

**COLLECTIVE IDENTITY AND COLLECTIVE ACTION IN THE
MANAGEMENT OF COMMON POOL RESOURCES:
A CASE STUDY OF DORO !NAWAS CONSERVANCY IN NAMIBIA**

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Abstract

Conservation is increasingly understood to require collective action, particularly in the context of community based conservation. This thesis is premised on the proposition that understanding the dynamic nature of the relationship between collective identity and collective action is fundamental to management of common pool resources such as are created through establishment of community conservancies in Namibia. I used collective identity and resilience theories to develop a framework for exploring change in collective action in the Doro !Nawas conservancy in Namibia. The framework is based on the assumption that change in collective action is dependent upon the temporal changes in two attributes of collective identity; identification and affective commitment. It is suggested that the framework also yields insight into how these may be applied in adaptive management. The research is informed by an interpretive paradigm accepting that collective identity and collective action are social constructs and that personal meanings could be revealed through in-depth interviews and documentary analysis. Computer aided software (Nvivo), manual analysis and a mix of inductive and deductive analysis yielded excerpts, codes and themes that were used to interpret change in the two attributes.

The framework I proposed to understand how identification and affective commitment influence collective action was helpful as a general model but it tends to convey a degree of cohesion and homogeneity that does not reflect the real situation, particularly during the 'collapse' phase when members of the collective respond to disturbances. My results show that collectives, including organisations, should be understood as collectives of individuals and groups of individuals who express differing levels of identification and affective commitment. Narratives can be used to track change in identification and affective commitment in collectives. Thus, the identification and affective commitment of members is reflected in the language they use to express feelings, thoughts and experiences toward the collective and behaviours that are supportive or destructive to collective identity. A need for incorporating collective identity into adaptive management is identified. I suggest that incorporating collective identity in strategic adaptive management would make those who engage with the process mindful of the collective identity, and therefore more inclined to manage collective identity in order to achieve the collective action required for successful common pool resources management.

I use the findings of my research to identify four issues for further research in community based collectives: firstly, research that focuses on the how to design institutional arrangements for conservancies and similar organisations that are more accessible and responsive to the collective;

secondly, research on understanding the role and influence benefit sharing can have in sustaining a collective identity that is supportive of conservancies and how it would contribute to making these systems more resilient; thirdly, research to determine how strategic adaptive management can be restructured and implemented in conservancies and protected areas so that it helps to sustain a collective identity and the collective actions that are required to secure them for future generations; finally, whether the long term intentions of community based conservation might be better served if the instruments of governance and the procedures for their application were engineered to make these social ecological systems more robust and if so, how this might be achieved.

Declaration of originality

I hereby declare that this thesis, except where indicated to the contrary in the text, is my own original work and has not been submitted for any degree at any other University.

Signed on this 23rd day of November 2012

A handwritten signature in black ink, consisting of a large, stylized initial 'A' followed by several vertical strokes and a long horizontal line extending to the right.

Alfons Wabahe Mosimane

Declaration – Publications and manuscripts

1. **Mosimane A W, Breen C M and Nkhata B A (2012)** Collective identity and resilience in the management of common pool resources. *International Journal of the Commons* 6 (2) 344–362.

A handwritten signature in black ink, consisting of a large, stylized initial 'M' followed by several vertical strokes and a horizontal line extending to the right.

Signed _____

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Dedication

To my children, Thato Yahmilla Mosimane and Waone Hotago Mosimane, for their unconditional love, patience and understanding over years of study.

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Abbreviations

ADMADE	Administrative Management Design Project
AGM	Annual General Meeting
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CBNRM	Community Based Natural Resources Management
CGGs	Community Game Guards
CMC	Conservancy Management Committee
COP	Conference of the Parties
CPRs	Common Pool Resources
DC	Disciplinary Committee
DNC	Doro !Nawas Conservancy
DRA	Damara Representative Authority
DTA	Damara Traditional Authority
GRN	Government of the Republic of Namibia
IRDNC	Integrated Rural Development for Nature Conservation
KNP	Kruger National Park
MET	Ministry of Environment and Tourism
MRC	Multidisciplinary Research Centre
NACSO	Namibia Association of CBNRM Support Organisations
NGO	Non-governmental Organisations
NRMP	Natural Resources Management Programme
NRWG	Natural Resources Working Group
OKACOM	Okavango River Basin Commission
RISE	Rural Institute for Social Empowerment
SADC	Southern African Development Community
SAM	Strategic Adaptive Management
UKZN	University of KwaZulu-Natal
UNAM	University of Namibia
UNFCCC	United Nations Framework Convention on Climate Change
VFA	Versteendewoud Farmers Association
VTC	Village Trust Committee
VWC	Village Wildlife Committee
WWC	Ward Wildlife Committee
WWF	Worldwide Fund for Nature

Chapter 1: Introduction

*“But, this commons nonetheless remains susceptible to collective action problems”
(Fennell, 2011:21).*

There is increasing appreciation that success of environmental and natural resources management depends on collective action (Dietz, Ostrom, & Stern, 2003). Adger (2003:389), in similar vein, argues that “...collective action is at the heart of many decisions on the management of natural resources”. This thesis is concerned with understanding resilient collective identity to sustain collective action in managing the use of common pool resources that are created through establishment of community conservancies such as those in Namibia. Common pool resources are those that are jointly utilised, making it difficult to exclude (weak or low excludability) potential users and where use of the resource by one person reduces the availability (subtractability) for other users (Berkes & Farvar, 1989; Fennell, 2011; Hoole, 2009b). Managing the use of common pool resources requires self-organisation to form collective action (Adger, 2003; Dietz et al., 2003; Hoole, 2009a; McGinnis & Walker, 2010; Ostrom, Burger, Field, Norgaard, & Policansky, 1999). Collective action is the set of actions the members of the collective institute to manage their use of common pool resources, for common benefit (Meinzen-Dick, DiGregorio, & McCarthy, 2004; Wade, 1987).

The spatial scale of environmental threats and natural resources under management determines the type of organisation required to implement the necessary activities (Hoole, 2007). There is evidence that environmental and natural resources management fails when spatial scales are not taken into consideration (Scanlon & Kull, 2009). Environmental threats and management of natural resources is complex and requires strategies at different spatial scales from international, to regional and community level. Activities at different levels involve stakeholders with diverse interests that make some form of collective action necessary to coordinate activities at the appropriate scale. Ostrom et al. (1999) contend that the management of resources at different scales depends on cooperation. For example, climate change is a global environmental threat which cannot be resolved by individual nation state actions but demands collective action (Ostrom, 2010). Coping with climate change requires cooperation and a common position between nation states to stabilise greenhouse gas concentration in the atmosphere and so reduce the threat of climate change. Coordination of activities among nation states required collective action which resulted in the formation of the United Nations Framework Convention on Climate Change (UNFCCC) in Rio de Janeiro, June 1992. Member states that were in agreement with the UNFCCC environmental treaty, signed up to become members of the Conference of the Parties (COP) which assesses member state's progress in dealing with climate change. COP is a collective action which recognises that the protection of the environment is a

common responsibility, because global environmental threats can only be addressed through collective thinking and understanding (Senge et al., 1999).

At a regional level, the management of shared watercourse systems, for example, requires collective action amongst neighbouring nation states. On 5 July 2001 the Southern African Development Community (SADC) region ratified the protocol on the management of shared watercourse systems in the region. This protocol enables member states to establish close cooperation and to coordinate their activities in the utilisation of shared watercourses. The protocol further expects member states to establish river basin management institutions for shared watercourse systems. For example, to demonstrate member states' commitment to collective action Angola, Botswana, and Namibia established the Okavango River Basin Commission (OKACOM) to coordinate the management of the Okavango river system (OKACOM, 2012).

At the community level, the management of wildlife and other natural resources on communal land in southern Africa requires collective action. Examples are the Natural Resources Management Programme (NRMP) in Botswana, the Community Based Natural Resources Management Programme (CBNRM) in Namibia, the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) in Zimbabwe and the Administrative Management Design Project (ADMADe) in Zambia. In these programmes the management of wildlife and other natural resources was devolved from central government to communities in rural areas (Jones, 1999a; Jones & Murphree, 2004). The devolution made it necessary for resource users at community level to self-organise for collective action in order to manage the sustainable use of wildlife and other natural resources on communal land. Devolution was based on the assumption that local resource users who live in close proximity to the resources will manage their use of resources better if they derive benefits from them because they have more to lose if the resources are degraded (NACSO, 2008).

While the evidence shows that the first part of this assumption is generally valid in that communities do respond to prospects of livelihood benefits that derive from CBNRM (Jones, 1999a, 1999b; NACSO, 2004), it is much less reasonable to assume that communities will manage their use of resources effectively (Child, 2004; Fabricius, Koch, Magome, & Turner, 2004). As may be anticipated this is a consequence of inexperience and capacity constraints, and also of weak governance (Fabricius, 2004a; Nkhata & Breen, 2010). The effectiveness of governance is determined by both formal and informal institutions. While governance can be improved through better design and enforcement of formal institutions much depends on how well informal institutions regulate behaviour (Nkhata & Breen, 2010). Because collective identity reflects shared values and beliefs it is a dimension of the informal institutions that determine how collective action is expressed (Fabricius, 2004a). Notwithstanding the acknowledged importance of informal institutions in sustaining the

collective action necessary for CBNRM it has not attracted much attention from scholars (Nkhata, Breen, & Abacar, 2009). This research seeks to contribute to understanding how to sustain the attitudes and behaviours that are necessary if conservancies are to be resilient in the changing world.

It is important that members of the collective share a collective identity as this helps them to achieve collective action when managing common pool resources. For example, the UNFCCC signatories to the conference of parties to address climate change threats, the SADC protocol on the management of shared watercourse systems, and the CBNRM to manage the use of wildlife resources, are all collective actions which require a collective identity. Common understanding of the collective identity enables members of the collective to contextualise their appreciation and expectations of the collective as it evolves. It allows for continuous self-organisation of the collective as the collective identity adjusts to reflect variability in supply of benefits and costs, and changing demands on common pool resources. Communities that participate in CBNRM expect to benefit through improved livelihoods from the management of wildlife and other natural resources (NACSO, 2008). Thus, if CBNRM is to deliver on longer-term expectations, it would be important to sustain collective identity and collective action.

Because of the complex and unpredictable nature of social-ecological systems and the fact that some drivers of change are beyond our capability to control, the success of managing the environment and natural resources depends on sustained collective action that is adapted to accommodate changing circumstances. The same may be said for systems defined at smaller social-ecological scales. Sustainable use of common pool resources requires collective action which is a function of collective identity. Changes in the demand for, and supply of services from the common pool resource, continually challenge the collective identity, and to sustain collective action in the long term it is desirable to construct a collective identity that is resilient. A resilient collective identity requires an adaptive approach for understanding the continuous dynamic processes inherent in the relationship between collective identity and the collective action.

Studies of collective identity and collective action over time (longitudinal studies) are likely to give insights into how to sustain collective action in support of the chosen outcome. The Doro !Nawas, conservancy, the sixth community conservancy in Namibia, established in December 1999, provided an opportunity to study change over a period of ten years. This research was designed as a longitudinal study of collective identity and collective action to yield a deeper understanding of how to sustain collective action in conservancies. The study anticipates that the research will hold relevance in other situations across a range of social and ecological scales.

Since independence in 1990, Namibia adopted a regulatory and policy approach that promotes a governance system to create and strengthen local level institutions to manage natural resources. Examples include the promulgation of the Nature Conservation Amendment Act, No.5 of 1996 for wildlife management, utilisation and tourism in communal areas; the Traditional Authorities Act No. 25 of 2000 that empowers traditional authorities to manage communal land; the Water Resources Management Act No. 24 of 2004 that provides for the devolution of the management of water supplies to communities; and the Forest Act No. 12 of 2001 which devolves management of the use of forest resources and other woody vegetation to communities to enhance socio-economic development. These legislative changes devolved the management of natural resources to local level institutions on communal land and prompted the need for effective collective action at a local level.

The most widely recognised devolution of natural resources management in Namibia took place under the CBNRM programme that established conservancies. Namibia is renowned for its successful implementation of CBNRM and received international recognition for its contribution to devolution of decision making and the management of natural resources to local communities while simultaneously addressing the need for poverty alleviation (Hoole, 2007; Hoole & Berkes, 2010; NACSO, 2010). In Namibia a conservancy is a formally established community based institution on communal land that gives local resource users rights to consumptive and non-consumptive use and management of wildlife, including tourism (Hoole, 2009a; Jones, 1999a; NACSO, 2010; Scanlon & Kull, 2009). At present 71 conservancies are registered (Figure 1.2) managing more than 132,697 square kilometres of communal land embracing 234,300 residents. A further 30 conservancies are at various stages of development (NACSO, 2011). Communities in most of the thirteen administrative regions of Namibia have formed conservancies, with the majority of conservancies located in the Kunene and Caprivi regions. According to NACSO (2011) conservancies cover 41.8% of the communal land and 16.1% of the total land in Namibia. People living in conservancies sustain their livelihoods using a mix of subsistence and commercial agriculture, benefits derived from conservancy activities; and grants from the government and remittances from family members employed outside of the conservancy (IRDNC, 2011; Jones, 1999a).

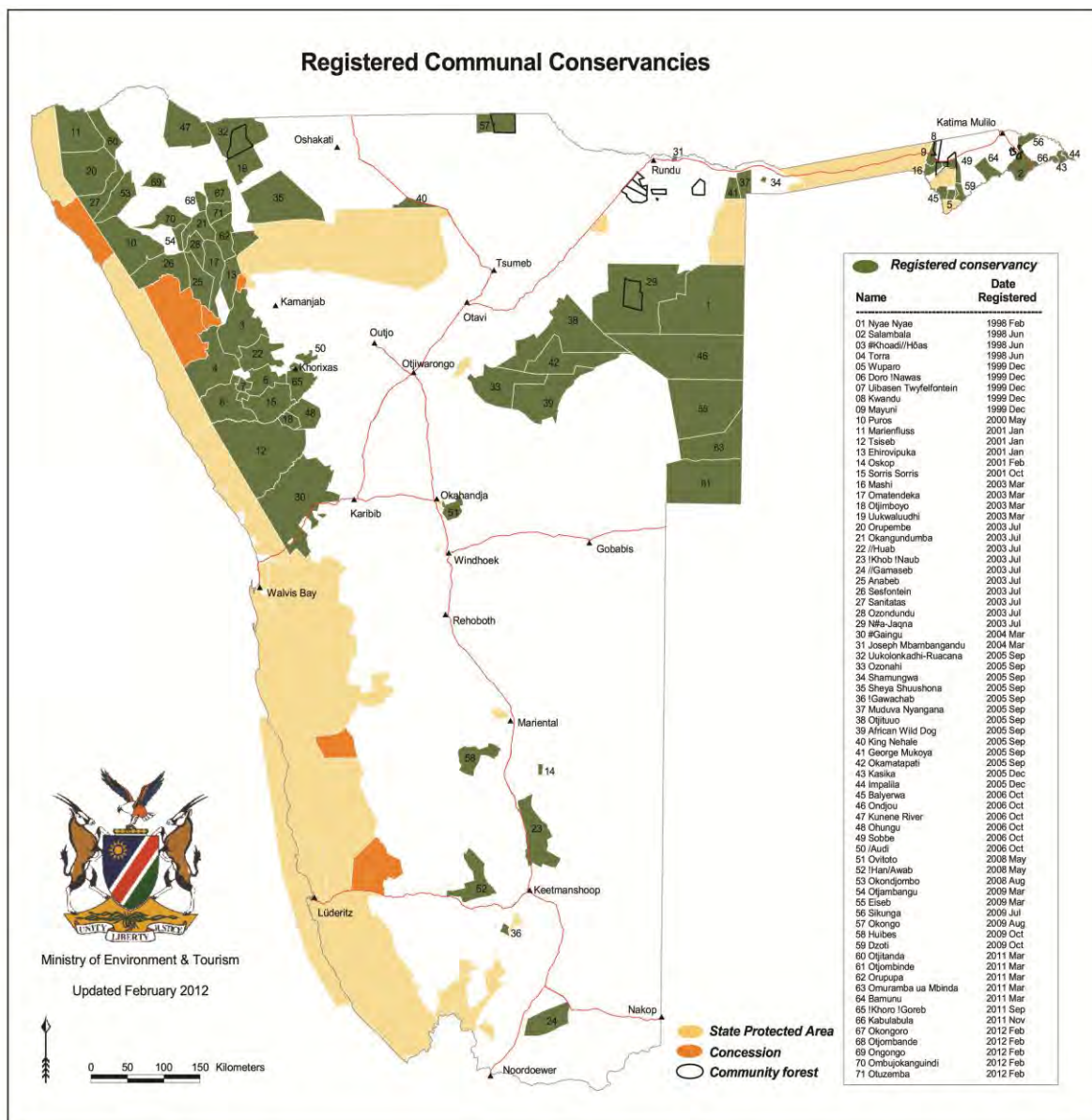


Figure 1.2: Map showing the distribution of communal conservancies and protected areas in Namibia. Note, community forests only refer to areas with bold boundaries. (Source: Ministry of Environment and Tourism, 2012)

Devolution of the management of natural resources evolved differently in different parts of the country, determined largely by resource ‘richness’ and the type of natural resources to be managed at community level. The Kunene region (Figure 1.1) is known for the scenic landscape and abundance of wildlife that attracts tourists to the region. What came to be known as the Namibian international flagship CBNRM programme with the focus on wildlife and tourism management on communal land (Hoole, 2009a; Jones, 1999a) originated in the Kunene region in the 1980s (Jacobsohn & Owen-Smith, 2003; Jones, 1999a; G. Owen-Smith, 2002). The region has the highest number (20) of communal conservancies, representing 34% of the total registered conservancies in Namibia

(NACSO, 2010, 2011). Landscape, wildlife and culture form the basis of tourism in the region (Wardell-Johnson, 2000). Furthermore, as wildlife numbers in the region have increased in response to improved management, tourism based on joint venture lodges and camp sites has also grown (IRDNC, 2011; Jacobsohn & Owen-Smith, 2003; NACSO, 2011).

The decision of government to return rights to manage and use wildlife to communities re-established wildlife as a common pool resource. To regain these rights communities are required to establish community-based institutions that provide for collective management in the long term. In Namibia, conservancies are the institutions established for management of common pool resources by local communities. Government requires that the community identify with the concept of a conservancy and in so doing establish a collective identity. The intention is that the management of the common pool resource will be responsive to the aspirations of the collective. This requires that individuals hold a collective identity that embodies identification with and affective commitment to the conservancy. They have to commit to behaviours and actions that support management for the common good. Conservancies therefore provide opportunities to study the dynamic nature of the relationship between collective identity and the collective action.

1.2 Research purpose and objectives

Research attention to the concept of collective action, especially as it relates to natural resource management and rural development, has increased in tandem with efforts to devolve management to local communities (Araral Jr, 2009). Although the literature in general provides several examples of successful collective actions (Dietz et al., 2003), there are studies that reveal many examples of failed collective action for which research should continue to seek better understanding (Meizen-Dick & Di Gregorio, 2004). Ostrom et al. (1999) acknowledge that there are many lessons and insights from the successes and failures in collective action. In the last three decades salient debates in the literature on collective action have focussed on factors which impede or facilitate collective action. While some studies have emphasised the physical characteristics of common pool resources such as scarcity, size and proximity to markets, others have stressed the importance of the characteristics of resource users themselves such as age and origin, wealth, salience, group size and heterogeneity (Agrawal, 2001; Agrawal & Gibson, 1999; Poteete & Ostrom, 2004b; Subramanian, Jagannathan, & Meizen-Dick, 1997; Wade, 1987). While the importance of these factors in fostering collective action has been elucidated, there are few longitudinal studies of how these factors, particularly those that relate to collective identity, foster or hinder collective action, in the context of complex resources systems such as are inherent in conservancies.

Meizen-Dick, DiGregorio and McCarthy (2004) have called for renewed focus of research to understand how collective action is developed and sustained over time. This call is based on the

understanding that long-term collective action embodies dynamic human processes which evolve over time. Despite a few exceptions (Folke, Berkes, & Colding, 1998; Janssen et al., 2006), not many studies have attempted to understand collective action from a dynamic perspective. Yet, collective action occurs in complex, dynamic and uncertain situations in which diverse and conflicting human interests tend to change over time (Dietz et al., 2003; Scanlon & Kull, 2009). This suggests that we need to understand the dynamic human processes through which resource users influence each other's behaviours and actions over a period of time to advance a common purpose. The purpose of this study is to contribute to understanding of the dynamic nature of the relationship between collective identity and the collective action. Viewing collective identity and collective action as necessary but vulnerable in management of common pool resources required that the study be designed to interpret change over a number of years.

My specific research objectives are to:

- Develop a framework to explore the role of collective identity in understanding collective action in the management of common pool resources;
- Understand how change over time in collective identity attributes, identification and affective commitment affects the resilience of collective action;
- Examine how collective identity could be incorporated into strategic adaptive management

1.3 Organisation of chapters

Chapter 2 outlines the theoretical and conceptual framework of the study. In the chapter I contextualise community based conservation in Africa. I then develop the argument that understanding the dynamic nature of the relationship between collective identity and collective action is fundamental to management of common pool resources. I draw on collective identity and resilience theories to develop a framework for exploring change in collective action. Chapter 3 presents the methodological framework and describes the context in which the research was designed and conducted. The colonial history of Africa, particularly the marginalisation of indigenous people from natural resources has a strong bearing on how they are positioned to assume management of natural resources. In chapter 4 I provide the historical context for the study of collective identity in the establishment and operation of the Doro !Nawas conservancy. The chapter also gives an overview of the conditions that affected development of Doro !Nawas conservancy during the period 1960 – 2010. I then draw on the findings of interviews and documentary analysis to interpret the changes that have occurred in the conservancy. Chapter 5 assesses the relevance of the adaptive cycle framework developed in chapter 2, using identification and affective commitment as attributes of collective identity to understand the organisation and growth, consolidation, collapse and reorganisation of the conservancy collective identity. In chapter 6 I consider three issues that have emerged from the study: Understanding the attributes of collective identity; detecting trends in collective identity and

incorporating collective identity into an adaptive management process. Chapter 7 summarises the key conclusions from this research, discusses the limitations of the study and suggests directions for future research.

Chapter 2: Theoretical framework: Collective identity, action and resilience in the management of common pool resources

I start this chapter by contextualising community based conservation in Africa. My purpose is to illustrate the central role for collective identity and collective action in CBNRM and to show why it can be so challenging for communities to sustain collective effort for conservation. I then develop the argument that understanding the dynamic nature of the relationship between collective identity and collective action is fundamental to management of common pool resources and draw on collective identity and resilience theories to develop a framework for exploring change in collective action. Two key attributes of collective identity, identification and affective commitment, provide the premise for interpreting, tracking and directing change in collective action. Lastly I interpret how the interactions between the two attributes contribute to desirable resilience in collective action (See Appendix 1 for the published version of this chapter). The applicability of the framework is tested and reviewed in Chapters 5 and 6.

2.1 Community based conservation in Africa

Conservation and management of natural resources in the twentieth century was largely achieved through establishing protected areas. The premise of this approach was to reserve places for conservation of nature through separating society from nature (Jones & Murphree, 2004). During the colonial era parks created in Africa (Hutton, Adams, & Murombedzi, 2005) and southern Africa such as the Kruger National Park in South Africa in 1926 and the Etosha National Park in Namibia in 1907, exemplified what has been termed “fortress conservation” because of the strong protectionist philosophy. This approach failed to take into consideration the complex relationship between society and conservation. Of particular relevance to this study is that traditional knowledge of and dependence on natural resources was ignored as indigenous people were marginalised from their livelihood resources through forced removals and legislation that excluded them from management of resource use (Berkes, 1989; Berkes, Folke, & Colding, 2000; Child, 2004; Fabricius, 2004a). The World Congresses on Parks and Protected Areas of 1982 and 1992, encouraged conservationists to adopt more people oriented, local participation and sustainable use of natural resources approaches to conservation (Brechin, Wilshusen, Fortwangler, & West, 2003; Hutton et al., 2005).

