drive the collaboration, as there could be negative impacts if these factors are not acknowledged (Selin & Chavez, 1995).

Within the collaboration there are three components which work together to influence action. These three components are *principled engagement*, *shared motivation* and *capacity for joint action*. These three components are discussed in the following three subsections.

### **6.2.3 Principled Engagement: UBCEG quarterly meetings**

*Principled engagement* is an aspect of UBCEG which was highlighted by the respondents as one of the strengths of the collaboration. Principled engagement refers to a variety of different stakeholders, with different mandates, working together to solve problems, resolve disagreement or create value (Cahn 1994; Cupach & Canary 1997; Lulofs & Cahn 2000). UBCEG has members from different organizations with varying mandates, principles and perspectives, who come together to communicate and create value. The UBCEG quarterly meetings are a forum or platform where a member organization reports to the group on current projects and can thereby, raise any issues and can ask for advice or assistance from the other members. It is a space for members to communicate and share knowledge and expertise. This aspect of collaboration is an important element of UBCEG, which allows individuals to *deliberate* amongst each other, *define* the problems which need to be overcome, define tasks to be completed, *discover* and assess relevant information, and lastly *determine* what should be done over time. These four components of principled engagement (deliberation, definition, discovery and determination) are the four elements of Emerson *et al.* (2011) Logic Model Approach to Collaborative Governance.

### **6.2.4 Shared Motivation: Trust and Relationships between Members**

The next two wheels of collaborative dynamics are *shared motivation* and *capacity for joint action* (Emerson *et al.*, 2011). Within shared motivation are mutual trust, mutual understanding, internal legitimacy and shared commitment (Emerson *et al.*, 2011). Mutual trust takes time to develop and happens as parties work together and relationships develop (Huxham & Vangen, 2005). There is evident trust amongst members of UBCEG, strengthened by relationships that have developed over the years. As mentioned by various individuals, they know they can phone another member to ask them advice at anytime (Röscher, DoA; Rossouw, BOCMA). One interviewee said that “*Whatever work is done on the ground is done by the best people*” (Koopman, CapeNature), which also shows there is trust

amongst members who know that other person will do a good job. Most of the individuals involved within UBCEG, highlighted how informal relationships exist between various members, which contributes to the collaboration. Relationships take time to develop through communication, building trust and respect amongst the individuals (Alpert *et al.*, 1992; Arslanian- Engoren, 1995; Kinnamon & Bleich, 2004; Thomson *et al.* 2004; Zimmerman, 1999) and much of what takes place in and through UBCEG is due to these personal relationships. In fact some of the most important relationships which contribute to UBCEG, are those between local members. The local members communicate amongst each other more frequently than just at the quarterly meetings. Additionally, some local members also have relationships with the landowners in the area, which allows UBCEG to have an on-the-ground understanding of the issues in the area.

*Mutual understanding* is also evident in UBCEG; that there needs to be a coordination of the efforts between the various partner organizations. There is also an understanding that each partner does have a different mandate, but that the parties can still work together for betterment of the natural resource management in the area. This mutual understanding gives rise to *internal legitimacy*, which is the acknowledgement that partners have varying interests but that these interests are compatible with each other. This legitimacy which encourages collaboration (Emerson *et al.*, 2011) is evident among the partners of UBCEG.

One aspect of UBCEG that needs to be improved, which falls within the notion of mutual understanding, is that not all the partners know the exact role they could play and all the ways in which they could contribute to UBCEG (Mortimer, CapeNature2012; Róschler,DoA). More clarity about what each member should do, would be a way to strengthen mutual understanding and would benefit UBCEG in striving to achieve its objectives.

#### **6.2.5 Capacity for Joint Action: Structures in Place**

Collaboration is a way for individuals to engage cooperatively, to enhance the capacity of one self and others to achieve a common goal (Himmelman, 1994). Within *capacity for joint action* are four components that create potential for effective collaboration (Emerson *et al.*, 2011). The first component is *procedural or institutional arrangements* which are rules,

protocols or structures in place to assist ongoing collaboration; the second is *leadership*; third *knowledge*, and finally, *resources*.

Within UBCEG there are no formal institutional arrangements to govern the collaboration. UBCEG is a bottom-up, self-organized group of individuals, which came about because all members have a shared vision for the area. There are however procedural arrangements within UBCEG, which make the group function effectively, such as quarterly meetings, where each member is expected to, give feedback on any projects or findings they have made during the last quarter.

A record-keeping procedural structure is the meeting minutes which are taken by the secretary at every meeting. These minutes are then distributed amongst the members after each meeting, so that every member can read them and see where they are required to give feedback by the next meeting. It is a system which creates accountability, so that individuals are committed to having done the required action by the next meeting. The minute keeping is therefore an effective procedural arrangement that UBCEG has put in place to assist the ongoing collaboration.