Community based approaches to conservation that are inclusive and people oriented gained traction in the twenty first century and have been widely implemented in the world (Berkes, 2004; Western & Wright, 1994). The premise of community based conservation is to create a link between livelihoods and conservation, by involving people in the management of natural resources, and to provide them with incentives to support and comply with natural resources management principles and practices

(Brechin et al., 2003). This approach devolves responsibility for managing natural resources to local resource users. Community based conservation is thus defined through concepts such as local resources users' participation in decision making, empowerment, 'management by, for, with the community', economic well-being and respect for the rights of local resource users (Child, 2009; Western & Wright, 1994). The fundamental assumption of the approach is that local resource users who live in close proximity to the resources will manage the resources better if they derive benefits because they have more to lose if the resources are degraded (Thakadu, 2005; Twyman, 2000; Western & Wright, 1994).

Community based natural resource management (CBNRM) has its origin in community based conservation (Jones & Murphree, 2004) but, in southern Africa, some authors consider the terms community based conservation and CBNRM to be synonymous (Turner, 2004b), and there are many variants of community based conservation in the world (Barrow & Murphree, 1998). In Africa, and southern Africa in particular, CBNRM emerged in the 1980s during the transition towards decentralisation and democratic participation (Meinzen-Dick, Knox, Place, & Swallow, 2002). The intention was to counter the exclusionary "fortress conservation" approach which separated people from nature through creating parks (Adams & Hulme, 2001). CBNRM was thus a response directed toward linking conservation with development; moving beyond the separation of people from wildlife (Fabricius, 2004a) and restriction of rights to derive livelihoods from utilising the resources (Hulme & Murphree, 2001; Scanlon & Kull, 2009). The two key principles of CBNRM were devolution of responsibility to manage natural resources to local communities living close to the resources and creating benefits and incentives that would encourage communities to adopt attitudes and behaviours that are conservation oriented (Jones & Murphree, 2004; Murphree, 2009; Steiner & Rihoy, 1995). In this light Jones and Murphree (2004) argue that CBNRM is a communal system of resource management that empowers local communities to make decisions about natural resources. It is viewed as conservation 'by the people', 'with the people' and 'for the people' (Child, 2004; Hutton et al., 2005).

Natural resources on communal land can be regarded as common pool resources because in principle, they may be utilised by all members of the community and thus the foundations of CBNRM are to be found in common pool resources theory (Steiner & Rihoy, 1995). Eight principles for enduring common pool resources institutions are shown in Table 2.1. These principles, drawn from the work of Ostrom (1990), became the foundation of CBNRM in southern Africa (Campbell et al., 2001; Fabricius, 2004a). The principles of common pool resources theory are considered to have provided the basis of the CBNRM programme in Namibia (Jones, 1999b), informed the "CAMPFIRE principles" (Murphree, 1997) and are considered to be the foundation of the principles of successful CBNRM (Shackleton, 2000).

2.2 CBNRM in southern Africa

Although CBNRM in southern Africa is based on common conceptual foundations, different approaches emerged across countries (Steiner & Rihoy, 1995). CBNRM programmes in southern Africa initially focussed on wildlife management and Zimbabwe and Namibia were the first countries in the 1970s to pass legislation to give commercial land holders rights over wildlife on their properties. The success of wildlife management on commercial private land in Zimbabwe and Namibia gave impetus to improve conservation on communal lands which led to the emergence of CBNRM (Hoole, 2009a; Jones & Murphree, 2004). Wildlife management rights were extended to communal land residents in Zimbabwe in 1982 when the supporting legislation for the Communal Areas Programme for Indigenous Resources (CAMPFIRE) was passed (Hoole, 2009a; Steiner & Rihoy, 1995). The Administrative Management Design for Game Management Areas (ADMAGE) programme in Zambia was piloted in 1983 and an enabling legislation was drafted in 1994 (Steiner & Rihoy, 1995).

In 1982 a local NGO, the Namibia Wildlife Trust, with the support of local traditional chiefs started experimenting with a community based approach to conservation but enabling legislation was not gazetted until 1996 after Namibia attained independence (IRDNC, 2011; Jacobsohn & Owen-Smith, 2003; Jones, 1999a). The government of Botswana, started reviewing legislation in the mid-1980s and enabling legislation for what was referred to as the Natural Resources Management Programme (NRMP) was passed in 1992 (Steiner & Rihoy, 1995). Several other community based conservation approaches have developed in parts of the continent and in southern Africa (Fabricius, 2004a, 2004b). In Table 2.1 I compare four CBNRM approaches against the Ostrom principles for enduring common pool resources institutions.

Table 2.1: Institutional comparisons of CBNRM in southern Africa

Design principles for enduring common pool resources institutions in southern Africa (Ostrom, 1990)	Namibia, CBNRM	Botswana, NRMP	Zimbabwe, CAMPFIRE	Zambia, ADMADE
Clearly defined boundaries for rights to resource use and management	Local communities negotiate and self-define conservancy boundaries	No definition by local community; established game management boundaries are used as boundaries	No local community definition. Established rural district wards used as boundaries	No definition by local community; established game management boundaries are used as boundaries
Appropriate local rules for governing resource use and access	Conservancies monitor wildlife and propose quota to government for approval; conservancies responsible for decisions on quota management and tourism development; all revenue and benefits accrue to conservancies	Central government establish, wildlife laws and quotas; Village Trust Committee (VTC) responsible for decisions on quota management and tourism development; all revenue and benefits accrue to VTC	Central government establish, wildlife laws and quotas; some wildlife management and benefits are devolved to rural district councils; revenues are shared between rural districts councils and ward/village level	Central government establish, wildlife laws and quotas; revenues and benefits shared between central government and community chiefs. Chief decides on development projects.
Collective choice and arrangements	Conservancy committees elected to represent community members	Community elect VTC to represent community members	Rural district management; Village Wildlife Committee (VWC) or Ward Wildlife Committee (WWC) elected to represent community members	Chiefs and headman represents community members and make decisions
Provision for monitoring resources and use	Conservancies appointed Community Game Guards (CGGs) and community members also monitor and report to conservancy management committee (CMC) and central government	Central government monitors wildlife and use	Central government monitors wildlife and use	Central government monitors wildlife and use. Scouts are appointed for local wildlife management and reports to central government.

Graduated sanctions for violation	CGGs reports to CMC and central government. Central government applies wildlife laws, provides enforcement and prosecutes violation	Central government applies wildlife laws, provides enforcement and prosecutes violation	Central government applies wildlife laws, provides enforcement and prosecutes violation	Central government applies wildlife laws, provides enforcement and prosecutes violation
Conflict resolution mechanism	CMC prepare management and benefit distribution plans; regular CMC meetings and annual members meetings; government mediate in conflicts.	VTC prepare management and benefit distribution plans; regular CMC meetings and annual members meetings; government mediate in conflicts	Central government and rural districts council resolve conflicts	Central government; chiefs and headmen resolve conflicts
External recognition of local institutions	Central government legally recognise conservancies, boundaries and members legally registered	Central government legally recognise VTC, boundaries and members.	Central government recognise rural district council. Each ward/village elects VWC/WWC. Programme top-down but recognise VWC/WWC.	Central government recognise community chiefs; programme top-down
Nested enterprises for appropriation and governance	Governance and activities are nested in multiple layers of networks.; central government, NGOs, conservancies	Governance and activities are nested in multiple layers of networks; central government, NGOs, VTC.	Central government dominant; rural districts, NGO support , VWC and WWC	Central government dominant; NGO support and community chiefs

Sources: Rihoy (1995), Fabricius (2004) and Hoole (2009)

Evident from this analysis is the fact that approaches to CBNRM in southern Africa has common conceptual foundations although there are differences that reflect the social, political, economic and environmental contexts of individual countries. Although all countries appear to apply the design principles, the interpretation differs slightly. For example, while communities in Namibia were required to self-organise and define the boundaries, in Botswana, Zambia and Zimbabwe the central government defined the boundaries. There is also difference in the devolution of the management of natural resources, to local communities. In Namibia, the devolution of wildlife rights and benefits was to communities, while in Zambia and Zimbabwe communities shared rights and revenues with regional level authorities. The success of CBNRM in Namibia, compared to other countries, is attributed to effective devolution of wildlife rights and benefits to communities. The success of CBNRM in southern Africa differs from country to country depending on the implementation of the design principles, suggesting that all design principles are equally important for the success of CBNRM in southern Africa. Child (2009) observed that in cases where the architects of CBNRM failed to either understand or implement the design principles there were reduced likelihoods of success. Jones and Weaver (2008) noted that the experiences of Zambia and Zimbabwe motivated Namibia to apply all the design principles for CBNRM.

2.3 Critique of CBNRM

While the early motivation for CBNRM was to achieve conservation objectives, because this was to be achieved through enhancing the flow of benefits to communities, CBNRM soon became interpreted as an approach to development and poverty relief (Brechin et al., 2003; Dressler & Büscher, 2008; Hulme & Murphree, 2001). Not surprisingly perhaps, the implementation of CBNRM over the years attracted critique about its success in development and conservation. Some argue that community based conservation is not working (Berkes, 2004; Child, 2009) suggesting that because the conservation and development objectives are not the same, the effectiveness of conservation is being diluted (Berkes, 2004; Fabricius, 2004a). Others have observed that CBNRM is an interventionist approach to development (Büscher & Dressler, 2007; Büscher & Dressler, 2012; Dressler & Büscher, 2008). Because CBNRM is open to different interpretations the results of a community based conservation approach to conservation and development have been mixed (Berkes, 2004).

There are also different opinions on what should be understood as benefits. Generally the benefits of CBNRM have been articulated as income, work and wildlife produce (Ashley, 2000; Long, 2002;

Turner, 2004a) but some scholars consider the social processes inherent in CBNRM to hold particular significance because of their role in strengthening social capital and empowering members of the community (Anstey, 2005, 2009; Nkhata et al., 2009). Perhaps with its origins in conservation and with such widely different understandings it is not surprising that social scientists have criticised CBNRM for the failure to deliver the intended benefits to communities and thus failing to meet people's expectations (Balint & Mashinya, 2006; Dressler et al., 2010). CBNRM has also been criticised for not developing the competencies and capacity in communities that would enable them to manage what are increasingly being interpreted as complex social ecological systems (Fabricius, 2004a). The mixed outcomes of CBNRM have caused some conservationists to bemoan the loss of biodiversity in CBNRM areas and to argue for a return to the 'fortress' approach to conservation (Hutton et al., 2005; Wilshusen, Brechin, Fortwangler, & West, 2002).

Because CBNRM in an African context is associated with the rural poor, the distribution of benefits assumes particular significance. This is particularly so because the benefits available for distribution and the needs of beneficiaries vary over time such that distribution is constantly under scrutiny and is commonly contested (Jones & Weaver, 2008; NACSO, 2010). Success requires effective institutions that for a number of reasons have been difficult to establish, for example: traditional institutions have been weakened; devolution for the central government has often been ineffective; communities do not have the experience and competencies; and self-serving agendas of NGOs (Balint & Mashinya, 2006; Blaikie, 2006). Faced with these challenges it is understandable that progress would be slow.

Perceptions of failure of CBNRM have also been attributed to improper implementation of the guiding principles as they relate to devolution of authority and the responsibilities (Murphree, 2002; Songorwa, 1999). The weak implementation is attracting academic criticism that CBNRM is not working (Child, 2009). CBNRM provides institutions of collective action, and literature suggests that the development of local institutions takes longer than a decade (Berkes, 2004). Child (2009) further suggests that the principles and practices of CBNRM are allowed to emerge organically, through trial-and-error while adapting, hence the reasons for taking decades to develop proper collective action institutions. Community conservation of wildlife resources on communal land is dependent on collective action, and the search for effective collective action models takes longer. Child (2009:196) argues "...CBNRM is not about a particular resource but is a way of thinking about local collective action and institutions". This statement and the critique of CBNRM suggest that the conditions necessary for the emergence of local collective action and effective CBNRM are developing albeit slowly (Child 2009). My research contributes to understanding the development of collective action in CBNRM and how it adapts to changing social ecological context. Emerging appreciation for the CBNRM as being practised in complex and dynamic social-ecological systems has directed attention

to the concepts of adaptive management and resilience (Armitage, 2005; Berkes, 2004; Nkhata & Breen, 2010).

2.4 Adaptive management of CBNRM

Berkes (2004) argues that community based conservation, including CBNRM, are complex adaptive systems in which society and the ecosystem are interrelated. The interaction between the society and the natural ecosystem is dynamic, making CBNRM a complex social ecological system, which is non-linear, uncertain and is able to self-organise (Berkes, 2004). Community based conservation, including CBNRM, as a participatory approach, makes communities central in the management process. Management of social and ecological non-linear systems with natural variations requires a process that is adaptive to changes, hence the introduction of adaptive management of natural resources. CBNRM literature in southern Africa, and Namibia in particular, demonstrate the need for adaptive management to understand collective action (Child, 2009; Fabricius, 2004a; Jones, Hulme, & Murphree, 2001; Jones & Weaver, 2008; NACSO, 2008).

Adaptive management is a tool, a multidisciplinary approach for dealing with uncertainty in complex social ecological systems (Gunderson, 1999; Gunderson & Holling, 2001; Roux & Foxcroft, 2011) while learning and incorporating feedback loops in the management process (McLain & Lee, 1996). Adaptive management has its origin from natural resources management in the mid-1970s, through the work of Holling (1978) and Walters (1986). It emerged from experimental work and the application of findings in ecology. The approach is premised on accepting uncertainty and admission that humans have limited understanding that can be applied to managing the social ecological system (Lee, 1999). Adaptive management is inclusive, involving all stakeholders so as to incorporate their views and knowledge in management and decision making (Johnson, 1999). It has been implemented in different ecosystems and environmental management situations for more than two decades (McLain & Lee, 1996; Van Wilgen & Biggs, 2011; Venter, Naiman, Biggs, & Pienaar, 2008).

Adaptive management of dynamic social ecological systems is directed at learning, through an ongoing process of trial-and-error, reflecting, revising and testing, and in the process building mutual trust among the stakeholders (Berkes, 2004; Folke, 2006; Olsson, Folke, & Berkes, 2004). The management process facilitates learning among individuals and organisations to acquire knowledge which enables them to adapt their behaviour in response to the situation or to what are considered likely future scenarios. The ability of individuals and organisations to access information, and their willingness and capacity to sense and respond to the information are critical elements in adaptive management (Olsson et al., 2004). Where collective action is a precondition for proper functioning, such as in CBNRM, individuals need to be convinced that developing shared understanding, and changing behaviour to engage in collective action is in their best interest.

Through adaptive management of social ecological systems individuals and organisations with the capacity to self-organise adapt to manage for resilience. The institutional arrangements (Anderies et al., 2004) and management competencies of individuals and organisations determines how social-ecological systems respond to and adapt, and in the process they influence the resilience of the system, either intentionally or unintentionally (Walker et al., 2006). The capacity of individuals to adapt their individual and collective behaviours in response to change or anticipation of change in a social ecological system enhances resilience. Folke (2006:259) defines resilience as “the capacity of a system to absorb disturbance and re-organise while undergoing change so as to still retain the same function, structure, identity and feedbacks”. The resilience approach is discussed in greater detail later in the chapter. In some literature, the concepts resilience and adaptive capacity are used interchangeably, because adaptive capacity is viewed as an aspect of resilience (Walker et al., 2002).

2.5 CBNRM in Namibia

In Namibia although community based conservation started informally in the early 1980s, it was not until the 1990s that it became a formal process first with wildlife management and subsequently it expanded to water and forestry management. National legislation, enables a local community to form a conservancy which is defined as a formally established, community based natural resources management unit on communal land that gives local resource users conditional use rights of wildlife and tourism on communal land (NACSO, 2009). To form a conservancy, local resource users must meet requirements such as clearly defined and uncontested area boundaries, a defined membership, an elected management committee and a legal constitution of the conservancy. A conservancy can be understood as requiring collective action that facilitates the management of natural resources with the common objective of providing benefits for local resource users.

The challenges of natural resources management facing conservancies are diverse and complex. NACSO (2004:34) observed that “many conservancies are faced with the complex task of organizing, planning and implementing a range of management and development activities”. A number of systems and procedures have been introduced, including the conservancy management framework in response to this observation but these in turn, require skills and expertise which do not yet exist in most conservancies. While institutional support to strengthen collective action through governance in conservancies has been one of the core pillars of CBNRM for the past decades (NACSO, 2008) the democratic process of elections after every three years contributes to the erosion of skills in conservancy management committees when members who have gained experience are not re-elected.

Not surprisingly, conservancies have been beset with management failures that compromise accountability and transparency in the management of the conservancy (NACSO, 2008, 2010). A number of authors have identified the understanding of governance systems; and how these are

devolved and function as obstacles to the performance of CBNRM in southern Africa (Nkhata & Breen, 2010). In the context of this study, management, and more particularly the capacity of management to adapt to disturbances, is understood to be a factor affecting resilience in conservancies because of its role in sustaining collective identity and collective action. In the next section I develop a framework for understanding the dynamic interplay between collective identity and collective action, using two variables, affective commitment and identification.

2.6 The relationship between collective action and collective identity

The concepts of collective action and collective identity have long been a focus of social science research. The relationship between collective identity and collective action has been extensively explored particularly in social movement literature (Holland, Fox, & Daro, 2008; Melucci, 1996; Polletta & Jasper, 2001; Snow, 2001). Elsewhere, social psychology has been helpful in clarifying the connection between the individual and the collective as they relate to collective action and collective identity (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Klandermans, 2002; Klandermans, Sabucedo, Rodriguez, & De Weerd, 2002; Simon & Klandermans, 2001). The literature suggests that in order to achieve collective action, members of a user group need to develop a collective identity which is founded on a shared understanding. The shared understanding enables members to contextualise their appreciation and expectations of the collective as it grows and evolves. It allows for continuous self-organisation as the collective identity adjusts to reflect variability in the supply of benefits and costs due to diverse and changing demands on common pool resources (CPRs). This implies that where it is necessary for collective action to be sustained in the long term, as in the use of CPRs, it is necessary for members of a user group to be conscious of and responsive to change in collective identity.

While the literature in natural resource studies has in the past few decades focused on collective action under conditions in which groups of resource users self-organise to govern use of resources on which they depend (Agrawal, 2001; Araral Jr, 2009; Dietz et al., 2003; Hoole, 2009b; McGinnis & Walker, 2010; Meinzen-Dick et al., 2004; Ostrom et al., 1999; Poteete, Janssen, & Ostrom, 2010; Wade, 1999), an appreciation of the concept of collective identity in understanding collective action has been missing. The management of CPRs through collective action is dependent upon collective identity. Change in collective action reflects temporal changes in the attributes of collective identity that differentiate a group of people – in other words the collective – from other similar social units. Such an identity, which I herein refer to as collective identity, is defined by shared meanings which direct the behaviours of resource users (Araral Jr, 2009; Berkes, Feeny, McCay, & Acheson, 1989; Hoole, 2009b). The shared meanings in turn define and underpin the actions of the members who act on behalf of the collective. Thus, collective identity can be considered as a precursor that facilitates or impedes collective action in the use of CPRs (Melucci, 1996; Polletta & Jasper, 2001; Snow, 2001).

Collective action is facilitated and sustained where there are shared interests and understandings that are actualised and reinforced through collective identity. Although collective action may in some instances not last when those interests are no longer shared and thus the group loses its collective identity, I contend that collective identity facilitates a degree of homogeneity which transforms individual experiences into collective experience (Simon & Klandermans, 2001). In other words, collective identity confers on the group unique characteristics based on shared meanings, experiences and expectations around which the group members coalesce (Cerulo, 1997; Snow, 2001). Such characteristics are expressed through the unique attributes of a resource user group, the resource it exploits, and the governance system that regulates use. In this way, the construction, maintenance and collapse of collective action can be understood as a dynamic system nested within a larger social-ecological system defined by the resource, its users and the institutions.

I acknowledge that the resilience of collective action may not be socially desirable in all instances and that some undesirable states of collective action may often be highly resilient. For example, a collective action to hunt might continue to exist in a community where collective action is changing to tourism. The state of collective action is particularly pertinent if I have to identify those attributes that can help me recognise, interpret and manage change in collective action (Ashmore et al., 2004; Ellemers, Kortekaas, & Ouwerkerk, 1999; Roccas & Brewer, 2002). From this perspective, accepting the importance and vulnerability of collective identity in directing behaviours of resource users towards the collective, highlights the need to develop an understanding of how to foster resilience in collective action. Burke and Cast (1997) suggest that identity is a process that can either be static or dynamic depending on particular circumstances. Collective identity continuously changes in response to discrepancies that may develop between individually held meanings (self-meanings) and collective meanings (Burke, 2006). These changes occur within a dynamic system that is self-regulating (Burke, 2006; Burke & Cast, 1997). Changes in collective identity may also occur in situations where multiple identities that share similar sets of meanings emerge and are activated at the same time (Burke & Cast, 1997).

For example, resource user groups in wildlife conservancies in Namibia have been shown to have different identities each defined by a different pattern of resource use (Mosimane, 1998, 2003; NACSO, 2005, 2006). Such groups include divergent resource users ranging from livestock farmers to users who engage in wildlife tourism activities. While each of these groups represents a distinct collective, some users align with more than one collective identity. In such situations, when change is slow or actions are taken to ensure that the discrepancies between collective meanings are small, collective identity may evolve slowly and remain relatively stable. When striving to sustain collective identity, strategic and conscious changes of behaviour can be used to reduce discrepancies between self-meaning and collective meanings.

Another useful example focuses on situations that involve religious groups, which are considered as enduring collectives founded on deeply held shared meanings. In such situations, self and collective meanings are continually realigned such that discrepancies remain small and collective identity appears stable (Burke, 2006). In contexts where shared meanings are not deeply entrenched, collective identity is more susceptible to collapse as tensions develop between individual and collective meanings. Given such potential consequences for a common pool system, collective action ought to be resilient in its response to emerging meanings so that user actions are aligned with the shared meanings of the collective.

The development of collective identity has mostly been studied from initiation to maturity at which stage it has been considered to remain relatively stable or to collapse. Collapse of collective identity, for example, would happen when the reasons for collective action no longer exist (Holland et al., 2008; Polletta & Jasper, 2001). For example, community members might form a collective identity around a water problem which requires collective action, but once the problem is resolved there is no longer need for collective identity, it collapses and community members return to their individual roles in the community. However, where common pool resources sustain livelihoods it is necessary to sustain collective action in the long term which requires a persistent collective identity, even where this may adapt to accommodate social-ecological change. This suggests a need for interpreting collective identity in the context of resilience of social-ecological systems. Given that a long-term perspective is required in management of the use of CPRs, I make the proposition that the state of collective identity is an important determinant of resilience in collective action. Thus, the strength of collective identity is a predictor of the trajectory of collective action.

2.7 Collective identity theory

Collective identity theory identifies seven distinct elements for the analysis of collective identity (Ashmore et al., 2004). The elements are: self-categorisation/identification, evaluation, importance, attachment and sense of interdependence/affective commitment, social embeddedness, behavioural involvement, and content and meaning. As I explain below, for the purpose of this study I selected two key attributes of collective identity, identification and affective commitment which provide the premise for interpreting, tracking and directing change in collective action. These attributions of collective identity are helpful in understanding change in collective action.

The terms identification and self-categorisation have at times been used interchangeably in literature (Bergami & Bagozzi, 2000). For the purposes of this study, identification is the process in which people come to view themselves in relation to the collective. It exemplifies the cognitive link of an individual to the collective and reflects the level of awareness of an individual's membership to the collective (Bergami & Bagozzi, 2000; Ellemers et al., 1999; Jackson, 2002). An important aspect of

collective identity is that people first have to identify with the collective before developing other dimensions of collective identity. Identification is the first and most basic attribute of collective identity, which gives people a sense of meaningfulness (Ashmore et al., 2004) and allows individuals to assimilate collective goals as their own (Bergami & Bagozzi, 2000). I am keenly aware that identification on its own may not be sufficient for people to behave in terms of the collective, especially when they do not feel committed to a particular collective identity (Bergami & Bagozzi, 2000; Ellemers et al., 1999). However, the extent to which people identify with the collective determines the inclination to behave in terms of the collective. Identification is thus characterised by an individual first recognising the collective of which the individual is a member, followed by an appreciation of the individual's membership to the collective (Jackson, 2002).

The term affective commitment refers to a state in which an individual feels emotionally involved with the collective and other members of the collective. It embodies the emotional link of an individual to the collective (Bergami & Bagozzi, 2000; Ellemers et al., 1999). It is usually defined in terms of emotional attachment and sense of belonging (Ashmore et al., 2004; Bergami & Bagozzi, 2000). The extent to which individuals feel affectively attached to the collective influences how they respond to the demands placed on them by the collective (Ellemers et al., 1999). Emotional attachment represents a process through which individuals merge their sense of self with the collective (Ashmore et al., 2004). The basic fundamental need to belong allows people to form positive and stable relationships that conform to the collective (Baumeister & Leary, 1995). Affective commitment is thus much more than identification and is developed through strong ties, bonds and a sense of interconnectedness (Ashmore et al., 2004; Jackson, 2002). It is characterised in terms of emotions (such as love or hatred, happiness or unhappiness, and likes or dislikes) arising from attraction to the collective (Bergami & Bagozzi, 2000; Jackson, 2002).

I contend that the degree of identification and the amount of affective commitment influence how people relate to the collective identity and in turn, impact on the collective action to manage the use of CPRs. The degree of identification is a measure of how closely the meanings held by an individual or sub-population of individuals accord with the collective meanings (Bergami & Bagozzi, 2000; Ellemers et al., 1999). However, when there is a discrepancy in the two sets of meanings, the individual or group may not willingly identify with the collective. Affective commitment is a measure of how emotionally involved an individual or group of individuals is with the collective meanings, identity and associated actions (Bergami & Bagozzi, 2000). In this way, the more emotionally involved people are, the more committed they are to collective action.

Although these two attributes of collective identity do not necessarily provide the only perspective for examining resilience in collective action, I suggest they provide a useful approach for analysing the

nature and substance of change in collective action especially as it relates to the management of CPRs. I consider the adaptive cycle of collective action (Figure 3) as a representation of how collective identity based on the two attributes varies over time. As such, the two attributes are important in understanding how collective identity links members of the collective to a set of meanings, which if stable would produce consistent actions aimed at the collective (Burke & Reitzes, 1991). Conversely, a change of meanings may result in actions that are inconsistent with the collective.

2.8 Resilience theory

Resilience theory provides a useful means of understanding how collective action as a system responds to change when its integral components change (Duit, Galaz, Eckerberg, & Ebbesson, 2010; Folke, 2006; Holling, 1973, 2001; Nkhata, Breen, & Freimund, 2008). I use resilience theory both as an approach (a way of thinking) to analyse change in collective action (Duit et al., 2010; Folke, 2006; Holling, 1973; Nkhata et al., 2008) and in broad terms as a system property to refer to the ability of collective action to maintain its configuration in the face of internal change and external shocks (Cumming & Collier, 2005; Poteete & Ostrom, 2004a). Although I argue that resilience theory (Holling, 1973) is helpful in understanding the dynamics of collective action in the management of common pool resources based on collective identity, I am keenly aware that the concept of resilience has many interpretations and is applied across various scientific disciplines (Nkhata et al., 2008; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008; Poteete & Ostrom, 2004a; Subramanian et al., 1997). While some authors (Brand & Jax, 2007) consider that the ecological meaning of the concept has been broadened and the term has become ambiguous, its positive influence in facilitating communication and research across disciplines is generally considered useful (Anderies, Walker, & Kinzig, 2006; Cumming & Collier, 2005; Folke, 2006). In the same vein, for the purposes of this study, I define resilience as “the ability of a system to absorb disturbance and self-organise while undergoing change so as to still retain essential functions, structure, identity and feedback” (Folke 2006:259).

The resilience approach has been adopted in social-ecological systems studies as a useful way of organising a collection of ideas for interpreting complex adaptive system (Anderies et al., 2006; Folke, 2006). For example, Holling’s (2001) adaptive cycle has been used to interpret the dynamics and resilience of complex ecological and social systems. In an adaptive cycle, four phases – exploitation, conservation, release, and reorganisation – are recognised that may or may not follow one another sequentially in the development of a complex system. Essentially, an adaptive cycle reflects discontinuous change in two dimensions of a complex system: capital that is inherent in accumulated resources; and connectedness among the elements that make up the system (Holling,

2001). Change in the two dimensions is thought to determine the evolution of the four phases of the adaptive cycle.

In the exploitation phase, a complex system accumulates capital that allows it to grow and mature. While capital accumulates slowly, strengthening connectedness leads to enhanced stability thereby transforming the system from exploitation to a conservation phase. As the conservation phase develops, and more capital accumulates, connectedness becomes more rigid exposing the system's vulnerability to disturbances which may trigger the collapse of the system into a release phase in which accumulated capital is lost. The release phase is followed by reorganisation where the potential for capital accumulation is high but connectedness is relatively low. Depending on circumstances, the system would either resume the adaptive cycle or possibly change some of its properties to transform into a new system altogether.

While Holling's adaptive cycle has been applied in a range of the studies involving both ecological and social systems (Abel, Cumming, & Anderies, 2006; Baral, Stern, & Heinen, 2010; Nkhata et al., 2008), it has in some instances been criticised for over-generalising reality and being too broad. Cumming and Collier (2005) suggest that the broad application of the adaptive cycle renders it a meta-model that fits many social and ecological systems. On the other hand, Holling (2001:393) describes the adaptive cycle as a "heuristic model, a fundamental unit that contributes to the understanding of the dynamics of complex systems from cells, to ecosystems, to societies, to culture". Thus, although one might argue that the resilience approach is intended to have wide application, I consider the adaptive cycle model as a useful metaphor for organising ideas about the resilience of collective action (Carpenter, Walker, Anderies, & Abel, 2001). My consideration is based on the understanding that resilience theory allows the use of Holling's model on condition that the selected system is describable (as in the original ecological context) in dynamic terms and is able to move into multiple states (Holling, 2001; Nkhata et al., 2008).

I propose that the adaptive cycle model offers an approach for understanding the continuous dynamic processes inherent in the relationship between collective identity and collective action. It offers a systematic way of identifying and understanding the processes of how change in collective identity affects change in collective action over time. Without an understanding of such change and how collective identity affects collective action, research in this subject risks omitting important determinant variables. The use of the resilience approach does not only enable some measurement of the resource users' willingness to cooperate, but also their ability to work together at different stages of collective action. It also provides a useful perspective for understanding stability and change insofar as the resilience of collective action is concerned. I incorporate the collective identity theory

of Ashmore, Deaux, and McLaughlin-Volpe (2004) into Hollings' adaptive cycle (2001) to provide a unique approach to understanding change in collective action based on collective identity.

2.9 A resilience-based framework for understanding change in collective action

Change in collective action can be interpreted through understanding the extent of change in collective identity defined by identification and affective commitment. I propose that identification and affective commitment provide the basis for interpreting how collective identity influences the state of collective action, which may remain quasi-stable for long periods while going through phases of an adaptive cycle. The development of identification and affective commitment represents the process through which collective identity evolves, matures, collapses, and reorganises as it adapts to reflect changing contexts of collective action. Change in collective action is controlled by either fast or slow changes in identification and affective commitment (Abel et al., 2006). The extent to which people identify and feel affectively committed to the collective determines the direction and pace of change and thus the state of collective action. This understanding is illustrated through a representation of an adaptive cycle of collective action in Figure 3. When compared with Holling's adaptive cycle model, the attribute of identification corresponds with the connectedness dimension and affective commitment with that of capital.

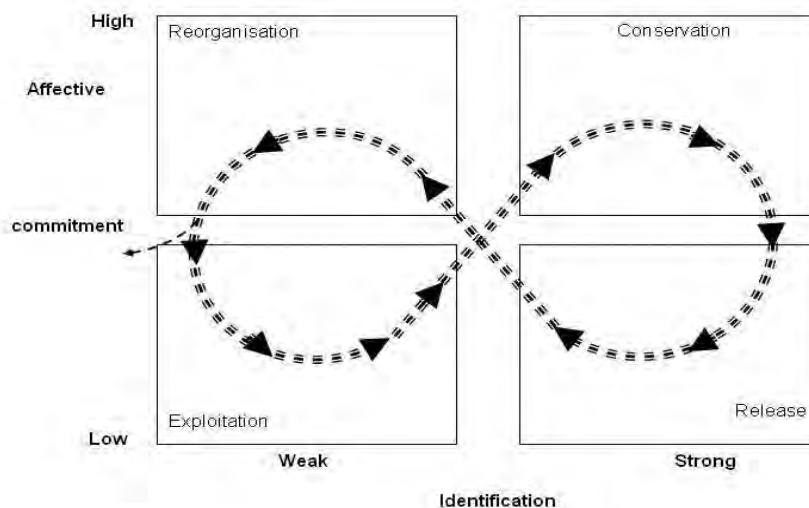


Figure 2.1: A framework based on identification and affective commitment for analysing the evolution of collective action and collective identity (Source: Adapted from Holling, 2001; Nkhata et al., 2008)

As depicted in Figure 2.1, the exploitation phase in the development of collective identity may arise when people perceive and seek to make use of an opportunity that may be optimally realised through

collective action. Such a period occurs when people engage with each other through social relationships to establish a collective identity (Child, 2004). In the conservation phase, identification and affective commitment continue to increase, thereby strengthening collective identity. While there is always potential for opportunistic behaviour, the degree of identification and amount of affective commitment could be sufficient enough to enable individual behaviours that are shaped by members' understandings of the collective identity.

Whereas the collective identity is consolidated during the conservation phase, it becomes increasingly rigid and vulnerable to disturbances. Increased identification results in complex social interactions with potential to stabilise or change meanings without disrupting the collective identity. Persistent disturbances may cause collective identity to change its configuration of meanings slowly or to collapse, causing the conservation phase to give way to the release phase. The release phase is when the accumulated affective commitment that sustains collective identity is lost. Although affective commitment is weakened, individuals still have strong identification with the collective, which in itself presents opportunities for the system to reorganise. The reorganisation phase arises when the level of affective commitment increases as individuals seek to renegotiate the meanings underlying the collective after identification has weakened.

2.10 Summary

In this chapter I started by contextualising community based conservation in Africa. My purpose is to illustrate the central role for collective identity and collective action in CBNRM and to show why it can be so challenging for communities to sustain collective effort for conservation. I then combined collective identity and resilience theories to develop a framework for exploring change in collective action. Two key attributes of collective identity, identification and affective commitment, provide the premise for interpreting, tracking and directing change in collective action. The framework illustrates how the development and stability of a collective identity could be explained by change in identification and affective commitment. It also might be helpful when trying to explain the weakening or collapse of collective identity. Because CBNRM initiatives have commonly exhibited periods of growth and decline of collective identity (Child, 2004; Fabricius, 2004a), the framework provides an approach to investigating how and why collective identity changes over time. The communal conservancies in Namibia provide appropriate study sites for testing the usefulness of the framework. In chapter 3 I present the environment in which the research was designed and conducted. The research issues are identified and the methodological framework is presented.

Chapter 3: Research setting and methodology

I have argued in chapter 2 that collective identity is necessary for sustained collective action in managing the use of common pool resources. In this chapter I describe the history of conservation in Kunene region and the formation of Doro !Nawas conservancy. The term CBNRM suggests a relationship between a collective identity, a community, and the collective actions of managing use of common pool natural resources. In Namibia, the term ‘conservancy’ implies both collective identity and collective action (Jones, 1999a; NACSO, 2006). Because some of the conservancies, such as the Doro !Nawas conservancy, have been in existence for a number of years they provide opportunity for a longitudinal study of the interactions between collective identity and collective action. The second part of the chapter provides a description of the research design and methods of the study. Lastly, I describe the approach to data collection, analysis and interpretation.

3.1 Overview of the study area

The Doro !Nawas conservancy is located in the northwest part of Namibia (Figure 1.1), known as the Kunene region covering a land area of 115,114 km² (Jacobsohn & Owen-Smith, 2003). The conservancy land area of 4,073 km² is classified as semi desert, with an erratic and highly variable rainfall of between 50-250mm annually (Mendelsohn, 2002). The landscape consists of the rugged, folded hills of the Etendeka Plateau, with central-western plains and wooded vegetation around the ephemeral river valleys (NACSO, 2010). The conservancy has an abundance of oryx, Hartmann’s mountain zebra, kudu, giraffe, springbok, lion, cheetah, hyena and other arid savannah and desert adapted species (Jones, 1999a). The northwest of Namibia, including the conservancy area is one of the few areas in the world where black rhino (*Diceros bicornis*) are found outside protected areas amongst communal subsistence livestock farmers (Holmes, 1992). The presence of wildlife, in particular, the black rhino, the desert elephant (*Loxodonta africana*), the scenic beauty of the landscape, the Welwitschia plants, as well as natural geological features such as the petrified forests, make the conservancy an attractive destination for both local and foreign tourists (Plate 1).



The Doro !Nawas Conservancy signboard (H. Denker)



Elephants and people in the conservancy (C. Brown)



Livestock farming in the conservancy (H. Denker)



Petrified forest in the conservancy (A. Mosimane)



The Welwitschia plants (A. Mosimane)



Doro !Nawas Lodge in the conservancy (A. Mosimane)

Plate 1: The landscape, people and natural attractions in the Doro !Nawas conservancy, northwest Namibia

The conservancy area is part of the former Damaraland. The South African administration proclaimed part of northwest Namibia a Damaraland homeland in 1970 (Holmes, 1992; G. Owen-Smith, 2002). The Damara Representative Authority (DRA) administered the homeland, and was given “second tier” government authority status in 1978 (G. Owen-Smith, 2002). Under the leadership of the chief of the Damara Traditional Authority the DRA accepted the responsibility for designated functions to administer land, the provision of social services and cultural promotion. The chief was the most senior position in the Traditional Authority, which had the support of headmen to administer land and traditional affairs within the administrative wards. The community in the former Damaraland was unified through language and participated in meetings and cultural festivals. Culture and language gave the community a collective identity that shaped the collective action reflected in the ways they went about their lives. The homelands were incorporated into the national government of Namibia in 1990 when Namibia became independent.

Doro !Nawas conservancy (DNC), registered in 1999, was named after the Doros crater that forms part of the mountain range in the conservancy (Figure 3.1). The inhabitants of the conservancy are mainly of the Damara ethnic group and the Riemvasmaak community from the current Northern Cape in the Republic of South Africa. The conservancy has an estimated human population of 1 500 people, with a population density of less than one person per square kilometre (NACSO, 2010). Residents are predominantly livestock farmers, raising goats, sheep and cattle as the main source of livelihood (Mosimane, 2000; Shapi, 2003). The arid environment of the conservancy, in particular scarcity of water resources, makes some parts of the conservancy uninhabitable for human settlement and livestock farming. The annual and seasonal variability of grazing and browsing in the conservancy reflects the previous season rainfall which in turn determines the amount of livestock and wildlife that can be supported (Leggett, Fennessy, & Schneider, 2003). Natural variations in climate particularly rainfall, are a challenge to people’s livelihoods in the conservancy.

Due to the remoteness of the conservancy and limited prospects for agriculture, unemployment is high. Livestock farming (29%) and social grants from national government (45%) are the main sources of income to households in the conservancy (Shapi, 2003). Some conservancy residents are government employees and business owners (11%) in the neighbouring town of Khorixas, and 9% derive their income from the tourism sector (Shapi, 2003). Due to the potential for tourism in the conservancy, the Namibian government and the community view nature based tourism as a vehicle for rural development (GRN, 2004). The potential opportunity for local community members to benefit from the management of wildlife and other natural resources through tourism gave impetus to the formation of the conservancy.

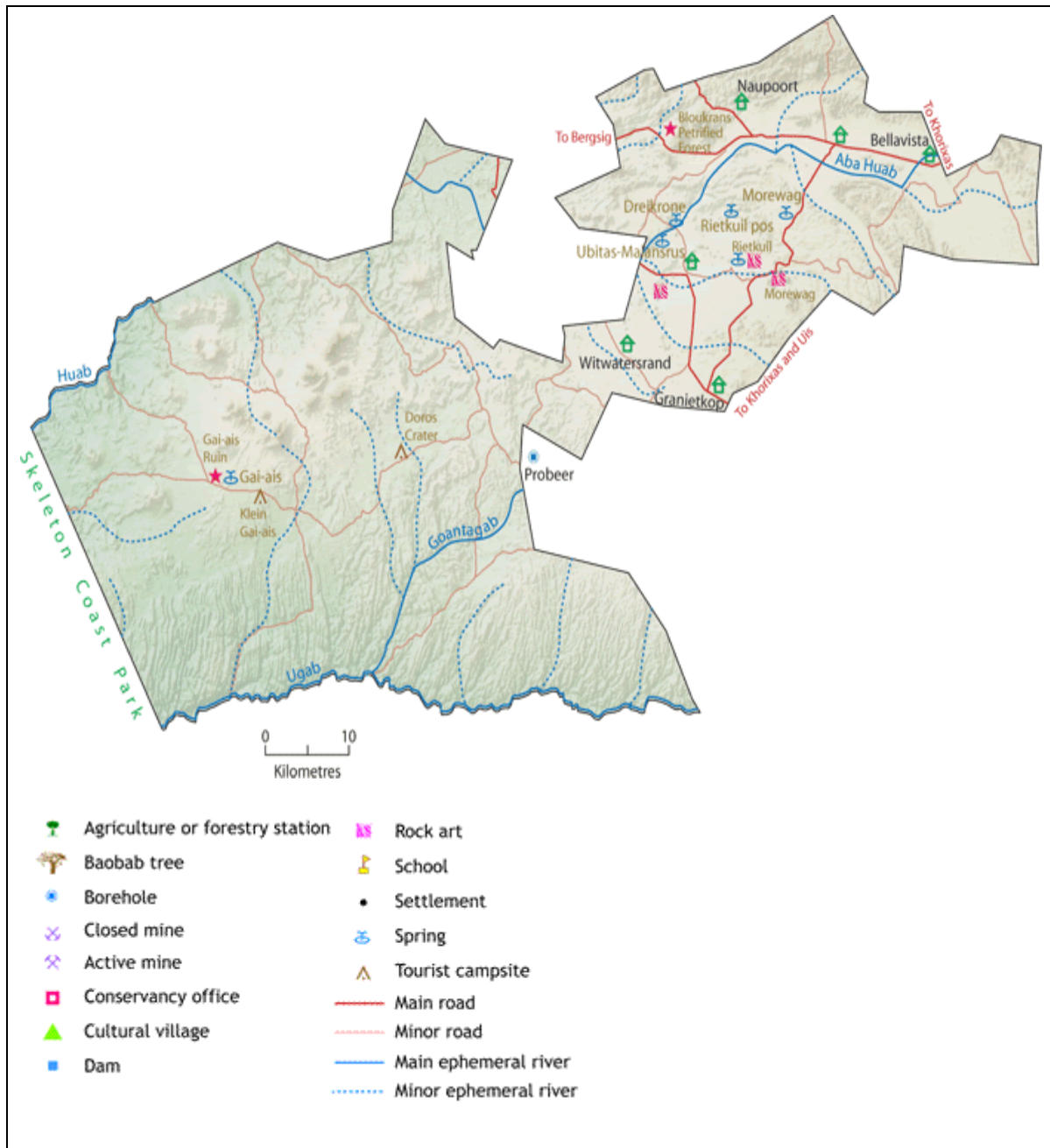


Figure 3.1: Map of Doro !Nawas conservancy (Source: www.nacso.org)

Subsistence farmers used the ward boundaries in 1988 to establish a farmers association, known as the Versteendewoud Farmers Association. The aim of the farmers association was to promote and improve farming activities through educating farmers and raising awareness about farming needs within the conservancy. The farming identity enabled the association to organise meetings for farmers and annually host farmer days to share information about farming. The farmers association served as a platform to invite people with expertise to educate and raise awareness of the farmers through sharing farming knowledge. The collective identity of stock farming shaped the way the community went about their business and particularly affected how they viewed wildlife. Because wildlife and other

natural resources were managed from central government, the DRA had very little control over use and management, even though their livelihoods were directly affected by wildlife (G. Owen-Smith, 2002). Local community members were not part of the government conservation efforts, the first community member was appointed as a ranger in 1983 when the Nature Conservation office was established in the town of Khorixas (G. Owen-Smith, 2002).

Farmers were in conflict with wildlife as predators killed their livestock and elephants destroyed water infrastructure. Due to the inability of central government to provide effective support for farmers and to enforce the management and protection of wildlife resources, wildlife numbers were low because of uncontrolled large scale poaching of elephants and rhino (G. Owen-Smith, 2002). Subsistence hunting and persistent drought also decimated wildlife (Holmes, 1992). Farmers did not have any rights and responsibility for wildlife and gained no economic benefits from wildlife whilst they suffered the costs of the influence of wildlife on livestock which was their most important source of income to sustain their livelihoods. The value of livestock to households caused the sense of collective identity to be dominated by a perception of being farmers for whom wildlife was more of a problem than a solution for their economy. The farming collective identity was held by farmers and their dependants, yet CBNRM required wider engagement in collective action and therefore the success of a conservancy depended on the re-emergence of an inclusive collective identity that would guide the behaviour and actions of all residents. Establishment of a conservancy in the Doro !Nawas area in 1999 therefore provided an opportunity to study how a new collective identity was created, how this influenced the actions of the people and how and why these changed over time.

3.2 Research design

The research design presents a plan of how the study was conducted. It consists of the research paradigm and epistemological position that defines the nature of the study and the methods used for data collection and approach to the analysis. The study adopted a single case study approach and employed in-depth interviews as the primary method, and documentary analysis as the supplementary method of data collection. This section further provides the rationale for the sampling procedure used to select respondents for the study. The section concludes with a description of the process of transcribing, coding data into themes and selecting excerpts for inclusion in the results of the study.

3.2.1 An overview of the research paradigm

An overview of the research paradigm in which the study is positioned is necessary because it influenced the research process and how the study would be conducted (Bailey, 2007; Esterberg, 2002). This study is positioned within the interpretive paradigm which informs the qualitative research design. The nature of the reality for this study is that there are multiple realities of the world,

which are fluid, environment-specific and which are shaped through contact with the researcher (Bailey, 2007; Guba & Lincoln, 1994). Social relationships, beliefs, ideas, meanings and feelings attached to activities are thus important to understanding and explanations of the social reality (Bailey, 2007; Darke, Shanks, & Broadbent, 1998; Patton, 2002). Based on this philosophical assumption, my position is that collective identity and collective action are socially, economically and politically constructed, through interactions and interpretation by conservancy members (Esterberg, 2002; Patton, 2002). Thus, over the years conservancy members would have developed multiple subjective views of change and stability in collective identity and collective action.

The epistemological assumption of this study is that the researcher is subjective – an “insider” – living within the social and ecological environment of the conservancy members (Creswell, 2007). In addition, Patton (2002) notes that the researcher is the instrument for data collection in qualitative research, the position of the researcher being central to the review and credibility of the findings of qualitative research study. A researcher is thus an integral part of the research, with his/her own bias and assumptions (Corbin & Strauss, 2008). Therefore my background and experiences as a researcher influenced how I understood and re-organised the social reality with the respondents (Patton, 2002).