Research by Bammer (2008) emphasized how boundaries need to be put in place within collaboration, so that the goals are achievable. Although the boundaries were not mentioned within interviews they could be noted by observing UBCEG meetings. Development applications and illegal 24(G) activities (as per NEMA, No. 107 of 1998) are purposefully not discussed at the meetings as an attempt to streamline meetings. Other boundaries which exist within the procedural arrangements of UBCEG were not mentioned by the respondents.

#### 6.2.5.1 *Leadership*

Leadership is one component of collaborative governance which is well emphasized in the literature (Ansell & Gash, 2007; Emerson *et al.*, 2011; Kinnaman & Bleich, 2004; Lynn *et al.*, 2007; Mandell & Keast, 2009; Vangen & Huxham, 2003) and is one component about which UBCEG can boast. Not only did every member make mention of the importance of leadership within UBCEG, they made specific mention of two individuals who are the leaders as well as the drivers of the group. The leaders' role is to oversee consensus-building (Ansell

& Gash, 2007; Innes & Booher, 2000) and create an environment in which collaboration operates (Kinnaman & Bleich, 2004). Empowering and involving stakeholders, is one way to create an environment for collaboration (Vangen & Huxham, 2003).

Similarly, Mandell and Keast (2009) found that leadership within collaboration should be focused on long-term benefits and building relationships between individuals, which is what the leaders of UBCEG do, instead of just focusing on short-term goals. They do not just emphasize decision-making around projects, but also see the value in engaging in discussion amongst various stakeholders, who would not normally share information if UBCEG did not exist. Therefore, the leaders focus on knowledge sharing in meetings rather than outcomes. They make certain there is a time for tea before each meeting and a lunch afterwards so that the members can socialize. This is a time where relationships, and additionally trust, can be developed between members. As Vangen & Huxham (2003) state, trust is an important factor which nurtures a collaborative process and so is therefore, beneficial to UBCEG. A leader's role should also be to influence and guide members, build commitment through interpersonal relationships or convince others of a vision (Mandell & Keast, 2009). The leaders of UBCEG do strive to build relationships between the members, which in turn develops trust within the group, an important factor within a collaborative process. As Mandell & Keast (2003) emphasize, leadership can be referred to as a process of getting each member to tap into their strengths. This is achieved in UBCEG by the leaders creating communication amongst members, which means individuals learn who the experts within different fields are, and who to go to for a certain query. Therefore the leaders of UBCEG create an environment in which collaboration operates (Kinnaman & Bleich, 2004).

#### 6.2.5.2 Knowledge

The third point of *capacity for joint action* is knowledge. As stated by the authors of the Integrative Framework, "*Collaboration requires the aggregation, separation, and reassembly of data and information, as well as the generation of new, shared knowledge*" (Emerson *et al.*, 2011: p.16). Knowledge in this context could also be called the *social capital of knowledge sharing* (Emerson *et al.* 2011). This sharing of knowledge is one element which allows development within the collaboration because it allows capacity building amongst the members. As is evident in UBCEG, by sharing knowledge other individuals may acquire

new knowledge of a different expertise, and indirectly there is a skills transfer amongst the group (Rossouw, BOCMA). UBCEG does strive to create an environment for knowledge sharing amongst members. This is done by having a feedback time at each meeting, where members can share information, by having a pre-meeting tea and post-meeting lunch and as well as organising occasional field days which all members can attend. Therefore knowledge sharing, within UBCEG, is one factor of capacity for joint action, which is evident and well confirmed.

### 6.2.5.3 *Sharing of Resources: Contribution*

Sharing of resources is a component of collaboration which is confirmed in the literature. As mentioned, collaboration is the most resource intensive interdisciplinary behaviour, because it requires individuals to spend time together communicating and building relationships (Albert *et al.* 2002; Bleich, 1995; Hoffman, 1998; Kinnaman & Bleich, 2004;). Although knowledge and expertise are central resources, other resources such as money, equipment, staff and legal authority (Imperial, 2002) also benefit collaboration. Because resources are so important, stakeholders with more resources often have more power in the collaboration and less resourced members, can be prone to manipulation by stronger members (Ansell & Gash, 2007). A similar issue was mentioned by one member of UBCEG, who felt that whichever partner had the most funding to contribute to a project, then that partner would have a concomitantly greater weighting in the decision making process (Balie, CWDM.). Although no other interviewees suggested this was the case around decision making, it is an interesting point made by one respondent that having greater resources, or in this situation funding, may influence the dynamics within the collaboration.

Additionally, it was mentioned by two respondents that not all member organisations know how they can contribute to UBCEG (Mortimer, CapeNature; Röscher, DoA), implying that some members could contribute more. Therefore, some members could offer more resources for the use of UBCEG, whether it is equipment or funding. More transparency or time spent discussing where UBCEG needs more resources, may help members see where they can contribute, and in doing so, members may contribute in more ways.

Each UBCEG members' contribution is directly related to their involvement and commitment to the collaboration. The organisations who are most actively involved, gain

the most from being in such a group. This statement is based on the fact that the five most involved organisations all felt very strongly that being involved in such a collaboration helps them reach their objectives and do their jobs better. Therefore, if each member contributed more to the collaboration, in their area of expertise, UBCEG may run more efficiently with greater resource sharing.