My position as a researcher was particularly pertinent because since 1995 I have worked widely in conservancies in Namibia. Over the years I developed an understanding of how conservancies evolved. DNC was selected for the following reasons. First, in 2004 the conservancy was the first to decide to operate independently, without the support of a non-governmental organisation. Second, in 2008 the conservancy was the first to review the conservancy constitution which set a trend in social dynamics when compared with other conservancies. Since the DNC reviewed the Doro !Nawas constitution, many other conservancies are either in the process or are completing the constitutional review process (NACSO, 2010). Third, the conservancy was selected for accessibility and practical reasons (Bailey, 2007).

I conducted previous studies in the conservancy, developed rapport and established trust with individuals. The focus of my earlier research was on socio-economic baselines and institutional development and as a result, I am known within the community and more particularly among those who have played leading roles in the establishment and operation of the conservancy. My relationship with conservancy members presented me with an opportunity to access the knowledge of the members. I acknowledge that my previous research experience in the conservancy and observations thereof influenced my understanding and interpretation of the conservancy members' perspectives of collective identity. However, I presume that my absence from the conservancy for five years (2005 – 2010) might have reduced the influence of preconceptions about life in the conservancy.

3.2.2 Case study approach

Qualitative research seeks to understand a research phenomenon from the perspective of the respondent within his/her social environment (Miller & Alvarado, 2005). This study employed the case study as the key methodological approach for acquiring the primary research data because of its appropriateness for understanding complex social phenomena within a social environment (Yin, 2004). Case studies are commonly used across the social sciences to conduct research, however, there is no consensus on the meaning of the term as definitions and applications differ across disciplines (Anthony & Jack, 2009; Bergen & While, 2000; Gerring, 2004; E. Lee, Mishna, & Brennenstuhl, 2010). Case study has been identified as a research strategy (Eisenhardt, 1989; Yin, 1994, 2004), a research design (Bergen & While, 2000), an evidence based empirical approach (E. Lee et al., 2010), a descriptive method within qualitative research methods (Brandell & Varkas, 2001) and a data collection method (Gangness & Yurkovich, 2006). This study adopted Anthony and Jack's (2009:1172) definition of a case study as a "... research methodology grounded in the interpretive paradigm, which guides an empirical inquiry of contemporary phenomena within an inseparable real life context".

This study defines the Doro !Nawas conservancy as a case study. Whilst government sets the policy, how conservancies function within that, may differ. However, because government requires a collective commitment before it will register a conservancy, the issue of collective identity and collective action is relevant in all conservancies. Drawing on the literature, in chapter 2 I identified two variables of collective identity, identification and affective commitment and theorised how these variables interact over time. The case study approach was appropriate to develop an understanding of the interactions among these variables (E. Lee et al., 2010), encourage dialogue to generate multiple perspectives (Patton, 2002), promote listening and observing within the social environment (Miller & Alvarado, 2005), provide closeness to a real life situation (Flyvbjerg, 2006) and to being contextually inclusive (Bergen & While, 2000).

The framework in chapter 2 provided the study with a well-defined research focus which is necessary to avoid being overwhelmed by data (Eisenhardt, 1989). The introduction of a theoretical framework in a case study, prior to data collection, is an important distinction between case study and other qualitative methods (Bergen & While, 2000; E. Lee et al., 2010). Lee et al. (2000:684) observed "... the case study, although inductive, begins with a theoretical/conceptual framework to compare and contrast and eventually lead to analytic generalisation". Generalisation has been used with caution in case studies (Bergen & While, 2000; Yin, 2004) because case studies have been critiqued for findings that cannot be generalised to populations because of small sample sizes (Flyvbjerg, 2006; Patton, 2002). The findings of the case study are not intended for statistical generalisation from the conservancy to a sample population as in quantitative methods. However, generalisation of findings

could be made to other cases (Darke et al., 1998; E. Lee et al., 2010; Yin, 2004), particularly when these are formulated as hypotheses.

The case study approach encourages the use of multiple methods of data collection as sources of evidence to understand the social reality (Darke et al., 1998; Eisenhardt, 1989; Yin, 2004). The choice of qualitative methods to investigate a case study is dependent on the research question and the best manner to answer the question (E. Lee et al., 2010). The methods selected for this study will be discussed in detail in the latter part of the chapter.

3.2.3 Negotiating access to the conservancy

Access to communities for data collection is a challenge in qualitative research, especially when the case study method is used and the researcher has to spend considerable time with community members (Burton, 2000). It is therefore desirable to prepare those who will contribute to the study and to seek their formal endorsement of the research before it commences (MacDougall & Fudge, 2001). I visited the conservancy two months before I conducted interviews to introduce the study and consult with various community leaders including members of the conservancy committee, the Traditional Authority, and individuals. The intention of the preliminary discussions was to re-establish rapport with conservancy members, to explain the study and to secure participation in the study.

In addition, I used a week before data collection to identify individual conservancy members who could provide information as well as divergent views about collective identity and collective action. In the process I developed relationships with conservancy members, spending time with them and becoming familiar with their socio-ecological context (Creswell, 2007). According to MacDougall and Fudge (2001), although it can be time consuming to search for and negotiate with potential respondents, it is an important process for establishing and maintaining relationships. The intention was to engage individual conservancy members who had knowledge of change and stability/instability in the conservancy over the previous ten years, in order to interpret the dynamics of change and stability/instability in collective identity and to validate this understanding in discussions with other members of the conservancy.

3.2.4 Sampling

The research is qualitative and therefore used non-probability sampling which, according to Berg (2007) tends to be the norm in qualitative studies. Gibbs et al. (2007) suggest that sampling is critical in determining the quality of qualitative research; therefore, information should be provided about sampling so that other scholars can assess the quality of the study. Miller and Alvarado (2005:350) propose that "...researchers must purposefully select the most information-rich and appropriate sources in relation to the goals of the research". The emphasis on purposeful sampling was employed

to select information rich sources in order to enhance in-depth understanding (E. Lee et al., 2010). The purpose of the study was to understand change and stability within collective identity and collective action, thus the sampling unit was individual conservancy members who had formed or become members of the collective. A purposive approach to sampling also allowed me to define categories of respondents drawing on documentary evidence and reflecting individual experience of, and association with the conservancy (Berg, 2007). The categories were created to include diverse views of respondents. Category-one interviews were conducted with current and previous conservancy committee members. Conservancy members and leaders knowledgeable about changes in conservancy collective identity were category-two interviewees. Category-three interviewees were NGO staff and government officials who worked closely with the conservancy but were not members of the conservancy.

Purposive sampling was used to select conservancy members in category-one because of their experience and knowledge of the conservancy. Conservancy members were selected on the following criteria:

- They must have lived and participated (although not necessarily consistently) in conservancy activities since its formation, so as to have acquired the knowledge and experience of the operation;
- They must be willing to participate in the study and be prepared to make time available to be interviewed; and
- They must have the capacity to reflect on and articulate conservancy collective identity. The study assumption was that these conservancy members have developed knowledge about change in conservancy collective identity and collective action, through years of participation.

Archival documents were used to identify previous committee members but interviews were started with present conservancy committee members. The reason for starting with the current committee was to ascertain whether past committee members were still living in or returning periodically to the area and might be available to be interviewed.

Snowball sampling was used to select category-two respondents. I started with a list of conservancy members who were known by committee members to hold strong opinions (positive or negative) about the conservancy and about the history of the local area before the conservancy was established (Berg, 2007). Conservancy members who were interviewed were requested to suggest other conservancy members who held opinions (positive or negative) about the conservancy. This information was used to develop a list to compare with the list developed during committee members' interviews. In this way, I was extending and diversifying the sample used in the study. I included

respondents with a range of opinions and experiences in the sample in order to purposively include divergent views to strengthen the understanding of the research problem (Gibbs et al., 2007). I continued interviewing respondents among the members of the conservancy until the data reached saturation (Glaser, 1992; Patton, 2002), meaning it became evident that no new understandings were emerging (Pope, Ziebland, & Mays, 2000). The study reached a situation of 'saturation' around 30 interviews but I continued interviews seeking divergent views until 47 conservancy members had been interviewed.

I recognise the limitation when using purposive sampling, in that the findings cannot be generalised (Berg, 2007). However, the focus was to use the conservancy's richness of information for a detailed and in-depth understanding of the collective identity change within a changing social ecological environment. While I may not be able to generalise the findings from the particular case of Doro Nawas, I could generalise about the change in collective identity and collective action and its potential importance to other conservancies.

3.3 Research methods

For this study I used two methods: in-depth interviews as the primary method and documentary analysis as the supplementary method. Combination of methods is encouraged in qualitative research because each method reveals different aspects of the research phenomenon, generates multiple perspectives and reduces vulnerability to disadvantages associated with particular methods (Patton, 2002). The information generated from a combination of in-depth interviews and documentary analysis provided opportunities for consistency checks and to corroborate information (Patton, 2002). Information generated through different methods would either produce a consistent picture of the reality, or provide an opportunity for explanation of the differences in social reality from multiple perspectives.

3.3.1 In-depth interview

In-depth interviews are useful for exploring subjective multiple perspectives of change and stability in collective identity and collective action that developed in the conservancy over the years (Baxter & Eyles, 1999). According to Darkes et al. (1989) an in-depth interview is a primary source of information for case study research because it provides direct access to the respondents' views. The dialogue that emerges from the application of the method allows the researcher to go beyond the views that are expressed and seek to understand the meanings that are attached to multiple perspectives. The method provides an opportunity for the social reality to be understood within its environment and for the reorganisation of meanings from the information collected (Baxter & Eyles, 1999). The meanings that are generated from the interviews allows the words of the conservancy

members to become the centrepiece of the research findings (Patton, 2002). The method encourages flexibility and spontaneity from the respondent and the researcher (Gray, Williamson, & Karp, 2007) which provides opportunity for probing or to rephrase questions that are not well addressed. The flexibility allows for the order of the questions to change from one interview to another and to follow on a potential lead of data immediately when mentioned and while it is fresh in the mind. Similar to the case study approach, the weakness associated with this method, is the generalisability of the findings to the population studied because of lack of standardisation in the interview procedure (Gray et al., 2007).

The interview themes were identified in advance in chapter 2, based on literature reviews and my experience of the conservancy. The interview themes of the study were collective identity, collective action, identification, and affective commitment. The in-depth interview method allowed for the asking of open-ended questions that could collect depth of data from relatively few people (Guion, Diehl, & McDonald, 2011) about the themes. An interview guide with a semi-structured, open-ended standard set of questions was used for interviews to interrogate change and stability in collective identity and collective action from the unique experiences and perspectives of conservancy members (Appendix 2). The interview guide served to provide focus on the themes and to maintain consistency across interviews (Guion et al., 2011). Open-ended questions encouraged the respondents to give details in their responses to questions while using their own words.

Contact was established to set time and place for interviews that were convenient for the respondents. Before the interview, confidentiality issues were explained and the consent of the respondents to participate in the interviews and be audio-recorded was requested (Anthony & Jack, 2009; Darke et al., 1998). The use of an audio recorder allowed me to pay full attention to the interviewee and for the interview to continue like a conversation, without delays due to note taking. All respondents approached for interviews agreed to be interviewed and audio recorded. Only one conservancy member was not comfortable with audio recording and written notes of this interview were taken.

Before each interview, themes were introduced and the context of the themes and questions explained. The interviews were conducted in a flexible and informal manner to afford the respondents a comfortable environment in which to freely express themselves. The interview questions were supplemented by probing questions developed in advance and spontaneously during the interview. The order of the questions differed from interview to interview and in some cases, not all questions were asked because the interview was dependent on the rapport developing between myself and the respondents (Gray et al., 2007). Deviation was permitted to follow an interview line with which a respondent felt comfortable. Where respondents felt the questions were not clear, I allowed them to

ask for clarity. I endeavoured to be conscious not to influence the views of respondents, allowing them to use their own words and phrases to explain their understanding of change in collective identity. Conservancy members were friendly and open in sharing their views about developments in the conservancy over the years. However I observed that some individuals were careful not to implicate current and former conservancy committee members of mismanagement. The timing of the study was eight months after a new conservancy management committee had been appointed. This situation made it easy for conservancy members to reflect on change in the conservancy, as they could relate to this recent event and compare it to previous years.

The duration of the interviews ranged from 30 minutes to 1 hour and 30 minutes. The majority of the interviews were 40-45 minutes long, depending on the individual conservancy member's knowledge of change in collective identity and their comfort with being interviewed. Confidentiality required that the names of the conservancy members interviewed should not be disclosed, thus I deleted the respondents' names from audio recordings after transcribing. The interviews were conducted in Afrikaans, which is a language spoken widely in the area and in the country in general. The translation into English was sometimes complex, as in some cases, conservancy members would use metaphors and phrases which are difficult to translate whilst maintaining their meanings. In such cases the translation was discussed with other researchers at the University of Namibia to seek better understanding and more accurate interpretation. Notwithstanding these challenges, I am confident that the advantages of having used interviews outweigh the disadvantages.

Interviews were conducted in two phases. The first phase was in October/November 2010, when I interviewed forty seven conservancy members and nine NGO and governmental organisation representatives. The second phase of interviews was in October 2011, after analysing the interviews for themes and words and identified additional sub-themes with relevance to the study. Follow-up interviews were conducted with conservancy members who, in the initial interviews, had demonstrated greater knowledge than their peers regarding change and stability of collective identity. In most cases, these interviews were to seek greater details and clarity on the chronology of events in the conservancy. During this period, conservancy members who were previously interviewed were also invited to a meeting to discuss the findings of the study. This meeting did not yield any divergent perspectives or new data, as members affirmed the findings rather than raising new issues.

3.3.2 Documentary analysis

Documentary analysis was employed as a supplementary method to enhance the comprehensiveness of the study because of its usefulness in probing insight into the "how" and "why" questions normally associated with case studies (Miller & Alvarado, 2005). It is a process of analysing documents for the

purpose of understanding a phenomenon, in this case change and stability in collective identity and collective action in the conservancy. Documentation refers to secondary sources of information that provides content which was not generated to address a particular research question (Stewart & Kamins, 1993). Therefore, the documents should not have been prepared in response to a request for research information by the researcher (Guba & Lincoln, 1981). Miller and Alvarado (2005) observed that documents convey meanings, are formal communications that relate to other documents, reflect social and historical circumstances, show collective decisions by multiple people, reflect social arrangements and are accessed through a social process which determines who would access them and for what purpose. These characteristics make documents an important resource to interpret the social reality indicated in the documents (Miller & Alvarado, 2005).

Documentary analysis started before interviews were conducted, but continued simultaneously with interviews in the conservancy. Documents with information (Table 3.1) about the conservancy were accessed at several locations: the Doro !Nawas conservancy office; University of Namibia Multidisciplinary Research Centre Resource Centre; Namibia CBNRM Support Organisation (NACSO); Rural People Institute for Social Empowerment (RISE-Namibia); the Ministry of Environment and Tourism (MET) Resource Centre; and WWF Namibia. These sources of information are depositories of most conservancy information because of their interests and collaboration with conservancies. The documents were interpreted to augment the data collected during interviews. According to Patton (2002) multiple methods with different types of data sources create an opportunity to compare the interpretation of the data to improve validation and consistency checks.

The analysis of documents for evidence of change and stability in collective identity and collective action required interpretation through various stages. The first stage involved gathering data about the conservancy without limitation to the themes of the study. The purpose of the exercise was to gather as much relevant data as possible about the past and present of the conservancy from different sources. The second stage was to use the data to develop a list of respondents and sort the data according to the nature of issues it contained. The third stage was to collate the data into codes and themes to supplement data collected through in-depth interviews. The coding process of data collected through documentary analysis and in-depth interviews took place simultaneously and involved thematic analysis. Key to the documentary analysis was to interpret the social reality as indicated in the documents, looking for consistencies and meanings to understand change and stability in collective identity and collective action (Miller & Alvarado, 2005).

Table 3.1: Sources of documents and type of information

Source	Documents	Comments
Conservancy office	<ul style="list-style-type: none"> • Quarterly reports of conservancy activities • Financial reports • Minutes of meetings • Correspondence letters • Conservancy constitution • Conservancy guidelines and procedures 	<ul style="list-style-type: none"> • Letters and meeting minutes of disputes • Few reports were available • Information missing
University of Namibia, Multidisciplinary Research Centre, Resource Centre	<ul style="list-style-type: none"> • Socio-economic baseline research reports • National reports 	<ul style="list-style-type: none"> • Reports were available • Only few Doro !Nawas reports • National reports available
Ministry of Environment and Tourism	<ul style="list-style-type: none"> • Correspondence letters • Minutes of meetings • National reports • Regulations and policies 	<ul style="list-style-type: none"> • Letters and meeting minutes of disputes • Regulations and policies available
Namibia CBNRM Support Organisation (NACSO)	<ul style="list-style-type: none"> • Progress reports • Financial reports • National Reports 	<ul style="list-style-type: none"> • Reports were available • Information available was only related to funding periods when WWF was involved • The website was the most useful source of information
RISE-Namibia	<ul style="list-style-type: none"> • Progress reports • Financial reports • Correspondence letters 	<ul style="list-style-type: none"> • Material was available • Data only for the period 1999-2005 when they were involved in the conservancy
Worldwide Fund for Nature (WWF) Namibia	<ul style="list-style-type: none"> • Progress reports • Financial reports • National reports 	<ul style="list-style-type: none"> • Information available was only related to funding periods when WWF was involved • WWF were interested in national information that gives an overview of progress in conservancies

Documentary analysis had several advantages for the study in that information was readily available in many forms (Appleton & Cowley, 1997) and the information was unbiased by the collection process because it was collated for different purposes (Webb, Campbell, Schwarz, & Sechrest, 1984). The most common limitation of the method was incomplete information (Appleton & Cowley, 1997; Webb et al., 1984) with documents either missing or incorrectly filed. The filing systems in the conservancy office were not well organised for easy reference. Failure to transfer information from the outgoing conservancy management committee to the incoming committee also contributed to the

problem of incomplete and missing information. In most cases, documents were not transferred from one committee to another over the years, and where transfer did occur, information went missing. The challenge may have been compounded by information being withheld due to confidentiality or because it might be perceived to have negative implications for the management committee (Appleton & Cowley, 1997). My experience from the document collection process confirms Miller and Alvarado's (2005) observation that the availability of documentation depends on social processes that determine access. The poor administration that became evident when trying to source documents suggested that members might not have a mean access to a coherent documented history of the evolution of the conservancy and the identity associated with it. It would also suggest that 'oral history' would be the most informative source. Another limitation was the analysis of data outside the conservancy, although the researcher was familiar with the social environment in the conservancy, the analysis was open to subjective interpretation of the researcher due to limited clarification from those who compiled the documents (Appleton & Cowley, 1997).

The conservancy management committee generated progress reports which were required in terms of the conditions relating to donor support to the conservancy for the period 1999 to 2005. Progress reports had a strong focus on both natural resource and financial management but very little on governance and conservancy members' perspectives. The specific emphasis of the reports could be attributed to the requirements of funding organisations to account for their activities in the conservancy. Another contributing factor determining the paucity of documentation within the conservancy could be attributed to the limited ability of the conservancy members to document their experiences, disseminate and preserve their documentation, without the assistance of the donor community. This impacted the amount of documentary material available for review during the study. Follow-up documentary data collection in other institutions produced similar material to that collected at the conservancy office. Information at national level was collated to provide a national perspective of conservancies in Namibia and was not disaggregated to provide insight into specific conservancies. Consequently, this information was in most cases not helpful to understanding collective identity and collective action in Doro !Nawas conservancy.

3.4 Data analysis and interpretation

Analysis involved several stages to make sense of the data and to give it some structure through interpretation. Thematic analysis, widely used in qualitative analysis, is a foundational method of qualitative analysis (Braun & Clarke, 2006). I considered thematic analysis an appropriate method to provide a coherent way of organising interviews (Twigger-Ross & Uzzell, 1996) and for analysing the data (Bailey, 2007). Thematic analysis is a process of searching for codes which in my study, best described change and stability in collective identity, collective action, identification and affective

commitment (Fereday & Muir-Cochrane, 2008). The analysis adopted an integrative approach employing both a mixture of inductive and deductive analysis. The themes of the study in deductive analysis were defined before data collection during the research and were used in part through the analysis to interrogate the codes (Pope et al., 2000). In the case of the inductive analysis, issues were generated from the data during coding. There is substantial debate on whether to use a deductive or inductive approach in the analysis (Bradley, Curry, & Devers, 2007; Pope et al., 2000) however, the purpose of the study should define the appropriate approach for a comprehensive analysis of the data (Fereday & Muir-Cochrane, 2008). A combination of computer assisted methods (Nvivo 8 software programme) and manual methods was used for data analysis.

3.4.1 Transcribing interviews

Transcription is essential for detailed analysis of the data, although some studies have failed to address it in qualitative research (Lapadat & Lindsay, 1999). Transcribing is the process of transferring oral information to a written form as precisely as possible while maintaining its original meaning (Bird, 2005). Maintaining the words of the respondents when the interviews were transcribed was important for their voices to become part of the study. This process reflected and shaped data collection through identifying issues which needed further probing in order to gain greater depth (Pope et al., 2000). The interviews were transcribed on the same day as the interviews had taken place as this enabled me to gain insight into the data while the interviews were still fresh in my mind. I wrote my observations and incorporated them in the interviews as data collection progressed. The observation notes enabled me to cross-reference data during interviews.

Lapadat and Lindsay (1999) and Bird (2005) suggest transcribing is an integral part of qualitative analysis which is the first step to make sense of the data. The process of transcribing was useful in that I had an opportunity to familiarise myself with the data (Braun & Clarke, 2006) through listening and reviewing the recorded interviews. This entailed repeatedly listening to the interviews whilst typing. Interviews were transcribed over a period of three months (December 2010 to February 2011) and most interview transcriptions lasted between two and three hours whilst longer interviews lasted five hours. Transcribing the interviews contributed to sharpening my ability and awareness to transcribe as I progressed. After transcribing the interviews, the transcribed manuscripts were edited for accuracy. Where the opinions of the respondents were not clear, I listened to the audio recording again to correct inconsistencies. At the same time, I was able to make notes of key issues emerging from the interviews. The issues were helpful in organising the data once the interview cases were imported into Nvivo 8 for coding.

3.4.2 Coding data into themes and selecting excerpts for inclusion in the study

Coding is a process of selecting words and phrases and grouping them into meaningful groups that describe a particular phenomenon that is of interest (Braun & Clarke, 2006), in this case change and stability in collective identity and collective action. Coding is thus a formal system of organising the experiences of respondents as described during interviews (Bradley et al., 2007). I decided to use Nvivo 8 for coding because of its efficiency in organising and reorganising data and the simplicity of importing interview cases from word processing packages (Welsh, 2002). The interview cases were each coded separately to be able to differentiate the respondents from each other as sources of information. They were then imported to Nvivo which was also useful for coding and storing data for easy retrieval. I preferred Nvivo to manual coding because the coding strips made it easier to follow on-screen the codes that had been created and used (Johnston, 2006; Welsh, 2002). Nvivo made it possible to organise coded material into free nodes and tree nodes. Nodes are the locations of coded words and phrases which make it easier to understand data (Bazeley & Richards, 2000; L. Richards, 1999; T. Richards, 2002). Nodes represent a code, theme or ideas from the data. Free nodes are the first level of coding where words and phrases are organised into codes that are not hierarchically arranged. This process mainly helps to organise data into meaningful groups enabling the researcher to see patterns. Once a relationship between free nodes emerged, they were converted into a hierarchical tree structure, which reflects sub-topics with an overarching topic. They are then referred to as tree nodes. The notion of ‘trees’ is particularly important as it allows one to discern the relationship among issues and themes and their relative influence on each other.