#### **6.2.6 Collaborative Actions**

The Emerson *et al.* (2011) Integrative Framework for Collaborative Governance states that actions by a collaborative group will be context specific, as will the impacts and adaptations which may result. With reference to UBCEG, the actions are varying and dependent on which period of UBCEG is being referred to. In the earlier years UBCEG actions were focused on facilitating communication between different stakeholders, which resulted in coordinated efforts around development applications and alien vegetation clearing. With time, the actions became project-driven with the riverine soil conservation works (Project 1) being conducted, and more recently the (TMF) environmental assessment (Project 2). Project 2 environmental assessment will require continuous involvement by many members of UBCEG, who make up the project team and the steering committee. This second project is an action that will result in impacts and adaptations and can therefore, be regarded as an action with direct outcomes (see Emerson et al (2011) Integrative Framework, Appendix A).

An action of the group is also as a compliance body, monitoring for illegal activities on the ground. As the Department of Agriculture is a member of UBCEG, they are active in the area at checking if there are unauthorised or illegal activities happening.

#### **6.2.7 Collaborative Outcomes and Adaptations**

The outcome of the described actions of a collaborative effort is aimed at altering the *system context* conditions (Emerson *et al.*, 2011). By collaborating members of UBCEG coordinate their actions to deal with the problems in the area. The most apparent outcome of UBCEG is the network which is now in place, for members to communicate and exchange advice. UBCEG has created a space which builds relationships between members, so that knowledge and advice is shared between members.

A collaborative benefit emanating from the existence of the UBCEG structures is that different governmental departments communicate more readily and authorisations are approved more quickly, which in turn improves service delivery of the departments. It has also meant that the actions of the various members are now coordinated, such as with alien vegetation clearing projects.

The economic gains of UBCEG have been measured using a number of variables, including the number of jobs created and number of individuals hired. Using these two measures, UBCEG's economic gains can be considered an outcome of a successful collaboration. UBCEG has social objectives as well, manifest in their training programs, junior LandCare camps for the youth and striving to create jobs through alien vegetation clearing initiatives. To date the coordinated efforts of UBCEG have meant that over 3000 hectares of infested land has been cleared of alien vegetation, and to date over 12 517 days of employment have been created. Therefore, UBCEG has a social impact outcome for previously disadvantaged individuals, through the creation of jobs and training programs they have.

Over time, there are elements within a collaborative governance regime that undergo adaptation (Emerson *et al.*, 2011). Such adaptations have occurred in UBCEG in respect of the drivers, collaborative dynamics and actions. In terms of drivers, the *consequential incentives* have changed as UBCEG has matured. In other words, the problems which were rife initially change as time goes on because the natural resources of the environment transform. For example, uncoordinated alien vegetation clearing which used to occur before UBCEG existed happens less now. Other drivers of UBCEG have changed through time and will continue to do so. Initially it was the conflict between conservation and agriculture, which was a primary reason for the formation of UBCEG, but this conflict is now much less common than it was six years ago. Although the conflict will never fully disappear, it is significantly less due to UBCEG facilitating communication and discussions between the various agencies.

The leaders of UBCEG both mentioned how they hoped that there would eventually be less pressure and dependence on them as individuals, and other members would take on more significant leadership roles in the future. This is one such adaptation which may arise but

which is not the case at present. There is a similar need for succession planning if one of the two leaders were to relocate.

The group meetings have become larger over the last two years and an aim is to try reducing the size of the group; to only have important individuals who contribute at meetings (Mortimer, CapeNature; Rösscher, DoA;). This is a way of stream-lining meetings so that they are not so long and the important officials, whose time is so precious, do not have to be away from their departments for the whole day. This too is one adaptation which may arise in UBCEG, but is not the situation to date.

As can be seen by in the above discussion, there are many factors which play a role in the life of the UBCEG collaboration. These factors either, led to the formation of UBCEG, occur within the collaborative process, or are as a result of the collaboration. Most of these aspects of UBCEG are illustrated in the diagram that is introduced in the following section.

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### 6.3 Representation of UBCEG as a Collaborative Process

Selin & Chavez’s (1995) figure has been adapted to represent visually the discussed attributes of UBCEG collaborative process.

**Figure 6.1. The Collaborative Process for UBCEG’s Natural Resource Management, adapted from Selin & Chavez (1995).**

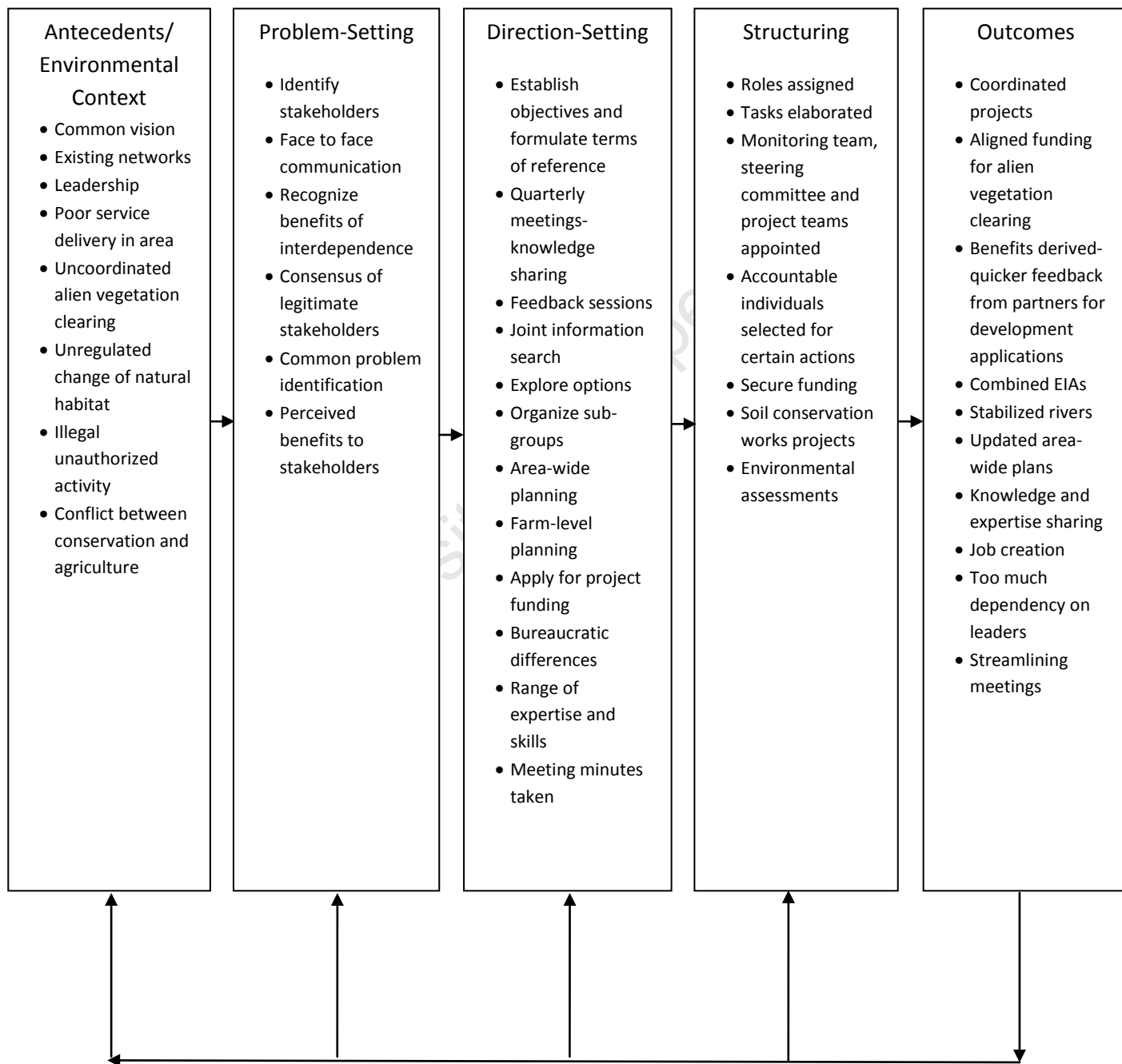


Figure 6.1 above shows, various elements which occur within, and contribute to, the collaborative processes of UBCEG. The processes are dynamic and have feedback loops which can influence every stage of the collaboration. The various aspects in Figure 6.1, do not all occur within the same time frame of UBCEG. For example, identification of stakeholders in the *problem-setting* box would have occurred at the beginning stages when UBCEG was being established (2006), whereas face-to-face communication happened at the beginning stages but will continue to happen still. Therefore, the aspects within the figure happened at various stages of the UBCEG process, and not necessarily simultaneously.

The antecedents, or environmental context, are the conditions of the area, and the reasons which led to UBCEG being formed. The various elements within the antecedent phase are explored within chapter 3, 5 and 6. To summarize, they are all the factors which led to the formation of UBCEG, or are factors which are still important in the persistence of the group. The factors which occur in the antecedent box, are discussed repeatedly, throughout this research and chapter and can be found under the section 6.2.1 entitled *Description of System Context*.

The antecedents, lead on to a period of problem-setting, which is the time when the initiators of UBCEG realised how collaboration could benefit group members, and that it could provide potential solutions to the problems identified in 'antecedents'. During this phase, engagement takes place and the stakeholders discuss what can be gained from the collaboration, and "*identify issues of common concern*" (Selin & Chavez, 1995: p.192). Many of these common issues are the problems mentioned in the 'environmental context' box, such as unregulated change and loss of natural habitat and uncoordinated clearing of alien vegetation.