Data analysis was a systematic process which involved different stages (Table 3.2). Although the stages are presented as a linear step-by-step procedure, it was a flexible and interactive process.

Table 3.2: Data analysis stages

	Description of stages
Stage 1	Sorting data into different codes
Stage 2	Collating codes into themes and identifying thematic connections
Stage 3:	Reviewing the excerpts in relation to the themes
Stage 4:	Grouped excerpts in terms of the four phases of the collective identity framework
Stage 5:	Excerpts selected for inclusion in the text

(Source: Adapted from Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2008)

Stage 1 involved seeking to understand the content of the data. I took an open-minded broad approach to coding in order to give every word and phrase equal attention. Open minded coding presented an

opportunity for developing as many codes as possible to reflect opinions in the data, making coding inclusive without limitation to prior defined themes. I coded the interview cases and archival material to complement the initial list of issues developed during transcribing that were of interest and widely expressed across the interviews. The issues were used to develop codes and the excerpt from the interview cases and archival material that supports a particular code was collated under the code. This process involved repeated reading of the transcripts to identify codes of potential interest within them. For example, some of the codes that emerged from the data were conservancy management, leadership, financial management, benefits and natural resource management. The visual representation of Nvivo made the coding of interview cases much easier on screen. Nvivo was practical for tagging and naming selections of words and phrases from the interview cases and later collating these under a code. My prior knowledge of the themes influenced my coding decisions in terms of transcription focus and issues that needed further elaboration (Lapadat & Lindsay, 1999). The end product of this stage was a list of different codes identified from the interviews.

Stage 2 concerned analysing the codes in terms of the themes which were my unit of analysis. In chapter 2, the theoretical framework identified the themes as collective identity, collective action, identification and affective commitment, prior to data collection from the literature. The themes of the study were thus 'theory driven' in that I approached the data with specific themes to interrogate (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2008). Nvivo free nodes were practical to organise themes from the codes which were converted into tree nodes, as relationships between different themes emerged. This entailed cutting and pasting to organise codes into themes and sorting themes into separate files. The analysis was an interactive and reflective process of coding and recoding to match themes (Bailey, 2007; Bradley et al., 2007) and establish relationships between themes. Nvivo visual representation was useful in diagrammatically mapping out the relationships between the themes, as several codes were grouped together to form sub-themes and themes. The mapping was an informative way to think about the relationship between the codes, sub-themes and themes. The end result of this stage was that all the excerpts, codes and sub-themes were coded in relation to the four themes of the study. Some of the codes did not match the themes of the study, and thus were collated into a different file so that they would be available should this become necessary as the study progressed.

In order to enhance my understanding of the themes and bring in multiple perspectives from different people, I discussed the themes and their relationships with fellow researchers at the University of Namibia, Multidisciplinary Research Centre, who are familiar with conservancies. Some of the themes from this early analysis were presented at a symposium (Zambia, Livingstone, May 2011) and the discussions allowed me to reflect on the relationships and the grouping of themes. In addition I

had several meetings with my supervisor to discuss the codes, themes and relationships between the themes. I used the feedback that I received from these early discussions to refine some of the themes and to review the grouping and relationships between themes, which required reading through and reorganising the codes.

Stage 3 entailed analysis to refine the sub-themes and excerpts that support the themes of the study and to search for evidence of change and stability in collective identity and collective action. In order to enhance my understanding of the data, with a specific focus on identification and affective commitment, manual methods for data analysis were necessary. The manual analysis included drawing mind maps and writing short descriptions of sub-themes, memos and excerpts on separate papers. Through repeatedly reading and interpreting the excerpts in the environment of the themes I was looking for, a coherent meaningful manner emerged of presenting excerpts to inform the themes. I identified the excerpts which were widely used across the interviews but which provided evidence of change and stability in collective identity and collective action and grouped them in terms of their description of identification and affective commitment, and compared across interviews (Pope et al., 2000). For greater depth in the analysis, I searched for words and phrases that were defined as attributes that best describe identification and affective commitment. The queries function of Nvivo was useful for interrogating the data, searching for attributes that best describes the themes (Johnston, 2006; L. Richards, 1999; Welsh, 2002). The software made it easier to search the data for patterns and excerpts which define the themes, compared to a manual search. I analysed the relationship between the excerpts using Nvivo search queries and the themes developed during the coding process. The excerpts which did not match or form a coherent pattern to support the four themes were collated into a different file. In some cases, in the search for sub-variables, I had to revisit the excerpts of codes that were collated in a file that was considered not to be relevant for re-coding, a process which Braun and Clarke (2006) consider as an ongoing organic process which could continue without end. The outcome of this stage was coherent excerpts that inform the themes of the study.

Stage 4 involved grouping the excerpts in terms of the four phases of the collective identity framework (Figure 3 in chapter 2) to see if they could explain the phases of growth, conservation, collapse and reorganisation of collective identity but separated in terms of identification and affective commitment. Where they could be explained in this way, I would be able to suggest a framework to explain the dynamics of collective identity and collective action that might be applied more generally. The analysis was an interactive process of continuous reference to the interview cases and to the narrative summaries developed during the coding process. I sought excerpts that related to the variables and were closely linked to the variables. Once I was confident enough with the classification

of the excerpts into coherent groups according to the four phases of the collective identity framework, I selected the excerpts for inclusion in the text which is explained in the next stage.

Stage 5 was about selecting excerpts for inclusion in the study. As discussed earlier, the purpose of the study is to examine the usefulness of the adaptive cycle framework to understand the organisation and growth, consolidation, collapse and reorganisation of collective identity with the view to develop a generalised framework for understanding collective identity and collective action in collectives. Interview excerpts that best described how respondents articulated change and stability in identification and affective commitment for the period 1999 to 2010 were then selected for inclusion in the text. This was a crucial stage of the analysis, as firstly, the excerpts should have sub-attributes of identification or affective commitment. Secondly, the excerpts should describe a particular stage of the four phases of the collective identity framework. The excerpts were distinguished by a unique identification number that was allocated to the respondents in order to maintain their confidentiality. Excerpts from documentary material were also used to further inform excerpts derived from interviews. The source of each documentary material used was indicated. The excerpts from interviews and documentary material included in the dissertation are indented.

3.5 Summary

The study is informed by interpretive paradigm, accepting that change and stability in collective identity and collective action are social constructs that need to be understood within their social environment and whilst recognising that the views of conservancy members are subjective. Purposive and snowball sampling was adopted as it allowed me to define categories of respondents drawing on documentary evidence and selecting conservancy members whose opinions ranged from being positive to negative about change and stability of collective identity and collective action in the conservancy. A single case study was used as the key means for acquiring the primary research data, acknowledging that the empirical data generated by the study, would be informative about change and stability of collective identity in other conservancies, although the data could not be generalised. For this study I used two methods: in-depth interviews as the primary method and documentary analysis as the supplementary method. I adopted a thematic analysis approach with a mix of inductive and deductive analysis to interrogate the data collected. I used a combination of computer aided software, Nvivo, and manual analysis to interrogate and organise the data into codes and sub-themes that supports the *a priori* defined themes of the study. The end result of the analysis was excerpts, codes and themes that best described how respondents articulated change and stability in identification and affective commitment for the period 1999 to 2010. In chapter 4, information about the conservancy will be presented which sets the context for longitudinal analysis of the relationship between collective identity and collective action in the conservancy.

Chapter 4: A longitudinal analysis of Doro !Nawas conservancy development, 1960 – 2010

In chapter 3 I presented the research design and the geographical location of the study area. The purpose of this chapter is to provide a historical context for the study of collective identity in the establishment and operation of the Doro !Nawas conservancy. I chose 1960 as the starting point because this was a time when people were forced to relocate into the area to create the ‘Damaraland homeland’ and government had centralised authority over wildlife. This chapter provides an overview of the conditions that affected development of Doro !Nawas conservancy during the period 1960 – 2010. I draw on the findings of interviews and documentary analysis to interpret the changes that occurred and implications these had for how individuals identified with and committed to the conservancy. Four periods are identified in the history of the conservancy: first, the period preceding the establishment of the conservancy; second, Versteendewoud Farmers Association (VFA) engaging the community to establish the conservancy; third, operationalising and managing the conservancy for the community; and fourth, faltering governance. A final period involved rebuilding support for the conservancy. In chapter 5 I assess the relevance of the adaptive cycle framework illustrated in Figure 2.1, to understanding the organisation and growth, consolidation, collapse and reorganisation of the conservancy collective identity.

4.1 The period (1960 – 1995) preceding moves to establish a conservancy

In chapter 3, I set the scene by recording how in 1960 the South African government forcibly relocated the Damara people into a homeland that was to become known as Damaraland. Table 4.1 shows the sequence of important milestones preceding moves to establish the Doro !Nawas Conservancy.

Table 4.1: Chronology of important milestones preceding moves to establish a conservancy (1960 – 1995)

Year	Milestones
1960	South African government establishes the Damara homeland known as Damaraland
1970	Damaraland homeland is expanded, based on Odendaal Commission recommendations.
1974	The Riemvasmaak community relocated from South Africa to Damaraland
1984	The Directorate of Nature Conservation office established in Khorixas
1988	The VFA is established in 1988 as the only community based organisation in Ward 7
1995	There are initiatives at national level to give communal farmers similar rights to utilise wildlife as commercial farmers.

The Damara people were moved from the northwest mountains, central Namibia and other parts of the country into the homeland. The homelands were tribal demarcations of the former South African government where all indigenous tribes of Namibia were allocated land according to the segregation laws of South Africa (GRN, 2004; Hangula, 2000). The Damaraland homeland was expanded in 1970 based on the recommendations of the Odendaal Commission of Inquiry proposal of 1964 into the South West Africa affairs (F. Adams, Werner, & Vale, 1990; Hangula, 2000; G. Owen-Smith, 2002). The then South African government bought commercial farms adjacent to the homeland for the further resettlement of Damara communities, some of whom were relocated from the central regions of Namibia. In 1974, the Riemvasmaak community from the current Northern Cape in the Republic of South Africa was relocated to Damaraland (Hoffman, Todd, & Duncan, 2005). Although the Damara and Riemvasmaak tribes shared language, they had different historical backgrounds and culture. Damaraland was subdivided into wards each under the control of a traditional headman who was to facilitate administration. According to the DTA demarcation in the 1980s, the current conservancy area was then referred to as Ward 7 (Mosimane, 2000). The commercial farms which were added to Damaraland in 1970 were incorporated in the DTA Ward system. The Damara and Riemvasmaak communities lived together in Ward 7 which gave them a sense of belonging, a collective identity which became the foundation for the emergence of a new collective identity aligned with the conservancy.

The Damara people were hunter-gatherers and livestock herders and the Riemvasmaak people were mainly livestock farmers. Damaraland has poor soil structure and variable climatic conditions which have implications for subsistence livelihoods and wildlife. The population was small and as hunter gatherers, hunting wildlife was mainly for subsistence and had very little impact on the wildlife populations (G. Owen-Smith, 2002). However, with the development of Damaraland in 1970, authority over wildlife and other natural resources was retained by the then South African administration in Pretoria. Wildlife on the homeland was managed through the Directorate of Nature Conservation (DNC) in Windhoek with no administrative involvement of the local Damara and Riemvasmaak people. It was only in 1981 when a wildlife management office was established in Khorixas, the administrative town of Damaraland, that the first local game ranger was employed in 1983 (G. Owen-Smith, 2002). Government officials and other influential persons were granted hunting permits on Damaraland without consultation with the DRA or the local DNC office in Khorixas (G. Owen-Smith, 2002).

Residents of the homeland observed hunting of elephants, rhino and other wildlife species on their land without any consultation or benefit to them (NACSO, 2004). Local subsistence livestock farmers lost livestock to predators without compensation from the central government who were the owners and protectors of wildlife. Loss of livestock to predators worsened after the 1981 and 1982

devastating drought, when predators killed livestock because their natural prey became less abundant and was difficult to hunt (G. Owen-Smith, 2002). The DRA could not benefit from trophy hunting in Damaraland and did not have rights over tourism so they were not authorised to enter into income sharing agreements with tour operators. This situation alienated local subsistence Damara and Riemvasmaak farmers from wildlife and other natural resources to the extent that the presence of wildlife was interpreted as a problem rather than a resource from which they could legally benefit (Jacobsohn & Owen-Smith, 2003; Jones, 1999a). As a result livestock farmers developed a collective identity that defined wildlife as a problem.

In 1988 the community of Ward 7 with the support of the Agriculture Extension Officer, organised themselves to establish the Versteendewoud Farmers Association (VFA) (U. Naibab, personal communication, November, 2010). The VFA developed a constitution and elected a committee to provide leadership. The objectives of the farmers' association were to support and promote farming activities amongst the community, improve livelihoods and raise awareness about livestock diseases (I. Garoeb, personal communication, November, 2010). The VFA arranged livestock auctions, organised meetings to share information among farmers and agriculture extension officers hosted a farmers' information day annually where farmers could interact and share knowledge about farming (E. Aebib, personal communication, November, 2010). By participating in these activities farmers expressed their identification with the collective and what it stood for. The VFA and the DTA were the focus for collective identity because they were the only community-based organisations which existed in the area that could address challenges that impacted livelihoods of the community.

4.2 Versteendewoud Farmers Association engages the community to establish the conservancy (1996 – 1999)

In this section I introduce the legislation that created an institutional environment for the VFA to engage the community, and the community consultation process that resulted in the formation of the conservancy. Table 4.2 shows the sequence of important milestones leading up to the registration of the Doro !Nawas Conservancy.

Table 4.2: Chronology of important milestones leading to registration of Doro !Nawas Conservancy during the organisation and growth phase of a new collective identity (1996 – 1999)

Year	Milestones
1996	<p>Legislation is introduced at national level to enable establishment of conservancies:</p> <ul style="list-style-type: none"> • The Nature Conservation Amendment Act No. 5 of 1996 • Policy on wildlife management, utilisation and tourism in communal areas • Policy and associated ‘toolbox’ on the establishment of conservancies
1996	The VFA establishes a sub-committee with the mandate to encourage community members to support the establishment of a conservancy.
1997	<ul style="list-style-type: none"> • Boundaries of the conservancy are confirmed. • The conservancy constitution is drafted. • Community members register their intention to support the conservancy.
1998	<ul style="list-style-type: none"> • The conservancy constitution is adopted on 28 March 1998. • At the same meeting, members of the conservancy management committee were nominated and appointed subject to registration of the conservancy at which time the management committee would be formally constituted.
1999	<ul style="list-style-type: none"> • Ministry of Environment and Tourism (MET) officially registers the conservancy and recognises the conservancy management committee on 16 December 1999. • The Conservancy management committee on behalf of conservancy members assumes rights, privileges, duties and obligations in accordance with the Nature Conservation Amendment Act of 1996. • Conservancy members are formally registered.

4.2.1 Enabling legislation

In chapter 1, I drew attention to the legislative changes that were introduced in Namibia after independence in 1990 to redress the injustices of the past. The Nature Conservation Ordinance No. 4 of 1975 was reviewed to give communal farmers, such as the Versteendewoud farmers, conditional and limited rights over wildlife, previously enjoyed only by commercial farmers (Table 4.2). The review allowed for establishment of conservancies on communal land (MET, 1995, 1996). A conservancy is described as “... a community or group of communities within a defined geographical area who jointly manage, conserve and utilise the wildlife and other natural resources within the defined area and then share in the benefits or returns produced from their combined efforts” (MET, 1995:6). This implies that a conservancy is a community-based governance institution in which the state has devolved certain defined rights and responsibilities for management and use of wildlife occurring on communal land to the community concerned.

According to NACSO (2004:10) the purpose of the conservancy was "... to restore the link between conservation and rural development by enabling communal area farmers to derive direct income from the sustainable use of natural resources". Before legislative review communal farmers were alienated from wildlife resources and all benefits that were legally derived from wildlife accrued to the private sector and the national treasury (MET, 1995). A motivating factor for promoting community participation in wildlife management was that wildlife numbers were declining due to drought and the inability of the state to control poaching (MET, 1995; G. Owen-Smith, 2002). It was perceived that communal farmers would be receptive to this approach as they experienced human-wildlife conflict and had to endure the costs of living with wildlife without either compensation or being able to derive benefit from the wildlife economy.

We had problems with animals destroying our gardens and attacking livestock but we did not have rights to manage these animals. (Interview 35)

The government implemented conservancies because in the past most of the people did not have benefits from wildlife and therefore poaching was too high. For the government to prevent poaching they gave the responsibility to the community to take care of wildlife. (Interview 49)

Cabinet approval of the Nature Conservation Amendment Act No. 5 of 1996, the policy on wildlife management, utilisation and tourism in communal areas and the policy on the establishment of conservancies, created an opportunity for the VFA to diversify its activities to incorporate wildlife management and use (NACSO, 2012). In 1996 VFA committee members accessed the Community Based Natural Resources Management (CBNRM) Toolbox (J. Gawiseb, personal communication, December, 2010) which provided guidelines for the establishment of communal conservancies. Members of the VFA consulted with the headman of Ward 7 and secured his support for the conservancy concept. The support of the DTA, in particular the headman of the Ward, was necessary to give legitimacy to the process of forming the conservancy among the community and to enable the VFA to take a lead in the process. The interview statements below affirm the process of how information on the conservancy concept was shared and discussed within the VFA committee in consultations with the Ministry of Environment and Tourism (MET) before the VFA members as a whole and the broader community were informed.

In 1996 while serving in the committee of the farmers association the former governor of Kunene region Mr Tjongarero explained the conservancy concept to me. He gave me the toolbox and explained the use of the toolbox to me. We (the VFA committee) went through the toolbox and we went back to the community of Ward 7 and informed them. (Interview 44)

The idea of conservancy was new to us when we received the regulations (toolbox). (Interview 27)

I was involved in the conservancy idea in 1996, while serving on the farmers' association committee which started the conservancy. We studied the toolbox and discussed it amongst us in the committee. (Interview 29)

The VFA committee after developing an understanding of the concept agreed to inform the farmers and the broader community about the conservancy concept. A sub-committee of the VFA was established in 1996 to introduce the concept to the farmers and the broader community (J. Gawiseb, personal communication, December, 2010). The policy on establishment of conservancies required that a majority of the community members should support the formation of the conservancy (MET, 1995). It required a 'community mandate' which was broader than that of the VFA. The interview excerpts below assert that raising awareness of the conservancy concept by the VFA sub-committee was an extended consultative process.

After two months of farmers' association familiarisation with the CBNRM toolbox which explained the conservancy concept, we held a consultative meeting with the MET and then established a sub-committee. (Interview 44)

We used to drive around with some VFA members, using their cars and own petrol, to inform the community about the conservancies. I used to drive with them as I was a tour guide at Twyfelfontein in 1996. We tried to hold meetings every month to convince the community to buy into the conservancy idea but first people were not interested. (Interview 38)

4.2.2 Community consultation process

The consultative process and sharing information enabled community members to develop enough of a shared understanding of the conservancy concept to secure the support required for the community mandate. Once the concept was understood and supported it was necessary to secure agreement on the boundaries for the conservancy. The sub-committee and the traditional authority agreed to use the traditional authority demarcation of Ward 7 as the boundary of the emerging conservancy (J. Gawiseb, personal communication, December, 2010). However, during consultations with the community members in Ward 7, the community of Bethanie and surrounding farms decided not to become members of the proposed conservancy. This community had earlier also decided not to become part of Torra conservancy during boundary negotiations (B. Utiseb, personal communication, November, 2010). The community of Twyfelfontein and neighbouring farms, although agreeable to the conservancy concept, chose to separate themselves from the emerging Doro !Nawas conservancy and went on to register their own conservancy, called Twyfelfontein conservancy (Figure 2). The

reason for the split was because some members of the community realised that individually they could derive more benefits if they registered as a separate conservancy, because there would be fewer beneficiaries, and their area was already established as tourism attraction (J. Gawiseb, personal communication, December, 2010). Twyfelfontein has a population of approximately 230, compared to 1500 for Doro !Nawas (NACSO, 2004).

Bethanie and neighbouring farms, and Twyfelfontein and neighbouring farms were therefore excluded from the proposed boundaries of the Doro !Nawas conservancy. The sub-committee subsequently negotiated boundaries with the community of Fransfontein to the north, and with the Sorris Sorris community to the south and east (U. Naibab, personal communication, November 2010). The boundary with Torra conservancy to the west had already been negotiated because Torra was a registered conservancy. The Fransfontein and Sorris Sorris communities also established conservancies at a later stage (Figure 1.2). After consensus among people within the proposed conservancy had been achieved and agreement with neighbouring communities reached, the boundaries were described and demarcated.

The VFA sub-committee could only start to register members once the boundaries of the proposed conservancy were defined as this determined who would be included in the conservancy. The MET conservancy policy required the majority of the people living in a communal area who apply for recognition as a conservancy should support the formation of the conservancy. Registering as a conservancy member is a voluntary process and anyone over 18 years of age from the community could choose to register. The sub-committee was able to build upon the collective action of the farmers association to encourage community members within the proposed conservancy boundary to register as conservancy members. Registration differentiates members from non-members, which allows for exclusion of non-members from the benefits and conservancy activities. The sub-committee could then use the constituency of registered members to develop and adopt the conservancy constitution.

The conservancy constitution outlines the goals and objectives and sets out rules for operation and the management and utilisation of wildlife (MET, 1995). The VFA gave the sub-committee the mandate in 1996 to draft the constitution and to present the draft at community meetings for discussion and input (U. Naibab, personal communication, November, 2010; J. Gawiseb, personal communication, December, 2010). The committee with the support of local MET officials facilitated the process to ensure community participation. After the sub-committee had presented the draft constitution twice to the community, the first conservancy constitution was adopted on 28 March 1998 at farm Morewag (DNC, 1998). The drafting of the conservancy constitution was a long consultative process facilitated by the sub-committee between 1996 and 1998. The ratification and adoption of the constitution was a

collective action of members of the community to develop the governance structure and processes required to achieve the primary objectives of the conservancy. The primary objective is "... the conservancy shall enable registered members to improve their standard of living through diverse benefits derived from sustainable management of consumptive and non-consumptive utilisation of wildlife and natural resources within the boundaries of the conservancy" (DNC, 2008:4).

The constitution clarifies who could or could not be a member of the conservancy and states the collective expectations in relation to the conservancy. Members of the conservancy are constitutionally expected to adjust their attitudes and behaviour, and to exercise the following rights and obligations that are compatible with the conservancy objectives: to attend, speak and vote at any general meeting; to have equitable access to conservancy benefits; to elect members to the committee or remove committee members who violate specified principles, procedures and laws; to inspect minutes or any records of the decision making of any general meetings; to inspect and make copies of the financial statements and records of the conservancy; to abide lawfully to decisions taken; and to endorse and approve reports presented at the general meetings (DNC, 2008). The quote below illustrates how identifying with the constitution influenced the attitude and behaviour of a conservancy member. It also articulates a perspective on the primary objectives that define conservancy collective identity.

As a conservancy member I must benefit from the conservancy, participate and vote in the elections of the conservancy committee. I must be concerned about our natural resources and financial mismanagement in the conservancy. I must cooperate and give advice in the development of the community. (Interview 05)

After the constitution had been adopted, the conservancy management committee was elected from the membership of the conservancy to serve on the committee for a period of three years, as required by the conservancy constitution. The MET conservancy policy required the management committee to be elected from the membership of the conservancy and be representative of the community it serves. The elected committee replaced the sub-committee which promoted the establishment of the conservancy. Most of the sub-committee members were elected to serve on the management committee (U. Naibab, personal communication, November, 2010). The committee was mandated to facilitate the registration of the conservancy in terms of the requirements stated in the legislation (Mosimane, 2000). The management committee elected in 1998 served until the registration of the conservancy. It transitioned into the first conservancy management committee when members' names were submitted with the application for registration of the conservancy (U. Naibab, personal communication, November, 2010). Members of the committee were nominated and appointed subject

to registration of the conservancy, at which time the management committee would be formally constituted.