Direction-setting is an important phase of a collaborative process, when members discuss what actions and projects they wish to pursue. It is the time when brain-storming and communication happens amongst the different stakeholders to explore the options which lie ahead (Selin & Chavez, 1995). This is an important time when engagement happens, in the case of UBCEG during quarterly meetings at which there is knowledge sharing and information exchange. During this phase, the group notes the various expertise of members that can be of benefit to UBCEG. But it is also when bureaucratic differences amongst

organisations may arise, such as was different criteria for selecting alien vegetation clearing sites. During meetings, organising for future projects takes place, such as applying to receive funding from the Table Mountain Fund for an Environmental Assessment in the area. All the planning or strategising happens within this phase which informs the next stage of the collaborative process which is structuring.

Structuring is an important phase of collaboration, where delegation of roles and duties happens. Structuring deals with problems that require sustained commitment from members and therefore can require a framework or structure to guide the group (Selin & Chavez, 1995). In UBCEG tasks were assigned to individuals and a means to ensure accountability was created in the meeting minutes, to ensure responsibility amongst members. This structuring means that there is sustained commitment and UBCEG continues to function from year to year. One example, within project 2, which reinforces the function of the structuring phase, is the appointment of a project team and steering committee who will oversee the Environmental Assessment funded by the Table Mountain Fund.

The last phase is the outcomes of UBCEG, which are intended to solve the problems acknowledged in the antecedent phase. It is at this stage that stakeholders reassess the impacts that have resulted from their collaboration (Selin & Chavez, 1995). These outcomes then influence the other phases, hence the arrows from outcome to all the other phases in Figure 6.1, showing the dynamic nature of the process. The outcomes which UBCEG has achieved vary, from acquiring funding to coordinated alien vegetation clearing projects, which used aligned funding from the various organizations. Another outcome is that members can get support letters and approval quickly from other member organizations in UBCEG, due to the informal relationships which exist. This speeds up any development applications, which an UBCEG member is trying to get approved. Another outcome confirmed by the members of UBCEG, is that the collaborative meetings are a space for knowledge sharing and skills transfer. This information sharing creates capacity building amongst individuals. One outcome which also became evident in the outcome phase was that there is too much dependency on the UBCEG leaders. Other outcomes may become evident after the TMF Environmental Assessment project has been implemented. It may yield positive outcomes for the sustainable management of natural resources in the area, but this will only to be seen after the project is complete.

A collaborative process is difficult to represent due to the nonlinear, dynamic interactions which occur (Ansell & Gash, 2007). This was similarly the case for representing UBCEG. It is important to realise that resource needs and interests of the stakeholders change over time and different opportunities arise which influences what drivers cause the collaboration to persist. There are many components which feed into the collaborative process, and thereby, make it difficult to depict in a figure. There are also outcomes and components within the different phases which are not shown in figure 6.1 as they are similar to another component or occur within another phase of the collaborative process. For example components within antecedents could be placed in the problem-setting phase, such as 'unregulated change and loss of natural habitat'.

The Selin & Chavez (1995) collaborative process model was adapted, to represent aspects of UBCEG's collaborative process. It is a visual representation of the phases which UBCEG undergoes to reach an outcome and the aspects which occur in each phase.

#### **6.4 Challenges to Collaboration**

There are many institutional and situational challenges which hinder collaboration. The situational challenges are specific to any collaboration, and may be anything from financial restraints to power differences between members (Selin & Chavez, 1995). Situational challenges within UBCEG are uncommitted members, difficulties with farmers who implement activities without authorisations, or landowners who do not do follow-up after alien vegetation clearing has been completed on their land. Situational challenges are specific to the project at hand: in UBCEG, the variety of members, with different expertises and networks, helps to solve any situational challenges which arise.

Shared commitment is a feature of UBCEG which is mentioned as a challenge for the group. There is excessive reliance on the leaders of UBCEG to maintain progress, through organising meetings and doing the administration for the group. Although leadership is an important aspect of collaboration, too much dependence on the leaders is a weakness of the UBCEG group. Additionally, there is varied commitment to UBCEG among partners. Some are present at each and every meeting, whereas, others only attend occasionally; this varying commitment amongst the different partners is considered a challenge which UBCEG

needs to resolve, both increased commitment by members to attend every meeting, and increased contributions; to take some pressure off the leaders. The TMF project may help redefine members and the roles individuals can play which may, take some pressure off the leaders.

A challenge with uncommitted members is not unique to UBCEG. Ansell & Gash (2007) did research on 137 studies of collaborative governance and found that public agencies lack real commitment to collaborate. Yaffee & Wondolleck, (2003) noted particularly weak commitment at the headquarters level of public agencies. In the case of UBCEG, it was mentioned by 2 members that the local municipality was uncommitted. It is unknown why this is the case within the Upper Breede Valley, but it is not uncommon for local municipalities in South Africa to be understaffed and under-resourced as was mentioned in research done by Hamman (1999). Attendance by the provincial departments is varied, and is largely dependent on the individual commissioned to attend.

It has been suggested that the institutional challenge may be a function of centralized, rational comprehensive planning processes (Schatz *et al.* 1991) which militate collaborative consensus based decision-making (Selin & Chavez, 1995). It is the bureaucracies in centralised government agencies, which can make it difficult for collaborations to continue. One such institutional constraint was mentioned by a member of UBCEG, who made reference to the criteria which one governmental department has to fulfil before alien vegetation clearing can be initiated in an area. The departmental criteria may be exceedingly different to another organization's criteria for selecting a site for alien vegetation clearing; which makes coordinating efforts difficult. This is one example where institutional challenges may hinder collaboration.

Another institutional challenge which UBCEG has to contend with is as a result of individuals changing positions within their organisations. By individuals changing their current job positions their role in UBCEG may change. This is evident when individuals are promoted to more senior positions in their organizations and they no longer have an active role in UBCEG or do not work within the region any longer. Unfortunately this is an unavoidable institutional challenge; one that any collaboration may have to contend with. Succession

planning is one mechanism which UBCEG could put in place to pre-empt the loss of important individuals, such as the chairman and secretary.

## 6.5 Summary

The collaboration, UBCEG, has many complex components which contribute to and challenge the collaborative process. UBCEG exhibits many elements which the literature confirms are imperative in collaboration, such as principled engagement (Emerson *et al.*, 2005), leadership (Ansell & Gash, 2007; Emerson *et al.*, 2011; Kinnaman & Bleich, 2004; Lynn *et al.*, 2007; Mandell & Keast, 2009; Vangen & Huxham, 2003), knowledge sharing (Innes & Booher, 2000) and informal relationships (Mandell & Keast, 2009). Because collaboration is a dynamic process it adapts to the project at hand and the direction-setting is context specific depending on requirements at the time. This makes it difficult to describe generally the properties of UBCEG because they change through time and are context specific, as noted by Patel *et al.* (2012).

The elements of UBCEG that are noticeably different to those highlighted in the literature are: that UBCEG does not have a formalized capacity building strategy for their members, in that the members build capacity informally by sharing expertise and knowledge. Such sharing of knowledge and expertise allows development of the capacity of the agencies involved (Bayer, n.d.). As stated by one interviewee, by being in UBCEG, each member may not necessarily learn more about their expertise, but gets to learn about the context in which they practice their field of expertise (Koopman, CapeNature). As the capacity of the involved agencies develops, the actions of the collaboration progress and the collaboration dynamics adapt under the improved conditions (Emerson *et al.*, 2011). Participation in UBCEG assists agencies' to better define their role within the area, and their actions can be better aligned with the context of the environment.

There is confirmation amongst UBCEG members that there is strength in having the minutes taken at meetings. They act as a record-keeping tool and create accountability amongst members and require individuals to report-back on progress, by the following meeting. Record keeping at meetings was not directly referred to in the collaborative governance literature, but there was reference made to knowledge management to ensure knowledge exchange (Patel *et al.*, 2012) and role assignment (Selin & Chavez, 1995). The minutes are a

means to record points of discussion, which aids knowledge exchange as members can refer back to the minutes to recall what was discussed during the meeting and thereby improve their understanding of a situation and what the other organizations are involved in.

There is well confirmed agreement amongst the members of UBCEG that the leaders play a facilitative role as well as acting as the drivers of the collaboration. They are responsible for the administration of the group, but more importantly have the passion and personalities to make UBCEG persist. The leaders are one of the most important attributes of UBCEG, and without them it would be questionable whether UBCEG would have developed at all and would persist today.

In any collaboration, as within UBCEG, there are situational and institutional challenges which may arise. Institutional challenges, which exist within bureaucracies and within higher powers, are unavoidable, but situational challenges can be buffered by having a range of members who have different expertise and can work together to overcome such challenges.

The way UBCEG operates could be mimicked in other agricultural areas, but there needs to be effective role-players or drivers for it to be successful. Another attribute of UBCEG which favours the collaboration is that the group operates in a relatively small, well-defined area which is surrounded by mountains. If the operational area was too big, it could be an added challenge.

From the information given in the findings of chapter 5 and the current discussion chapter, conclusions will be made in chapter 7 as well as recommendations which may benefit the UBCEG collaboration.

# Chapter 7: Conclusion and Recommendations for UBCEG

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This chapter provides general conclusions on the UBCEG collaboration in section 7.1, and thereby provides specific recommendations for the collaborative group in section 7.2.

## 7.1 Conclusions

The overall aim of this research was to describe and evaluate collaborative environmental governance in the functioning of an active collaboration in the Upper Breede Valley- the Upper Breede Collaborative Extension Group (UBCEG). UBCEG has influenced two environmental assessments within the region, one entailing a combined environmental assessment of a soil conservation works project in six rivers, and the other an environmental assessment that will inform management of a floodplain wetland within the area. This chapter collates the findings of the UBCEG collaboration and additional projects, in summary form, by emphasising the main conclusions and, based on these, making pertinent recommendations which may benefit the functioning of UBCEG. This chapter consolidates the attributes that influence, and form part of the collaborative work of UBCEG.

Two theoretical frameworks were explored within this research to identify aspects of collaborative governance which were thereafter used to evaluate and review the efforts of UBCEG. Stakeholder perspectives and opinions were explored in order to find strengths and weaknesses of the collaboration. These objectives allowed the researcher to evaluate which principles or factors of UBCEG were fundamental for effective collaboration and identify which challenges were encountered, in accordance with the theoretical frameworks.