The recognition of the conservancy committee and the declaration of Doro !Nawas conservancy is approved. (Ministry of Environment and Tourism letter, 16 December 1999)

The conservancy management committee mandate included the following: Manage the wildlife and natural resources within the boundaries of the conservancy in a sustainable way for the economic and social benefit of the members of the conservancy; Use the powers of the conservancy committee in accordance with the overriding principles of transparency, fairness and equity, which shall require that the conservancy committee deal with the community property and rights in accordance with the objectives of the constitution and only for the benefit of the members; Endeavour to ensure transparent equitable benefit distribution, and that there is no unfair discrimination between members; and Exercise its duty and responsibility to keep members regularly informed of its decisions and of the financial status of the conservancy and of any matters of importance to the members (DNC, 1998, 2008). With the conservancy registered with the MET, the committee was authorised to proceed with operationalising and managing the conservancy.

4.3 Operationalising and managing the conservancy for the community (2000 – 2005)

In this section I discuss how the conservancy management committee operationalised and then managed the conservancy. The sequence of important milestones leading to the consolidation of the conservancy collective identity is shown in Table 4.3.

Table 4.3: Chronology of important milestones in Doro !Nawas Conservancy during the consolidation phase (2000 – 2005)

Year	Milestones
2000	Community Game Guards (CGGs) employed to deter poaching, monitor wildlife, record and investigate human wildlife conflicts, mobilise community members to participate in the conservation of wildlife and report poachers.
2000	Rural People's Institute for Social Empowerment (RISE-Namibia) provided a one-year grant to Doro !Nawas Conservancy on 24 August 2000. The grant was to support institutional development and the CGGs.
2002	The conservancy office built with conservancy funds from trophy hunting and the support of RISE-Namibia. Conservancy members benefit from employment during construction.
2003	Conservancy management committee signs a trophy hunting agreement with Black Nossob Safari. Conservancy members' benefit through employment, meat distribution and the income from hunting.
2005	The conservancy signs a tourism joint venture agreement with Wilderness Safaris to build a lodge. Construction starts the same year.

4.3.1 Operationalising the conservancy

The collective action that led up to registration of the conservancy enabled MET to confer rights, privileges, duties and obligations on the conservancy management committee in accordance with the Nature Conservation Amendment Act of 1996. The conservancy management committee accepted rights relating to huntable game, including the capture and sale of game, hunting and culling, and the right to use protected game after applying for and being granted a permit (Jones, 2003). In addition, the conservancy acquired concessional rights over commercial tourism activities which enabled the conservancy management committee to establish tourism facilities within the boundaries of the conservancy (Jones, 2003; MET, 1995). The conservancy management committee was thus able to enter into agreements with trophy hunting companies to use conservancy hunting quotas and tourism companies to develop tourism, including infrastructure, in the conservancy. It is worth noting that rights conferred on the conservancy management committee are conditional, as the Minister can withdraw the rights if in his/her opinion the conservancy was not utilising wildlife sustainably or the management of the conservancy was not acceptable or beneficial to the community (Jones, 2003). However, the Minister can withdraw the rights only after written notification to the conservancy management committee and after having considered representations from the conservancy management committee.

The constitution of the conservancy provides the basis for setting up the necessary governance structures and processes for managing decision making and ensuring responsibility and accountability in the affairs of the conservancy. Governance structures refers to the conservancy management committee and the processes refers to management of the conservancy, meetings, financial matters, membership, dispute resolution, planning for sustainable management and utilisation of wildlife resources, benefit distribution and procedures for the amendment of the constitution (DNC, 1998). With the registration of the conservancy accomplished, the conservancy management committee engaged the development and management of the conservancy which was unfamiliar to many committee members and thus required the development of new skills and expertise (NACSO, 2004).

The conservancy management committee approached the Rural People's Institute for Social Empowerment (RISE-Namibia), a Namibian non-governmental organisation, in 2000 to build capacity in the management of the conservancy and natural resources. Natural resources management support included training Community Game Guards (CGGs) to control poaching, assisting local residents with problem animal control, the use of the "Event Book System" as a management tool for natural resources monitoring and conducting game counts (NACSO, 2004). Providing conservancy management support entailed training of the conservancy management committee members and the conservancy members to build the capacity and skills required to manage the conservancy in the best interest of conservancy members. For example, training was provided on the following topics:

meeting procedures, roles and responsibilities, leadership, financial management, business management, human resources management, conflict management, negotiation skills (RISE, 2005). Overall, RISE-Namibia support was aimed at developing democratic decision making process that would facilitate the implementation of the conservancy constitution and its associated policies and procedures for the day to day management of the conservancy (RISE, 2005).

4.3.2 Managing the conservancy

In 2000, the conservancy management committee, with the financial support of RISE-Namibia, appointed six conservancy members that were skilled and knowledgeable about nature and wildlife as CCGs (U. Naibab, personal communication, November, 2010). CCGs are responsible for deterring poaching, monitoring wildlife, recording and investigating human wildlife conflicts, mobilising community members to become conservancy members and reporting poachers to the conservancy management committee who would inform nature conservation officers. The information collected by the CCGs was complemented by the annual game counts to assist decision making when the conservancy management committee applies each year for a hunting quota. Annual game counts are a joint initiative between various conservancies, conservancy staff and members, the MET field personnel and non-governmental organisations. MET head office approves hunting quotas based on the annual game count estimate and information from other MET sources.

The conservancy generated income from trophy hunting in 2000 and received a support grant from RISE to cover operating costs. In the years that followed improved wildlife management contributed to the increase in wildlife numbers in the conservancy (NACSO, 2004, 2006, 2010, 2012). Since 2001, game sales have been the biggest source of revenue for the conservancy, followed by trophy hunting (NACSO, 2004, 2006, 2010, 2012). Trophy hunting during this period took place through annual negotiations rather than long-term agreements because the wildlife population was still recovering. However, the income increased year by year as the number of wildlife on the hunting quota increased and the conservancy diversified the use of wildlife to include game sales (NACSO, 2004). During the period 2000 – 2001 donors covered most operational costs of the conservancy which included salaries of CCGs and the office administration expenses of the conservancy management committee. In 2002, the conservancy management committee using own funds from trophy hunting and financial support from RISE Namibia, built an office on the farm Bloemhof within the boundaries of the conservancy (Figure 4). The conservancy income was used for the construction of the conservancy office and contributing to meeting conservancy running costs (NACSO, 2004).

The conservancy signed its first long-term trophy hunting agreement with Black Nossob Safaris in 2003 (Conservancy Management committee letter to Black Nossob Safari, dated 15.07.2004). The trophy hunting agreement provided employment and the meat harvested during hunting was

distributed to conservancy members. The trophy hunter brought the meat to the conservancy office and the area representatives would collect the meat for distribution to conservancy members on the respective farms they represented. The conservancy supported poor households with meat during funerals of conservancy members (NACSO, 2004, 2006). The conservancy management committee also provided food parcels to elderly conservancy members during the festive season. Meat distribution was one of the benefits widely accessed in the conservancy. Infrastructure development in the conservancy enabled the conservancy to provide benefits like employment at the lodge, campsite and at the conservancy office. Cumulatively, employment in the conservancy over the years increased from four people to 35 (L. Hoab, personal communication, December, 2010). Long (2002) observed that employment in rural areas is important because it keeps young people in the community with their families (Long, 2002).

The conservancy management committee created participatory decision making platforms. For example, regular community meetings to facilitate participation and communication, and conducted the Annual General Meeting (AGM) where issues were raised for discussion with members before major decisions were taken. The conservancy management committee called meetings every three months to report on finances as well as activities completed and planned (U. Naibab, personal communication, November, 2010). Shapi (2003) noted that regular meetings improved the participation of conservancy members in decision making and reinforced the collective expectations stated in the constitution. This process served to increase communication between the conservancy management committee and the members as well as to strengthen accountability and transparency in the conservancy (NACSO, 2005). The statements below illustrate conservancy members' perspectives of their participation in the conservancy collective action.

We had meetings every three months on finances and activities done and planned. We attended meetings regularly and worked together for the benefit of the community. The conservancy belonged to the community and the committee looked after it for the benefit of the community. (Interview 33)

The conservancy members owned the conservancy and the committee asked the members what they want. The members told the committee what they wanted and how they wanted to benefit. (Interview 47)

The committee had an open policy which allowed the community access to the conservancy financial books. The members felt needed and were welcomed by the committee. (Interview 13)

In 2005 the conservancy management committee entered into a joint venture agreement with Wilderness Safaris for the development of a lodge at farm Rendezvous in the conservancy. The construction of the Doro !Nawas lodge started in 2005 after the conservancy management committee

signed a joint venture agreement with Wilderness Safaris. The construction of the lodge started in the same year and was completed a year later with community members employed during the construction phase. Wilderness Safaris started to pay leasehold fees for the land to the conservancy management committee after signing the agreement. The Doro !Nawas lodge officially opened for tourists two years later, after operationalising and marketing the lodge. The conservancy is a 45% shareholder in the lodge while Wilderness Safaris holds the remaining shares. In addition, the conservancy had a revenue sharing agreement with Wilderness Safaris (L. Hoab, personal communication, December, 2010). After the official opening of the lodge, the conservancy management committee continued to receive leasehold fees and shareholding revenue. Tourism income increased and tourism became the main source of income for the conservancy (NACSO, 2006, 2012). The joint venture agreement provided the conservancy management committee with a partner with tourism and customer service experience, financial resources to invest in infrastructure development, access to markets and tourism management experience (NACSO, 2006).

For the first time, the conservancy covered the full operational costs of conservation from the income it generated and this has been so every year since then (NACSO, 2006, 2010). With the diversification of sources of income and particularly the income from the joint venture tourism lodge, the conservancy stopped receiving donor funding for operational costs. The conservancy annual income from joint venture tourism, trophy hunting, own use game and meat distribution was estimated to be above N\$500,000 estimated at US\$55,500 (NACSO, 2006, 2008). The operational costs included salaries of CGGs, managers and administrative staff, allowances for committee members, money for travel, meetings, insurance, office administration and training activities (NACSO, 2006). In 2005 the relationship with RISE-Namibia was terminated as the conservancy management committee was of the opinion that they no longer required the support of RISE (L. Hoab, personal communication, December, 2010).

This period of the conservancy (2000-2005) was characterised by good governance, although challenges started to emerge in the management towards the end of the period. The newly established structures and processes facilitated participation in the affairs of the conservancy and benefits, in their various forms, started to accrue to members.

4.4 Faltering governance in the conservancy (2004 – 2009)

In this section I present the challenges of governing the conservancy which resulted in faltering and government intervention to avoid the collapse of the conservancy. Table 4.4 shows a series of important milestones leading to the collapse of conservancy collective identity in Doro !Nawas. There is an overlap in the time frames of this development stage and the previous stage.

Table 4.4: Chronology of important milestones in Doro !Nawas Conservancy during the collapse phase (2004 – 2009)

Year	Milestones
2004	Doro !Nawas Conservancy draft policy and operational guidelines approved by the conservancy management committee. The policy and guidelines are supplementary to the constitution, but are not presented to conservancy members at the AGM for approval.
2004	A new conservancy management committee is elected and all previous committee members were replaced except for one at a poorly attended AGM in December. Only 78 conservancy members attended. In the same AGM the conservancy constitution was amended, to change the conservancy management committee term of office from three years to five years.
2005	Conservancy faces several management challenges. <ul style="list-style-type: none"> • Regular conservancy meetings not taking place • Allegations of financial mismanagement are frequent • Financial reports not provided • Decline in benefits to conservancy members • Annual General Meetings did not take place due to lack of quorum • Conservancy members not attending meetings
2005	The !Garibasen Conservancy Ad hoc Committee established as a concern group on 2 February 2005. Concerned group members (135) of the Doro !Nawas conservancy form an ad hoc committee with the purpose of breaking away and forming a new conservancy.
2006	MET appoints a constitution review committee consisting of MET staff, conservancy members, non-governmental organisations, traditional authority, regional council, line ministries and other local stakeholders. The review of the conservancy constitution starts.
2007	MET and non-governmental support organisations facilitated the process of constitution review and drafting of new constitution.
2008	Conservancy members approve the new conservancy constitution on 9 February 2008.
2008	Conservancy Disciplinary Committee is established in terms of the revised constitution to mediate in conflict situations.
2009	The Disciplinary Committee organise an AGM to elect new conservancy management committee

4.4.1 Challenges in governing the conservancy

In 2004 the conservancy management committee identified the need to supplement the guidelines in the constitution and developed and approved the Doro !Nawas policy and operational guidelines in May 2004, but without the participation of conservancy members (DNC, 2004). The purpose of the operational guidelines was to enable the conservancy to establish a sound administration system to manage the finances and conduct proper financial recording. A draft benefit distribution plan was also developed with the primary objective to provide a solid basis for equitable benefit distribution

procedures for the greater advantage of all members and to provide incentives for participating in conservancy development (DNC, 2005a). The policy and guidelines were not implemented because the management committee did not present the guidelines for approval to conservancy members at the Annual General Meeting (AGM) as required by the constitution. The statements below demonstrate the need for policy and operational guidelines to complement the constitution.

The management committee must be assisted to develop policies, guiding tools, etc. We cannot manage the conservancy with the constitution only. (Interview 35)

Hampering the conservancy progress was lack of adopted financial policies. There was a need for such policies to enable the management committee to draw budgets and handle funds smoothly and avoid allegations of mismanagement of funds. (Conservancy Chairman Report, AGM minutes 2010)

Without clear guiding policy on benefit distribution which has been approved at the AGM, it is difficult. Only if we have an approved policy we can be fair and transparent in the distribution of benefit. (Interview 45)

In 2004 during the Annual General Meeting (AGM) in December, attended by 78 conservancy members, a new conservancy management committee was elected because the term of office of the committee had expired. However, due to controversy amongst the conservancy management committee members some refused to attend the AGM (U. Naibab, personal communication, November, 2010; J. Gawiseb, personal communication, December, 2010). In this AGM all previous committee members were replaced with new members, except for the chairperson (DNC, 2005b). At the same AGM the conservancy management committee and the community divided the conservancy into six areas each comprising between three to five farms which each accommodate a number of farmers. Each area elected one person, as an area representative, to serve on the management committee. The aim was to facilitate communication where area representatives would provide regular feedback to residents of their areas after committee meetings and other important events. The newly elected conservancy committee proposed a change in the constitution, for the conservancy management committee term of office to be extended from three to five years. The proposal was adopted in the same meeting. The reason provided was that the conservancy committee required sufficient time to plan and implement activities (L. Hoab, personal communication, December, 2010; C. Classen, personal communication, November, 2010). Some conservancy members, questioned the constitutionality of the 2004 election during and after the AGM based on the number of conservancy members present and the absence of the previous committee members at the AGM, but their objection was not successful (DNC, 2005b).

Some conservancy members who were dissatisfied with the conservancy management committee administration established a concerned group on 2 February 2005 to raise issues affecting members

with the conservancy management committee. An estimated 135 conservancy members were dissatisfied with the management of Doro !Nawas conservancy (Ad hoc Committee !Garibasen letter to MET, 26 June 2005). On the same date the concerned group was established they formed an ad hoc committee and proposed the establishment of the !Garibasen conservancy. The boundaries proposed by the concerned group ad hoc committee included the farms to the west of the conservancy such as Granietkop, Witwatersrand, Driekrone, Malansrus, Rendezvous and Bankfontein which were part of Doro !Nawas conservancy (Figure 4). The members of the concerned group were mainly residents of the above farms. The reasons mentioned for dissatisfaction were accusations of mismanagement of conservancy finances and assets, and conservancy activities being implemented without the involvement of the conservancy members in decision making (Concerned Group letter to conservancy management committee, 9 June 2005). The concerned group requested a meeting with the conservancy management committee in June 2005 to express their desire to break away from the Doro !Nawas conservancy due to irreconcilable differences (Information meeting minutes between Doro !Nawas conservancy management committee and the concerned group, 23 June 2005). The requested meeting never took place. The statements affirm the reasons advanced by the concerned group for their proposal to break away from Doro !Nawas conservancy.

The concerned group was of the opinion that their views were not considered in decisions that the conservancy management committee was taking. The concerned group stated, "...we came to the conclusion of setting up another conservancy of people who shares the same sentimental value of indigenous environment, and understanding one another's reasons for preserving of natural resources for future generations." (Ad hoc Committee !Garibasen letter to MET 26 June 2005)

We were not happy with the financial management in the conservancy and we decided to hold meetings with the community and wrote a letter to MET. We met with the Governor of our region and MET authorities they advised us (the concerned group) not to divide the area by forming a new conservancy. (Interview 44)

In 2005 the conservancy management committee called an AGM but the members present did not constitute a quorum (DNC, 2005b). The AGM was postponed for two reasons: there was no quorum which the conservancy management committee claimed was not well defined in the constitution (L. Hoab, personal communication, December, 2010); and secondly, conservancy members were dissatisfied because they were not informed about conservancy activities and had not received financial reports from the conservancy management committee (DNC, 2005b). Although the AGM did not take place, the conservancy management committee held meetings with those conservancy members who were supportive and continued to implement conservancy activities (L. Hoab, personal communication, December, 2010). Some concerned group members attended these meetings to express their dissatisfaction with the manner in which the conservancy management committee was

administering the conservancy (C. Classen, personal communication, November, 2010). The quotations below show the views that describe the challenges that influenced the relationship between conservancy management committee and some conservancy members during this period and affirm the reasons for the AGM not taking place.

There is no cooperation between the community and the conservancy management committee. People are not informed of what is happening in the conservancy. If there is no quorum, there are no meetings held. (Interview 19)

We arrived at the meeting and the meeting is postponed because there is no quorum or other problem. Later I became tired of making effort to come to meeting and bring people only for the meeting to be postponed. I decided to rather look after my livestock. (Interview 21)

The committee take decisions and only come back to inform the community while in the past the committee asked permission from the community on activities of the conservancy. It is this approach that brought dissatisfaction and conflicts during meetings, but there were no proper feedback on activities of the conservancy. (Interview 08)

4.4.2 Government intervention in the conservancy

The MET minister visited the conservancy in December 2005 to attend a mediating meeting between the concerned group and the conservancy management committee. The meeting recommended revision of the constitution and election of a new conservancy management committee instead of de-registering of the conservancy to establish the !Garibasen conservancy. This recommendation was adopted as a resolution of the meeting (DNC, 2005b). MET and non-governmental support organisations facilitated the process of constitution review and the election of a new conservancy management committee. The constitution review process which started on 15 September 2006 emphasised the principle of wide participation, to give as many members of the conservancy as possible an opportunity to understand the importance and functions of the constitution and propose issues that needed to be addressed (NACSO, 2008). The process was also necessary to refine the powers and the roles of members and the conservancy committee leadership in decision making (NACSO, 2008).

During the first constitution review consultative meeting (15-17 September 2006) with conservancy members, the constitution review process identified the following weaknesses: conservancy management structure, functions of the executive committee, financial management (signatory powers), AGM procedures not clearly stipulated and incompatibility of the policies and regulations with the constitution (Garoes & Jiji, 2007). The draft constitution required legal input which was

provided by the Legal Assistance Centre¹ followed by the presentation of the draft constitution to the conservancy management committee and conservancy members, together, for final input. The key issues addressed in the constitution were decision making structures, financial management, meetings and disciplinary committee. The term of office of the conservancy management committee was changed to three years. Drafting of the constitution was followed by finalising some policies and procedures and training for conservancy personnel and the conservancy management committee on the use of constitution, policies and procedures. The final process was educating and raising awareness of conservancy members on the new constitution and procedures (Garoes & Jiji, 2007). The constitutional review process took two years because of the emphasis on the principles of wide participation and education, and the new constitution was adopted on 9 February 2008. Although a new constitution was adopted, the implementation of the constitution only came into effect later, and the conservancy management committee remained in office.

In March 2008 concerned group members complained that the conservancy management committee had failed to present audited financial reports for the years 2006, 2007 and 2008 (Concerned group letter to MET dated 27.03.2008). The conservancy management committee's failure to prepare and present financial reports to the conservancy members contributed to allegations of mismanagement of conservancy funds becoming frequent in the conservancy (C. Classen, personal communication, November, 2010; U. Naibab, personal communication, November, 2010; J. Gawiseb, personal communication, December, 2010). A statement from the extraordinary general meeting report (March 2008) read "... no budget was tabled for operations in 2008 which means that if the conservancy committee is utilising funds, they are acting illegally since the budget was not tabled and approved. The community does not know how much is available in different conservancy accounts as well as projects targeted for the current financial year."

A Disciplinary Committee (DC) was established by the conservancy management committee and the traditional authority on 8 March 2008, in terms of sections 90-94 of the new conservancy constitution (DC letter, 13 October 2008). The old constitution did not have provision for a disciplinary committee. In accordance with the new constitution, a senior traditional authority member was to be appointed as the chairperson of the DC and the chairman of the conservancy committee also served on the DC. The DC was to mediate in conservancy conflict situations and monitor election of the conservancy management committee when the term of office ended (Disciplinary Committee minutes, 13 October 2008). As they had done at the meeting called to adopt the new constitution, the concerned group ad hoc committee tabled a motion of no confidence in the conservancy management committee

¹ A Namibian support NGO, providing legal advice to conservancies on constitutions, contracts, legal conflicts and conflict resolution and advocacy on CBNRM issues.

without success (DC letter, 27 March 2008). The motion of no confidence would have allowed the conservancy members to call for new elections to replace the incumbent conservancy management committee. The statement below confirms the efforts of concerned group members to replace the conservancy management committee.

I belonged to a concerned group of people from the !Garibasen area. We wanted to break away from Doro !Nawas and establish our own conservancy, the !Garibasen Conservancy. We wrote letters to the Minister and we held a meeting with him, where we wanted to submit a vote of no confidence in the committee. The minister understood our concerns but noted it would take a long time to resolve this. (Interview 24)

Some conservancy members who were not part of the concerned group supported the de-registering of the conservancy for the same reasons as the concerned group, but with the intention to simply remain as farmers.

The conservancy can just be cancelled and we can just live as we did before as farmers. I just feel that there is no need for the conservancy and the government can just de-register Doro !Nawas conservancy. All the negative developments in the conservancy make me to just think the conservancy should be de-registering. (Interview 04)

The DC took time to organise new elections in the conservancy, while organising itself and mediating conflicts between the conservancy members and the conservancy management (C. Classen, personal communication, November, 2010). During this time, the conservancy management committee continued to administer the conservancy. The concerned group members continually sent letters of complaints about the management of the conservancy to MET. After several letters of complaint the MET minister remarked in 2009, “It has come to my attention that Doro !Nawas conservancy does not adhere to institutional good governance principles. Therefore the minister decided on the following measures against you and your committee. The conservancy bank accounts are suspended with immediate effect and the withdrawal of money from the conservancy accounts will only be done in the presence of the MET regional head with an approved work plan” (MET letter to conservancy committee, 7 August 2009).

The DC also observed that all was not well within the conservancy and activities were executed without approval of conservancy members as required in the constitution (DC minutes, 23 September 2009). The DC wrote several letters to the MET to inform them of management challenges experienced in the conservancy (DC minutes, 23 September 2009). It also wrote letters to the conservancy management committee informing them of complaints the DC had received from conservancy members (DC letter to conservancy committee, no date). In the same letter the DC requested a meeting with the conservancy management committee to resolve the issues but the

meeting never took place. In a follow-up letter MET directed the conservancy management committee to arrange for a financial audit of the conservancy books and accounts as a matter of urgency before the next AGM and for a copy to be submitted to MET (MET letter to conservancy, 2 October 2009). In December 2009 audit reports for the years 2006 and 2008 in which there was no evidence of irregularities, were presented to the MET. However, there is no record of an audit for the year 2007.