Upon reviewing the theoretical frameworks and identifying the factors of UBCEG, it can be concluded that the main driver of UBCEG is the positive role of strong leaders, who initiated the collaboration and continue to be the main drivers in the persistence of the group. This strong leadership, although a strength of the group, means that there is significant pressure on the leaders and other members are not required to do as much as they could and should.

There are consequential incentives in the region, to keep UBCEG persisting from year to year. The members all agree that the Upper Breede Valley is a unique region, and they have a shared vision- which they believe UBCEG can achieve. All the members see value in the collaboration, and feel that being a member of UBCEG allows them to perform their jobs better within the area, than if they were working in isolation.

The UBCEG quarterly meetings were confirmed to be a crucial aspect of the collaboration, with two important features. The first is the feedback time during meetings, which allows members to hear what each organisation is busy with as well as raise issues or request needed assistance. The second important feature is, the meeting minutes, which have created accountability amongst members. The meeting minutes act as a procedural structure, which assists the ongoing collaboration.

UBCEG has created a platform where members can exchange knowledge and expertise, which in turn has allowed members to increase their understanding of the area and therefore the context in which they practice. There is no formalized capacity building within UBCEG, but members learn from other partners and can ask advice at any stage, thanks to the UBCEG platform. UBCEG has created a space for communication and knowledge sharing and has built relationships between members, both of which will have long-term benefits.

Within this research, the efforts of UBCEG were reviewed in the two projects explored. The influence UBCEG had on the two projects was assessed, as was the suitability of combined environmental assessments for agri-ecological projects. The informal relationships and information-sharing platform in UBCEG, positively influenced the soil conservation works combined environmental assessment (Project 1). The structure of UBCEG meant that the project was supported by the partner organisations and the public participation process ran smoothly and quickly. Once funding was received from the national department, the combined environmental assessment gained authorisation quickly from the provincial department (a member of UBCEG). There were delays in the project which were out of the Department of Agriculture (the project proponent) control, but the influence of UBCEG benefitted this project. The project would also have been unfeasible if it were not conducted as a combined environmental assessment. It would have been too costly and

combined environmental assessments could potentially be used as a tool for agri-ecological projects in the future.

The leaders of UBCEG are responsible for acquiring funding from the Table Mountain Fund for a wetland environmental assessment (Project 2). The structures which exist within UBCEG, and the various members of UBCEG, will no doubt play an important role in the execution of this project. It is already evident that members of UBCEG will be required to constitute the steering committee and project team of the environmental assessment. The relationships between certain UBCEG members and the interested and affected communities will benefit the project, when requiring landowner participation. Agencies like the Breedekloof Wine and Tourism, and the Biodiversity and Wine Initiative have relationships with farmers in the area and will help with farmer involvement in the project. A combined environmental assessment, such as in Project 1, may be conducted towards the end of the project, for farmers who wish to expand their agricultural land onto degraded wetlands.

In the case study of UBCEG the researcher has identified and evaluated the following critical success factors for effective collaborative governance, in accordance with objective 4, which are:

1. Strong leadership
2. Quarterly meetings providing an information sharing and assistance platform
3. Minutes of meeting creating accountability
4. Relationships between members- creates trust and improved communication
5. Local member representation is vital- allows firsthand knowledge of the issues on the ground and relationships with local community benefits collaboration
6. Diverse range of stakeholders with different and complementary expertise and perspectives

From this research it can be concluded firstly that, without its dedicated leaders, UBCEG would not have persisted for the last 6 years. The second main conclusion is that the quarterly meetings constitute a most valuable aspect of UBCEG in facilitating information sharing and the development of meaningful working relationships among members. The third main conclusion is that further benefits will accrue if all members contribute more

outside of meetings, which would take pressure off the leaders. The fourth main conclusion is that the UBCEG collaboration has had positive outcomes in the Upper Breede Valley, contributing to job creation, providing training to disadvantaged individuals, creating environmental awareness amongst the youth, and positively influencing agri-environmental management with the soil conservation works project, and will no doubt do the same with the wetland environmental assessment. The fifth main conclusion is that combined environmental assessments are an effective tool which should be used for agri-environmental projects, particularly under a collaborative structure such as UBCEG, in striving to improve the sustainable resource management of an area.

## **7.2 Recommendations**

The following recommendations, which are addressing objective 5 and 6, on the functioning of UBCEG address the challenges highlighted in Chapter 5-about the functioning of UBCEG and Projects 1 and 2 on the basis of the literature highlighted in Chapter 2. Environmental governance is a complex, long-term challenge which can often extend over one generation (Underdal, 2010), which can make it exceedingly difficult to understand problems and find working solutions. Therefore these recommendations are largely context and time specific to UBCEG. Changing representatives of the member organisations and changing conditions within the Upper Breede Valley will influence UBCEG as an operational collaborative and these recommendations will have to be adapted accordingly.

There is a need to have the right stakeholders around a table (Mandell & Keast, 2009). In the case of UBCEG, the group may want to consider placing a greater emphasis on improving the commitment of local government and apathetic members. As confirmed in the literature, creating trust between agencies will improve the collaborative process (Vangen & Huxham, 2003) and attention should be given to building trust between individuals of the local municipality and UBCEG.

Leaders should predominantly have the role of creating an enabling environment. Within UBCEG, there is too much reliance on the leaders to undertake administrative functions and do most of the work. Greater delegation of responsibilities to other members would benefit the collaboration and take some pressure off the current leaders. Developing a greater clarity of how each member can contribute to UBCEG may give members the opportunity to

contribute more resources, which may in turn take dependency off the leaders. A memorandum of understanding could be a way to write a formalized written agreement of the roles of member parties, to ensure commitment. There needs to be a more formalized support system in place for members. UBCEG receives no external funding and cannot therefore, use money or resources to do formalized capacity building for its members.

Shortening the length of meetings may be a way to get uncommitted members to attend meetings more regularly, such as provincial departmental officials and representatives of local municipalities. By ensuring that the quarterly meetings are restricted to a maximum of three to four hours, members may be more willing to dedicate time to attend, if they know they could be back in their offices by midday. It is an aspect of UBCEG that is difficult to resolve, as meetings only happen every quarter and there is much to discuss. As mentioned, a strong point of the meetings is the feedback time between members and by shortening the length of meetings. A concern is that one does not wish to lose this valuable information sharing time.

There is no easy or single solution to improve the commitment of all members and to encourage them to contribute more. A brainstorming workshop between members could provide a structured opportunity for where members can collectively decide on the necessary changes that can be made to meetings to shorten them, whilst still retaining the valuable feedback time.

To summarize the researcher's recommended improvement areas for UBCEG are to:

1. Reduce dependency on leaders
2. Provide greater definition of substantive roles and delegation to members
3. Ensure leaderships succession planning
4. Streamline meetings
5. Develop greater commitment to attend meetings by the local municipalities
6. Use combined environmental assessments for more agri-ecological projects in the future.

These recommendations are intended to strengthen the UBCEG collaboration. A few procedural changes to UBCEG would no doubt add to the already effective mechanisms in place. The strongest aspects of collaboration, being that of relationships and communication

amongst members, already happen effectively in UBCEG and should remain a focus of the group.

The collaborative framework by Selin and Chavez (1995) which was adapted to represent UBCEG, although relevant to the case-study in this research, it could be refined. The problem-setting and direction-setting phases had many elements of overlap, as did the direction-setting and structuring phase. Some aspects on UBCEG could be considered to occur in both or either of the phases. The collaborative process figure could be adapted so the problem-setting and direction-setting blocks overlap to represent that some aspects occur in both, and the aspects which do occur in both phases be written in the section of overlap. The same can be done for the direction-setting and structuring phase.

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## Appendix A

*Interview Questions, adapted slightly for the context of each interview: (adapted from Thomson et al. 2007)*

1. When and how did your organization become involved with UBCEG?
2. What were the factors that led to the formation of UBCEG?
3. Are you aware of any such similar collaboration in other districts/provinces?
4. Do you think the UBCEG recipe could be used in other agric districts or are the setting with the UBV unique which therefore contributes to the success of UBCEG?
5. How are decisions made in UBCEG?
6. Do all partner organizations have to agree to a decision before it is made around activities of the UBCEG?
7. Does the collaboration hinder your organization from meeting its goals?
8. Would you say decisions are made by those who best understand the issues rather than relying on a hierarchy of authority?
9. Do informal relationships exist between your organization and the partner organizations which you feel benefit the collaboration?
10. Would you say with each meeting, issues become more finely focused and objectives become better executed or do the same issues keep arising with no better solution than the time before?
11. Would you say UBCEG develops the capacity of the involved organizations for future challenges?
12. Does your organization know *why* the other partner organizations are part of the collaboration?
13. Does your organization know *what resources* the other partner organizations bring to the collaboration?
14. Do partner organizations need your resources, services and support to accomplish their goals?
15. From reading past meeting minutes it seems as if the various partners undergo their own projects and at meetings they tell the other partners what they have been doing the past quarter. Is this correct? What projects require all the partners' involvement?
16. Is your organization's input valued and seriously considered before decisions
17. Do the objectives of other partners make it difficult for you to work with them?
18. Does your organization achieve its goals better by working with partner organizations than by working alone?
19. Would the collaboration be impaired or suffer if you pulled out of the partnership?
20. Do you feel there is a certain role-player or role-players who make the collaboration successful and who make proactive decisions so goals of the collaboration are achieved?

21. Are there any role-players whose involvement is counter-productive to the collaboration?
22. Would you say with more funding, more objectives and the success of UBCEG would be much larger?
23. Is this the first occasion you have been involved in a combined EIA?
24. Are you aware of any other combined EIAs which have been conducted in other districts?
25. Do you think combined EIAs are a better mechanism for agri-ecological projects in the future? Why?

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