The DC had the responsibility of facilitating the election of a new conservancy management committee. In preparation for the elections the DC organised a consultative meeting on 12 December 2009 with all stakeholders to reach agreement on procedures for the elections. In preparation for the AGM to be held early in 2010, it was agreed that a quorum would be 133 members present at a meeting from among 527 registered members (Doro !Nawas conservancy extra general meeting, 12 December 2009). The concerned group ad hoc committee was disbanded when the DC organised the consultative meeting for the 2010 election.

This period (2004-2009) was characterised by multiple challenges in the management of the conservancy. The structures and processes did not facilitate participation and accountability in the affairs of the conservancy. The relationship between the conservancy management committee and members was confrontational, although some members were in support of the conservancy management committee.

4.5 Rebuilding support for the conservancy (2010)

In this section I present the process of electing new conservancy management committee and rebuilding support for the conservancy. The sequence of important milestones leading to the reconstructing of collective identity in Doro !Nawas conservancy is indicated in Table 4.5.

Table 4.5: Chronology of important milestones in Doro !Nawas conservancy during the re-organisation phase (2009 – 2010)

Year	Milestones
2009	The Disciplinary Committee organise an AGM to elect new conservancy management committee.
2010	A new conservancy management committee is elected on 13 February 2010.
2011	The new conservancy committee hold their first Annual General Meeting on 25 March 2011.

In January 2010, the DC announced the names of 20 candidates who were nominated to stand for election to the management committee. The DC had the responsibility to screen the candidates in terms of agreed criteria for criminal records and in line with the constitution, and it could suspend any candidate that did not meet the criteria (MET, 2010). In February 2010, the DC called an AGM

attended by 351 registered conservancy members (66%) to elect a conservancy management committee. The number of members present suggested revitalised interest among members and better prospects for the conservancy.

The February 2010 AGM proceeded with elections in the presence of observers from MET, NGOs, neighbouring conservancies' committee members and the police. The presence of different stakeholders and neighbouring conservancies was to facilitate free and fair elections (MET, 2010). The new conservancy management committee of 17 members was elected, consisting of seven executive members, one representative from each of the six areas and one representative each for the water point committee, Petrified Forest guides, VFA and one representative of the traditional authority. The new conservancy committee was elected to serve for three years and was mandated to manage the conservancy on behalf of the conservancy members.

In September 2010 the conservancy committee held its first meeting with the community to report progress on activities the conservancy committee agreed to implement after being elected. The committee also provided the conservancy members with financial reports. The statements illustrate the views of conservancy members and give insight into the emerging relationship between the conservancy members and the new conservancy management committee.

The community is currently very happy about the current committee because in the conservancy meeting people said it is the first time to have a copy of the financial reports in our hands to take home. In the past the minutes were just read to us and told not to complain too much. The conservancy members in the September meeting were applauding the committee for the financial report and chairperson report of activities done from February to September. (Interview 01)

The financial statements provided to the community so far, was well received. There was a very good response from the community, and they were proud of the new committee because of the detailed financial reports they received. The community at the meeting was very happy because we have seen and can read and know what we as the conservancy have in our accounts. Even the traditional authority said they are very happy with the financial reports. (Interview 02)

The observations below summarise the state of the relationship between the conservancy members and the conservancy management committee during the period February to December 2010.

In the last eight months of the new committee, we could see change. The meat from trophy hunting is being distributed in the conservancy. The area representatives were re-established and every area representative came with the people from his/her area to receive meat to distribute in his/her area. The most important change at present is that conservancy members receive financial reports on time and there is accumulation

of finance. The committee is now working closely with the Disciplinary Committee and the Traditional Authority. The Traditional Authority is for the community, and the conservancy operates on the land of the community, it is therefore important for the Traditional Authority to advise the conservancy management committee. (Community leader, 05)

This period marks the beginning of rebuilding of support for the conservancy. The efforts of the conservancy management committee were to rebuild a relationship founded on good governance that would encourage members to align with a collective identity that strengthens the role of the conservancy in the affairs of the community.

4.6 Summary

The chapter provides a historical context for the study of collective identity in the establishment and operation of the Doro !Nawas conservancy. It demonstrates how the pre-conservancy history of land allocation and the period immediately prior to the move to establish the conservancy provided the foundation for development of the conservancy. The manner in which the conservancy management committee governed the activities of the conservancy, the achievements and failures influenced the relationship between conservancy members and the conservancy management committee. In the period preceding moves to establish the conservancy, the community were livestock farmers and participated actively in the activities of the VFA. The second period was when the Versteendewoud Famers Association engaged the community to establish the conservancy, through a community consultation process that resulted in the formation of the conservancy. The third period was operationalising and managing the conservancy for the community which was characterised by structures and processes that facilitated participation and accountability in the affairs of the conservancy while benefits, in their various forms, started to accrue to members. The fourth period was when the conservancy governance started to falter and the relationship between the conservancy management committee and members was confrontational, although some members were in support of the conservancy management committee. The last period was rebuilding support for the conservancy after the revision of the constitution and the election of a new conservancy management committee. In chapter 5 I consider application of the framework developed in chapter 2, using changes in identification and affective commitment to explain the dynamics of collective identity. The two attributes of collective identity are analysed to illustrate change and stability in collective identity and collective action. This is in the context of the broader research question of developing a framework for understanding the dynamics of collective identity and collective action in collectives to manage common pool resources.

Chapter 5: Assessing the relevance of the adaptive cycle framework to understand the organisation and growth, consolidation, collapse and reorganisation of collective identity

In this chapter I assess the relevance of the adaptive cycle framework illustrated in Figure 2.1, to understanding the organisation and growth, consolidation, collapse and reorganisation of the conservancy collective identity. Collective identity is defined as the shared meanings that individuals in a user group hold as members of the collective. I have argued in chapter 2 that the shared meanings in turn define and underpin the actions of the members who act on behalf of the collective. I make use of two variables of collective identity, identification and affective commitment, to elucidate change in how conservancy members identify with and commit to the conservancy collective identity. I draw on interview statements to show how identification and affective commitment to the conservancy collective identity over the years grows, consolidates, collapses and is reorganised as it adapts to changing social and ecological contexts in the conservancy. Four phases are identified: organisation and growth; consolidation, collapse and reorganisation (see Figure 2.1).

Identification is the process in which individuals define themselves in relation to the collective (Bergami & Bagozzi, 2000). This implies that an individual would categorise with others who express attitudes that are compatible to the collective and would accept the values of the collective as their own. Fundamentally, an individual first develops interest in the collective to satisfy a desire to belong. But then the individual acquires knowledge of the values, behaviour and expectations of the collective which allows him/her to become involved in the activities of the collective. Involvement in the activities of the collective helps to establish a relationship between the individual and the collective (Levine, Hogg, Blaylock, & Argote, 2010). In order to understand identification from conservancy members' perspective, I examined the interviews for themes that expressed interests of the conservancy members in the conservancy and the consequent actions, such as involvement in conservancy activities. Change in interest and involvement in the conservancy reveals change in an individual's level identification with the conservancy collective identity.

Affective commitment is the state in which an individual feels emotionally attached and a sense of belonging to the collective identity and members of the collective (Ashmore et al., 2004; Bergami & Bagozzi, 2000; Gong, Law, Chang, & Xin, 2009). The emotions expressed signify the state of the relationship, the bond an individual develops and holds towards the collective identity and members of the collective. Emotions gain their significance from the social and ecological context and can therefore be positive or negative (Nicholson, 1997; Watson & Tellegen, 1985). In order to probe the conservancy members' affective commitment, I searched the interviews for words that characterise

positive emotions or feelings such as proud, happy, and trust which suggest high commitment and words that characterise negative emotions, feelings or resentment such as unhappy, not proud, hate and mistrust that imply low commitment (Watson, Clark, & Tellegen, 1988; Watson & Tellegen, 1985).

In the next sections I describe change in collective identity using identification and affective commitment and assess the usefulness of the framework. The two variables are described in terms of the four phases of the adaptive cycle framework: first, the organisation and growth of collective identity; second, consolidation of the conservancy collective identity; third, collapse of the conservancy collective identity; fourth, re-organisation of the conservancy collective identity; and finally, I consider the current state of the conservancy collective identity.

5.1 The organisation and growth of conservancy collective identity

It is important to appreciate that during the organisation and growth phase, the collective identity was being constructed around the idea and ‘promise’ of how a conservancy might benefit individuals and the community. With this understanding, I started with the assumption that there would be no conservancy collective identity because individuals might not be aware of, or understand the concept of a conservancy. As I have shown earlier however, there were other collective identities with which groups were aligned such as tribes and the VFA. Applying the collective identity framework I developed in chapter 2, I constructed the following proposition: *The process initiated by and the associated actions of members of the VFA sub-committee caused community members to define themselves in the context of a conservancy (identification) and to develop a sense of belonging to the collective (affective commitment)*. Both of these would strengthen over time (Figure 2.1) so that a conservancy collective identity emerged that would be sufficiently entrenched to effect the necessary change in members’ attitudes and behaviours. The new attitudes and behaviours would be defined by the conservancy collective identity. The principal causal factors and how they affected the states of identification and affective commitment during this phase are shown in Table 5.1.

In chapter 4, I explained how the VFA sub-committee was mandated to encourage members of the community to establish a conservancy. They visited farms and engaged with community members, explaining how they could benefit from establishment of a conservancy. The benefits mentioned included meat, employment, cash payouts, repair of water infrastructure damaged by elephants, compensation for livestock losses and support to poor households (Mosimane, 2000). Their intention was to encourage community members to identify with the concept and commit to the establishment of the conservancy. This was necessary because the Act required majority support before a conservancy could be registered. The sub-committee needed a majority of eligible community members to express a collective identity by: defining and agreeing upon the boundaries of the

proposed conservancy; registering as members; developing and adopting a constitution; and electing a conservancy management committee. Achieving this would enable them to convince government that they met the requirements of the legislation for conservancies and were sufficiently committed to establish and operate the conservancy.

Table 5.1: Identification and affective commitment changes during organisation and growth of the collective identity

Organisation and Growth Phase	Drivers of change	Identification	Affective commitment
Starting state Prior to 1996 no collective identity related to a conservancy existed	<ul style="list-style-type: none"> • Communal farmers had no opportunity to legally benefit from wildlife resources • Wildlife a threat to livelihoods 	<ul style="list-style-type: none"> • <i>Attitude:</i> wildlife a threat • <i>Behaviour:</i> poach wildlife 	<ul style="list-style-type: none"> • <i>Emotion:</i> unhappy with wildlife
Organisation and Growth The process of the formation of conservancy collective identity 1996-1999	<ul style="list-style-type: none"> • VFA accesses information about conservancies • VFA perceives opportunity to benefit from wildlife • Sub-committee formed to establish a conservancy • Sub-committee visits community members to inform them about the conservancy concept • Bethanie farmers resolve not to join the conservancy • Boundaries determine who is 'in' and who is 'out' • Sub-committee registers conservancy members 	<ul style="list-style-type: none"> • <i>Attitude:</i> interest aroused • <i>Behaviour:</i> attend meetings • <i>Attitude:</i> individuals are involved • <i>Behaviour:</i> use of expressions such as we, us, ours • <i>Behaviour:</i> register as members of the conservancy • <i>Attitude:</i> wildlife a potential resource • <i>Behaviour:</i> values change and members patrol to monitor poaching 	<ul style="list-style-type: none"> • <i>Emotion:</i> use of expressions such as happy, proud, trust. • <i>Emotion:</i> happy about potential benefits

5.1.1 Identification

As the name implies, conservancies are founded on conservation principles. Prior to the formation of the VFA sub-committee to promote the establishment of a conservancy, there was no opportunity for community members to legally benefit from the management of wildlife resources, whilst they suffered the costs of living with wildlife. Not surprisingly as the following statements illustrate, community members did not identify positively with conservation and had no knowledge of the concept of conservancy, however the use of words such as 'we' and 'us' suggest a community collective identity existed.

We did not have benefits from wildlife, and therefore poaching was high. (Interview 49)

When there was no conservancy there was poaching and people were hunting for their own households without control. (Interview 03)

The idea of conservancy was new to us when we received the regulations (toolbox). (Interview 27)

At the start-up stage of the conservancy initiative it may be argued that the community did not identify with the conservancy. In fact they held a collective identity that directed and supported behaviours that were in conflict with conservation. The VFA sub-committee had therefore, to effect fundamental change in the way people identified with and committed to wildlife to succeed in the establishment of a conservancy. Identification with the conservancy concept emerged after several sub-committee visits to the farms and meetings with community members (Table 5.1). The sub-committee used the notion of potential new benefits articulated in the policies to develop identification with the conservancy concept. Potential benefits that community members could derive became a motivator for identification with the conservancy.

The sub-committee called the community together, to inform us that the conservancy is something we can make a living from, something that can help the community in the farming areas. (Interview 04)

The sub-committee visited the farmers to talk about the conservancy. They said all communities are starting conservancies, if the conservancy becomes registered, we will be able to sell wildlife and generate funds which will benefit the community. (Interview 22)

The sub-committee told us lodges and campsites will be built and the income will come to us and our children as benefits. We had interest because we wanted to benefit, when we heard of all the benefits we could get from the conservancy. (Interview 38)

The level of identification of community members with the conservancy concept strengthened when community members started to attend meetings and show a desire for more information. Community members wanted to understand the conservancy concept and how it would benefit them if they agreed to establish a conservancy. The information community members received motivated them to identify with the conservancy concept, by showing more interest, listening to questions and responses and attending meetings more regularly.

My interest in the conservancy came from attending meetings and listening to questions people were asking. (Interview 01)

I had interest in the conservancy because I wanted to know what the conservancy has for me. I attended meetings regularly. (Interview 38)

I attended a few meetings and heard what the conservancy was planning and decided to get involved. (Interview 47)

5.1.2 Affective commitment

Prior to the conservancy, the community exhibited affective commitment that was contrary to that which would be required to establish the conservancy (Table 5.1). Responses below affirm that because some wildlife posed a threat to their livestock the preference was for elimination rather than conservation of wildlife. At this early stage of the initiative to establish the conservancy, community members did not evince affective commitment to conservation.

We were not happy as predators were attacking our livestock. The baboons would get in the kraals and eat the small animals. Elephants killed livestock and caused major damage to infrastructure. (Interview 16)

People were not aware that the elephant also needed protection. They were under the impression that they should be destroyed and taken out of the area. (Interview 34)

The prospect of potential benefits developed community members' affective commitment to the conservancy concept. Community members expressed enthusiasm about the prospect of benefits should the conservancy be registered.

The benefits that we could get from the conservancy made me happy. (Interview 03)

I was proud when the (sub-committee) started making promises about solving the water problems, reimbursements for damage by elephants, water points, troughs, kraals. (Interview 13)

Once community members had assimilated available information and were convinced about the conservancy concept, they were able to choose whether or not to register. Community members whose identification and level of affective commitment had strengthened were motivated to register as conservancy members (Table 5.1). The statements show that the strengthening levels of identification and affective commitment empowered community members to make the choice to register as conservancy members. The registration process allowed individuals to affirm their sense of belonging to the collective effort directed at establishing conservancy. Belonging and contributing engendered pride and emotional attachment to the collective, signifying strengthening of affective commitment as the process unfolded.

I attended conservancy meetings and decided to register as a member of the conservancy because I wanted to be involved. (Interview 01)

I registered as a member of the conservancy to be able to participate in the activities of the conservancy and ask questions in the meetings. (Interview 28)

5.1.3 Collective identity

In the growth and organisation phase, community members were developing identification with and affective commitment to the unfamiliar concept of a conservancy. It was the shared anticipation of benefits rather than the intangible prospect of a conservancy that provided the nucleus around which individuals could initially develop shared meaning and a collective identity. As understanding grew that the benefits would be realised when the conservancy was established, the level of identification and affective commitment to the conservancy concept strengthened. The act of registering as a member indicated a desire to belong to and be identified with the conservancy. As might be expected, particularly when the concept was new and the benefits intangible, community members exhibited different levels of identification and affective commitment. Mosimane (2000) reported that only 46% (295) of eligible individuals were registered as members when the application was made to the MET. As no objections were raised by those who had not registered, the MET accepted that even if not registered, they agreed to the formation of the conservancy (N. Howoseb, personal communication, December, 2010). The reasonableness of this assumption can be argued on the basis that both the delineation of boundaries and the adoption of a constitution that required a fundamentally different approach to wildlife management would have elicited responses from those who disapproved of the establishment of the conservancy. In fact, as indicated in Table 5.1, the Bethanie and neighbouring farmers had resolved not to join the conservancy and the boundaries were drawn to exclude them.

Towards the end of this phase those who had registered started expressing attitudes and behaviours consistent with an identity associated with a conservancy. The excerpts illustrate that wildlife was now being viewed as resource that required protection.

The conservancy did not have Community Game Guards (CGGs), we had to patrol ourselves. I looked after the wildlife and the well-being of the conservancy. (Interview 20)

Before the conservancy was registered, we (sub-committee) regularly visited the conservancy members on the farms and did patrols to monitor our wildlife. I had to balance my life between my work on the farm and the conservancy. (Interview 06)

These actions illustrate the strengthening identification and affective commitment in relation to the conservancy, at least among some members, and thus suggest growth and maturity of the collective

identity in the proposed conservancy. Implied in this understanding is that the collective identity was strengthening. Registration of the conservancy in December 1999 was particularly important because it acknowledged the strengthening collective identity. This acknowledgement and the sense of achievement reinforced identification and commitment as members engaged operation of the conservancy. The statement asserts the enthusiasm of members with the registration of the conservancy.

We were happy that the conservancy has been registered. (Interview 37)

5.2 Consolidation of conservancy collective identity

In the consolidation phase the conservancy is operational and there is a flow of benefits to members. Applying the collective identity framework developed in chapter 2 (Figure 2.1), I constructed the following proposition: *Satisfaction with the approach and actions of the conservancy management committee, the realisation of benefits and the involvement of members in the activities of the conservancy reinforced identification and affective commitment thereby consolidating the collective identity.* Table 5.2 illustrates the principal causal factors and how they affected the state of identification and affective commitment during the consolidation phase.

With formal registration of the Doro !Nawas Conservancy and acknowledgement of the associated collective, the management committee, on behalf of members, assumed rights, privileges, duties and obligations conferred in terms of the Nature Conservation Amendment Act of 1996. These included ownership rights of huntable game, the capture and sale of game, hunting and culling, and the right to use protected game after applying for a permit (Jones, 2003). In addition, the conservancy acquired concessional rights over commercial tourism activities which authorised the conservancy management committee to establish tourism facilities within the boundaries of the conservancy (Jones, 2003; MET, 1995). The conservancy management committee was thus able to enter into agreements with trophy hunting companies to use conservancy hunting quotas and tourism companies to develop tourism infrastructure in the conservancy. The conservancy management committee was required to administer the conservancy in the interests of the conservancy members and in accordance with the constitution.

Table 5.2: Identification and affective commitment changes during consolidation of the collective identity

Consolidation Phase	Drivers of change	Identification	Affective commitment
Consolidation of conservancy collective identity 2000 – 2004	<ul style="list-style-type: none"> • Conservancy is managed according to the constitution. • CCGs are appointed to monitor wildlife. • Committee distributes meat and employment as benefits. • Members are employed at the campsite, conservancy office and the lodge. 	<ul style="list-style-type: none"> • <i>Attitudes</i>: interested in conservancy • <i>Behaviour</i>: attend meetings and are involved in decision making • <i>Behaviour</i>: use of expressions such as we, us, ours • <i>Attitude</i>: wildlife is a resource • <i>Behaviour</i>: do not poach but look after wildlife • <i>Attitude</i>: people value the conservancy • <i>Behaviour</i>: more members register with the conservancy 	<ul style="list-style-type: none"> • <i>Emotion</i>: use of expressions such as ‘happy’, ‘proud’, ‘trust’. • <i>Emotion</i>: happy with the management of the conservancy • <i>Emotion</i>: members show ambivalent feelings about elephants • <i>Emotion</i>: members happy with the benefits (e.g. meat and employment)

5.2.1 Reinforcing identification

The drivers that reinforce identification in the consolidation of the conservancy collective identity such as management, benefits and employment are presented in this section.

Management

I have shown in Table 5.2 how the process of establishing the conservancy created conditions that encouraged members of the community to identify with the conservancy and that this identification was evoked largely by perceptions of benefits that might accrue to members. Management of the conservancy (Table 5.2) provided the process for realising expectations and for reinforcing identification. Importantly, it also provided the opportunity for empowerment through participation in decision making. Mosimane (2000) and Shapi (2003) concluded that during the early years of its operation, the conservancy management committee administered the conservancy with the overriding principles of transparency, fairness and equity and regularly informed members of decisions and financial status. The following statements confirm that the conservancy management committee convened regular meetings to share information with conservancy members and to solicit their participation in decision making. This approach sustained member interest and involvement in the conservancy and encouraged behaviours that aligned with the collective identity constructed around the vision for the conservancy.

Meetings were our means of communication that kept us interested in the conservancy and this is where we shared problems, conservancy projects and activities. Meetings were called as urgent matters came up and area meetings were held every three months. (Interview 37)

The committee managed the conservancy with a very good aim. We cooperated and worked together for the benefit of the community. The conservancy belonged to the community and the committee looked after it for the benefit of the community. The committee informed the community what they wanted to do and the community either approved or declined. If approved, the committee implemented and gave the community feedback. (Interview 33)

Committee members were transparent and the community were involved in conservancy activities. The committee was only there to execute the decisions made by the community. The community knew that they are the owners of the conservancy and took responsibility. (Interview 35)

Benefits

The significance of benefits and of the approach to management as determinants of identification is illustrated by the statement of a conservancy member comparing the attendance of conservancy meetings with farmers' association meetings. The strong identification that members developed for the conservancy contrasted with weak identification with the farmers' association.

If you compare farmers' association meetings with conservancy meetings, the conservancy meetings are largely attended in comparison because our people see the conservancy as something that can develop them. The farmers' association meetings do not provide much and are not financially sound but the conservancy generates a lot of income through joint venture and trophy hunting. It is known that the conservancy has funds and people prefer to be associated with the conservancy that has money and can benefit them directly. (Interview 02)

The flow of benefits and the success of the conservancy required a fundamental change in how members related to and behaved in relation to wildlife. Arguably, change in these provides insight into how identification was being reinforced. Registering the conservancy created the opportunity for members to assume responsibility for wildlife management and to merge their attitudes and behaviours with the collective expectations for the conservancy. The statements below show that the interests members developed in the management of wildlife and their involvement strengthened their relationship with the conservancy. Their attitudes changed from observing poaching to reporting it and becoming active in wildlife conservation with some accepting appointment as Community Game Guards. The change in attitude and behaviour contributed to the population numbers of game increasing and poaching incidences declining (NACSO, 2004; NRWG, 2009).

We developed interest in the conservancy and decided to look after our wildlife. If I come across an injured animal, I would report it to the conservancy or the CGG. (Interview 20)

The farmers support conservation in our area because wildlife is community resource which we will benefit from. When someone poaches we report to the CGGs and the committee. (Interview 01)

Since the conservancy formation we became aware that we cannot just hunt and eat like before, we know we have to conserve wildlife to benefit from it. We know that if we hunt these animals, we will be arrested for poaching as it is illegal and is punishable. (Interview 45)

Employment

Employment in rural areas of Namibia such as Doro !Nawas is very low (Long, 2002; Mosimane, 2000) and not surprisingly, opportunity of employment is a strong factor in how individuals identify with the conservancy. The benefits that conservancy members derive from tourism facilities and trophy hunting agreements reinforced identification with the conservancy. Employment in the conservancy favours registered members, although meat distribution benefits all households with a registered member. A community member who wants employment would thus first have to be a registered conservancy member. Mosimane (2000) recorded 295 members and in a later survey Shapi (2003) suggested that 82% (n=116) of the household heads sampled were members of the conservancy. In 2009 there were 527 registered members (Doro !Nawas Conservancy extra general meeting, 12 December 2009). The statements below suggest that benefits such as employment and meat encouraged more people to identify with and also reinforced members' identification with the conservancy.

Before the lodge and the campsite were constructed, people did not have interests in the conservancy but after few developments, more people registered as members. (Interview 23)

Once the conservancy was registered and there were hunting contracts and joint ventures and then everybody wanted to get involved in the conservancy. (Interview 51)

I am interested because I benefit from the conservancy resources. I receive a salary and meat from trophy hunting. (Interview 16)

We receive wildlife hunting quotas and when the trophy hunter come to shoot the community members get some meat. We are benefiting from wildlife meat because the elderly people and the people farming in the wildlife rich areas are given meat. (Interview 01)

5.2.2 Reinforcing affective commitment

The drivers that reinforce affective commitment in the consolidation of the conservancy collective identity are management and benefits.

Management

Managing the conservancy in accordance with the constitution and in the interest of the conservancy members continually reinforced the high levels of affective commitment to the conservancy. This is reflected in the sense of belonging and ownership expressed by respondents. The statements illustrate that the sense of belonging and contributing stimulated emotional attachment to the conservancy inducing positive emotions, signifying a strengthening of affective commitment to the conservancy.

We were the owners of the conservancy and not the committee therefore we were happy with the conservancy committee because the committee worked for conservancy members. (Interview 05)

We are happy and willing to give advice on how the funds should be utilised, when we received figures and expenditure. The most important thing the conservancy members wanted to see was financial transparency, and how the finance of the conservancy was being managed. (Interview 02)

We are happy when we receive financial report on time. The members wanted to know the financial status of the conservancy and how the conservancy funds were generated and spent. (Interview 03)

I was happy because the conservancy committee was doing things according to the conservancy constitution. (Interview 06)

Benefits

The development of tourism facilities and joint venture agreements enabled the conservancy management committee to deliver benefits that engendered pride and positive emotional attachment to the conservancy, reinforcing affective commitment.

I am proud of the conservancy because we built a lodge and campsite as development. Young people got jobs and at least they can look after their children and families. (Interview 23)

I am happy with the conservancy office and the lodge because it offers employment to conservancy members. The camp site is small and therefore employs only three people. Some people got jobs and can look after themselves. (Interview 09)

The provision of benefits to the conservancy members made me happy. Working with the community makes it possible for the committee to deliver benefits. (Interviews 34)

I like working with the community and what makes me proud is when the conservancy committee distributes meat to poor people when the trophy hunter shoots. (Interview 03)

Whilst access to benefits generates positive emotions toward the conservancy and wildlife, the costs people endure as a result of human wildlife conflicts evoke negative emotions toward both wildlife and the conservancy, and compromise affective commitment as shown by the responses below. Understandably it is the approach to management of the conservancy and the manner in which human wildlife conflicts are resolved that determines whether affective commitment is reinforced or undermined. This is particularly challenging in the Doro !Nawas Conservancy because it is one of the conservancies that is worst impacted by human wildlife conflict with an estimated 226 incidences of human wildlife conflict annually costing a minimum of N\$198,825 per annum (Brown, 2011) compared to conservancy annual income of estimated N\$ 200-500K (Doro !Nawas Assessment, 3 June 2010; NACSO, 2006). Brown (2011:11) notes "... large financial losses being experienced by farmers in this conservancy pose a serious risk of farmers turning against the conservancy". A view expressed below by one respondent suggested that at least among some members of the community, benefits were largely offset by the costs incurred in repairing damage resulting from elephants.

Before the conservancy we were not aware that elephants also needed protection, we wanted them destroyed and taken out of the area. After the conservancy we understood the importance of having elephants in our area. It is a huge animal and everyone is afraid of it but it brings in a lot of money for us. Tourists come to the area to see the elephants. (Interview 34)

We are not happy because of the elephants, the conservancy says we must manage and protect our elephants but the same elephant then destroys our water infrastructure. The community wants the elephants to be removed from the conservancy because although income is derived from the elephants the income is ploughed back in repairing destructions caused by elephants. (Interview 03)

We realise that a conservancy is a great idea but if something negative happens like human wildlife conflict which is a major problem in the conservancy it influences perceptions about the conservancy, it brings negativity. (Interview 07)

5.2.3 Collective identity

In this phase there was continual reinforcement of identification and affective commitment through the actions of management and the realisation of benefits, consolidating the collective identity that had formed around the concept and prospect of a conservancy and enticing more people to register as members. This is strikingly evident in responses in which individuals identify themselves as 'conservancy members' through the use of words such as 'we', 'us', 'ours', and show affection

through the use of words such as ‘happy’, ‘trust’ which demonstrate that they are part of and proud of the collective. It is also evident in the responses that convey association with collective action participating actively in meetings, in protection of wildlife resources or in employment. In this phase identification and affective commitment of conservancy members was being sustained.

The continual reinforcement of members’ identification and affective commitment to the conservancy merged their attitudes and behaviours with those of the conservancy, assimilating the collective identity as their own. It also created conditions that attracted more members transforming their attitudes and behaviour to be consistent with the collective identity. I argued in chapter 2 that the collective identity of conservancy members differentiates them from other groups of people and bestows on members unique characteristics and behaviours that are influenced by their shared meaning, experiences and expectations. The findings show that over a period of about four years, collective identity consolidated within the Doro !Nawas community, creating conditions that would contribute to making the collective identity, and thus also the conservancy, resilient.

In 2003 for the first time management began to falter and mismanagement of funds was recorded (Namibia Nature Foundation letter to the conservancy committee, 13 October 2003). This was to test resilience of the collective identity.

5.3 Collapse of conservancy collective identity

In this phase management of the conservancy experiences several challenges. Applying the collective identity framework I developed in chapter 2 (Figure 2.1), I constructed the following proposition: *Discontent with the approach and actions of the conservancy management committee, the decline of benefits and the limited opportunities for involvement of members in the activities of the conservancy gradually weakened affective commitment and the collective identity although identification remained strong.* The principal causal factors and how they affected the state of identification and affective commitment during this phase are indicated in Table 5.3.

I have argued in chapter 2 that collective identity can be considered as a precursor that facilitates or impedes collective action (Melucci, 1996; Polletta & Jasper, 2001; Snow, 2001) because it enables groups of resource users to self-organise to govern use of resources on which they depend (Agrawal, 2001; Araral Jr, 2009; Dietz et al., 2003; Hoole, 2009b; Ostrom et al., 1999; Wade, 1987). This understanding implies that collective identity is continuously under the influence of how governance is exercised, changing in response to discrepancies that may develop between the individually held meanings (self-meanings) and collective meanings (Burke, 2006). Ideally, a strongly internalised collective identity (one in which identification and affective commitment are high) would use collective action to pressure for corrective measures when mismanagement was evident. While

success would likely reinforce collective identity, failure might be expected to cause collective identity to gradually weaken and collapse.

It is important to appreciate that in Holling's (2001) model, collapse does not necessarily imply a complete breakdown or loss of system characteristics, of collective identity in this case. I interpret collapse as a process involving the weakening of collective identity if not among all members of the collective, at least among some. Collapse of collective identity can thus be understood as a contagious process reflecting the spread of dissatisfaction among members of the collective. The capacity of the system to re-organise depends on whether the level of identification and affective commitment among a sufficient number of members of the collective remains sufficiently high to contain the spread of dissatisfaction and arrest the process of collapse. This suggests that collapse may approach a threshold beyond which reorganisation becomes impossible and a change of state results.

Since 2004 it became increasingly evident that the conservancy management committee was not administering the conservancy according to the constitution and in the interests of conservancy members. In chapter 4, I discussed the milestones leading to a collapse of collective identity (Table 4.5). The conservancy management committee failed to hold meetings with conservancy members thus members could not participate in decision making (Disciplinary committee minutes, 23 September 2009). When meetings took place some members did not attend because meetings were always postponed and there was uncertainty. The lack of proper definition of quorum in the constitution for members meetings became an impediment to information sharing in the conservancy (L. Hoab, personal communication, December, 2010). Financial reports were not presented at meetings as required leading to allegations of financial mismanagement (Conservancy meeting minutes, 14 December 2005). Members' benefits, in particular meat distribution declined and there were accusations of unfair distribution of benefits (see 5.3.2). The conservancy management failed to execute their mandate to the satisfaction of conservancy members and in support of the conservancy collective identity.

Table 5.3: Identification and affective commitment changes during the collapse of the collective identity

Collapse Phase	Drivers of change	Identification	Affective commitment
Collapse of conservancy collective identity 2005 – 2009	<ul style="list-style-type: none"> • Management committee fail to hold meetings and present financial reports. • Meat benefits decline as management committee focus on income generation. • Bethanie farms community can join a conservancy of their choice. 	<ul style="list-style-type: none"> • <i>Attitude</i>: appreciate the conservancy • <i>Behaviour</i>: establish a concerned group • <i>Behaviour</i>: establish a conservancy disciplinary committee • <i>Behaviour</i>: Bethanie community joins the conservancy • <i>Attitude</i>: value wildlife as a resource • <i>Behaviour</i>: continue to look after wildlife and report poaching 	<ul style="list-style-type: none"> • <i>Emotion</i>: use of expressions such as ‘not happy’, ‘not proud’, ‘mistrust’ • <i>Emotion</i>: not happy with the management committee • <i>Emotion</i>: not happy with declining meat benefits • <i>Emotion</i>: lost trust and enthusiasm for management committee

5.3.1 Strong identification

Although there was considerable dissatisfaction with the manner in which the conservancy was being managed, members continued to display attitudes and behaviours that are well aligned with the collective identity. This suggests that notwithstanding their frustrations they continued to identify with the conservancy. Those members who still strongly identified with the conservancy established a concerned group and a conservancy disciplinary committee to engage the conservancy management committee and to be involved in resolving issues that were weakening the collective identity. Members of the concerned group used their collective action to call for corrective measures that would address the discrepancy between the individual and collective meaning. Their actions attracted new members (Bethanie farmers) who did not identify with the conservancy when it was being established ten years before. The statements below affirm that members continued to monitor wildlife and there was no substantial increase in poaching incidences (NRWG, 2009, 2010) and are indicative of the persistence of identification among members.

I am not in the committee but if I find someone poaching, I would report them, we are looking after the wildlife. (Interview 23)

Conservancy members established a concerned group to raise conservancy issues that were not acceptable to conservancy members with the conservancy management committee. (Concerned group, 2 February 2005)

Due to the desire of conservancy members to save the conservancy from failing, a Disciplinary Committee was established in terms of the constitution sections 90-94 on 8 March 2008, to mediate in conflict situations. (Disciplinary committee minutes 13 October 2008)

Almost 10 years after registration of Doro !Nawas Conservancy, the community of Bethanie farms collectively decided to become members of the Doro !Nawas conservancy. (Interview 40)

5.3.2 Weakening affective commitment

For some members whose collective identity was less strongly internalised, the failure of management and the decline in benefits distributed led to disaffection, weakening affective commitment, even if they still identified with its potential. Disaffected members displayed emotions that reflected low affective commitment to the conservancy. The statements below show that members' feelings were characterised by resentment to the conservancy management committee because it failed to hold regular meetings and inform members about the conservancy. Allegations of mismanagement of conservancy funds were reinforced by the conservancy management committee failure to present timely financial reports to members. Growing and spreading mistrust resulted in members not feeling emotionally attached to and not experiencing a sense of belonging to the collective, weakening their collective identity. The negative emotions were followed by resentment, with conservancy members deciding not to attend meetings and demanding change of conservancy committee.

Conservancy meetings were postponed because there was no quorum for the meetings. We decided not to attend conservancy meetings because we were tired and frustrated. We had a motion of distrust in the committee because the conservancy committee was not implementing conservancy activities according to the conservancy constitution. (Interview 05)

I was not happy with the conservancy committee because we did not know what happened with the income generated. Mismanagement of funds by conservancy members employed at the conservancy or serving in the committee was hurting me. No action was taken against people who mismanaged conservancy resources as some conservancy committee members were related. (Interview 21)

We were not happy with the financial mismanagement and presentation of financial reports of the committee, these were the main issues we wanted change because we were of the opinion that the conservancy could be managed the way the community wants. We wanted the previous committee to leave office. (Interview 02)

The decline in benefits distributed to conservancy members also contributed to low levels of affective commitment to the collective identity. The emotions individuals expressed in the interviews illustrate clearly the weakening of affective commitment and the role of benefits that, as I have shown, were a strong driver in the formation of the collective identity ten years earlier. The statements below show that feelings of unfairness in the distribution of the benefits and associated mistrust and loss of

enthusiasm that conservancy members developed weakened emotional attachment and the sense of belonging.

I thought the conservancy would be beneficial to the community as it would eradicate poverty and create employment but the committee broke the trust and enthusiasm the community had towards the conservancy. (Interview 25)

I am not happy with the committee because we were not receiving anything from the conservancy while the other communities receive benefits from their conservancies. I became a member of the conservancy in 2002 because information and benefits never reached my community I decided to get involved. I became a committee member to know what the benefits are and make sure that all community members must benefit from the conservancy. (Interview 09)

I am not happy with the unfairness in the conservancy. Without proper management and administration, it will not be possible to provide the needed benefits. If decisions are made, it should be according to what the community decided and agreed, not what the individual wants. The decision making is done and activities are carried out without consulting the community. (Interview 36)

5.3.3 Collective identity

Collective identity can weaken when one or both of identification and affective commitment decline (Figure 2.1). The findings suggest that although members were disillusioned with the poor management, they continued to identify with the conservancy. The weakening of the collective identity was thus more a consequence of the loss of emotional attachment (affective commitment) than of a change of values and meaning associated with the conservancy (identification). This was particularly significant because the persistence of identification provided a platform for reconstruction of collective identity as it related to the conservancy.

A group of individuals whose levels of identification and affective commitment remained high were able to engage collectively to arrest the process of collapse. They constituted a concerned group that lobbied successfully for the review of the constitution and establishing a disciplinary committee which enabled them to address challenges that were weakening the collective identity. They were eventually able to contain the contagious spread of dissatisfaction and initiate a process of reorganisation. Arguably the resilience of the collective identity was strongly dependent on these members of the collective who identified most strongly with and were most committed to the conservancy. They also had the standing and competencies to influence the process because they were landowners and some were educated and therefore able to write letters of complaint to MET. As a consequence, although the collective identity started the collapse phase, collapse was arrested and the

system was resilient enough to reorganise. This suggests that the collapse did not approach a threshold beyond which reorganisation becomes impossible.

5.4 Reorganisation of the conservancy collective identity

In this phase there are interventions to reorganise the conservancy collective identity. Applying the collective identity framework in chapter 2 (Figure 2.1), I constructed the following proposition: *The actions of the concerned group, the constitutional review committee, the conservancy disciplinary committee and the election of a new conservancy management committee strengthen affective commitment to the conservancy.* Table 5.4 shows the principal causal factors and how they affected the state of identification and affective commitment during this phase.

I have argued in chapter 2 that the construction, maintenance and collapse of collective identity are nested in dynamic social ecological system that renders the collective identity vulnerable in directing behaviours in support of the conservancy. This implies that the collective identity has to continuously self-organise and adjust in response to discrepancies that may develop between the individually held meanings and the collective meanings (Burke, 2006) due to the influence of how management is exercised. Members who retained strong identification with the collective identity established a concerned group to raise concerns with the conservancy management committee and MET. The concerned group continued to request MET and the conservancy management committee to effect changes that would help re-organise the collective identity. The conservancy constitution was reviewed to address weaknesses identified during the constitutional review consultative meetings. A conservancy Disciplinary Committee (DC) was established in terms of the revised constitution to mediate in conflict situations in the conservancy. The DC became a community based institution to facilitate change on behalf of the MET and mediate between the concerned group and the conservancy management committee to help re-organise the collective identity. A new conservancy management committee was elected to make management accountable to the members and to rebuild the collective identity.

Table 5.4: Identification and affective commitment changes in the reorganisation of the collective identity

Reorganisation Phase	Drivers of change	Identification	Affective commitment
Reorganising conservancy collective identity 2009 – 2010	<ul style="list-style-type: none"> • Conservancy management committee do not hold regular meetings or present financial reports. • Meat benefits decline due to failure of conservancy management. • MET appoints a constitutional review committee. • A Disciplinary Committee is established to mediate in conflicts and facilitate elections. • A new conservancy management committee is elected. 	<ul style="list-style-type: none"> • <i>Attitude</i>: members lost interest in the conservancy • <i>Behaviour</i>: members do not attend meetings • <i>Attitude</i>: members lost interest due to the decline in benefits • <i>Behaviour</i>: members not attending meetings and are not involved 	<ul style="list-style-type: none"> • <i>Emotion</i>: members feel attached to the conservancy • <i>Emotion</i>: members have feelings for the conservancy • <i>Emotion</i>: members trust the conservancy

5.4.1 Identification

I have shown in chapter 4 that a discrepancy between the individual meaning and the collective meaning emerged in 2004 but was only addressed in 2010. While this discrepancy existed for some, it was not so for all because when things go wrong, members do not behave as a single group. Some lose identification early while for others it may take much longer or not even occur at all as they take on the revitalisation of the organisation. Some members with strong collective identity used the mismanagement as a stimulus for collective action to intervene and sustain the collective identity. They arrested the collapse of collective identity and set it back on the road to reconstruction; both identification and affective commitment were strengthened in the process. The prospect of improved management and reinstatement of benefits and their retained identification with the conservancy, positioned them to reconstruct their affective commitment.

I personally do not agree with the establishment of a new conservancy. When the conservancy is de-gazetted we the community will suffer. We must re-unite. (Senior headwoman, Information meeting between Doro !Nawas and !Garibasen conservancy, 23 June 2005)

We do not want to break away from Doro !Nawas conservancy, if there are problems let us resolve them. (Community member, Minutes of Bloemhoff meeting 14 December 2005)

5.4.2 Reconstructing affective commitment

During the negotiations, the level of affective commitment to the collective identity among disaffected members gradually strengthened. The statements indicate that the interventions of reviewing the constitution and electing a new conservancy management committee gave members hope. The sense of belonging and emotional attachment in this phase is based on emotions founded on hope of better governance, rather than the influence of current governance in the conservancy. This implies that members' emotions did not change from negative to positive but were founded on the past shared interests and experiences of conservancy management and benefits to members. Members evinced positive emotions that demonstrated emotional attachment to the collective identity.

We have feelings for the conservancy but only when things are being done rightly shall we make efforts to attend meetings to hear about the good things and progress that is taking place in our conservancy. (Interview 04)

I always have the love for the conservancy because it is there for the community, not for me or the committee. (Interview 05)

I think with better conservancy management people's feelings about the conservancy will change for the better. (Interview 01)

5.4.3 Collective identity

At the start of this phase the collective identity was weak due to members' dissatisfaction with the continued failure of the conservancy management committee to hold regular meetings to involve the members and to present financial reports on time. For some members however, the collective identity had become stronger because of the feedback loop from collective action of the concerned group directed at resolving the management problems. Affective commitment started to reconstruct because the interventions gave members hope founded on past shared interests and experiences that evinced positive emotions to the collective. Although the collective identity had weakened, MET intervention to review the constitution and elect a new conservancy management committee helped to reorganise the collective identity.

5.5 Current state of conservancy collective identity

In this phase of the conservancy a newly elected conservancy management committee creates the conditions that enable individuals to capitalise on the opportunities, they identify with and commit to the conservancy, strengthening the collective identity. Applying the collective identity framework in chapter 2, I constructed the following proposition: *The actions of the new conservancy management*

committee created the conditions that enable conservancy members' identification and affective commitment to strengthen so that members' attitudes and behaviours are supportive of the collective identity. The principal causal factors and how they affected the state of identification and affective commitment during this phase are illustrated in Table 5.5.

I have shown in chapter 4 that through interventions to review the conservancy constitution, a new conservancy management committee with 17 members was elected to serve for three years. At the time of the study the conservancy management committee was in office for eight months, and had not held its first annual general meeting. The opinions expressed by conservancy members are thus a reflection of the progress of rebuilding identification and affective commitment, particularly among the disaffected members over the eight month period.

Table 5.5: Identification and affective commitment changes in the current state of the conservancy

Growth Phase	Drivers of change	Identification	Affective commitment
Rebuilding conservancy collective identity 2010	<ul style="list-style-type: none"> • Committee hold regular meetings to inform members. • Financial reports are presented timeously. • Benefit (meat) is delivered to members. 	<ul style="list-style-type: none"> • <i>Attitude:</i> members interested in the conservancy • <i>Behaviour:</i> members attend meetings regularly • <i>Behaviour:</i> members are involved in the conservancy 	<ul style="list-style-type: none"> • <i>Emotion:</i> members happy with the committee • <i>Emotion:</i> members happy with the financial reports • <i>Emotion:</i> members happy with meat benefit

5.5.1 Identification

With the management of the conservancy in the interests of members and their involvement in decision making, members' identification started to spread among those who were disaffected, contributing to the rebuilding of a collective identity within the larger community. Conservancy members now express attitudes and behaviours that are supportive of the collective identity. The statements below show that regular meetings are held to involve members in the management of the conservancy and that those who are involved cooperate because they are convinced the conservancy is managed in terms of the constitution. Timeous presentation and distribution of financial reports to conservancy members strengthens identification with the conservancy.

It is now up to the conservancy members to compare and judge us (new management committee) on the financial report that the treasurer will present. Because you as members know the financial state in which we took over from the previous conservancy management committee. (Chairman report, 5 March 2011)

The current committee is new and we do not know how the committee will work with the community. But, at least the new committee is informing us about the conservancy income and it is giving hope. (Interview 21)

The current committee cooperates with the community and works according to the constitution and how MET requires a conservancy to be managed. (Interview 40)

The committee informed us about conservancy activities and developments at the meetings. They hold meetings to discuss feedback they must give to the members. They prepared bank statements, made summaries of what was done and announced the date of the meeting. (Interview 30)

The atmosphere has changed with the election of new committee they attend to the needs of the people, which interest us to attend meetings. (Interview 34)

5.5.2 Affective commitment

Although members, including the concerned group, were unhappy with the state of affairs and therefore had experienced a decline in affective commitment, members of the concerned group retained sufficient identification to motivate action in support of the conservancy. Once prospects improved there was a contagious spread of hope and a resurgence of affective commitment to the collective identity that was founded on past shared interests and experiences. Members now express attitudes and behaviours that signal increasing levels of affective commitment to the collective identity. The statements below illustrate that timely presentation of financial reports and meat distribution evinced positive emotions from members which indicate increasing levels of affective commitment.

Conservancy members were happy about the balances in conservancy accounts since the current committee started with less than N\$2000 when they took over. The conservancy committee was applauded for their financial performance and transparent management of the conservancy. (AGM minutes, 25 March 2011)

We were happy to receive financial reports and applauded the committee, it was the first time to receive written financial reports which we can study on our own and keep copies. The current committee changed many things especially financial management in the conservancy. The committee prepare financial report every 3 months and the treasurer provides us with the reports, provides copies to conservancy members and everything are well done. (Interview 03)

I am feeling happy because the new committee did their best to ensure that benefits are reaching conservancy members. The area representatives distributed meat to most conservancy members this year and the conservancy members were happy. (Interview 02)

I am happy when the conservancy committee does things according to the conservancy constitution. I was unhappy but the current conservancy committee is implementing things according to the constitution again. (Interview 06)

5.5.3 Collective identity

The weakening of identification among members together with the decline in affective commitment among the disaffected group compromised collective action. It was the collective action of the concerned group, the group who had still identified strongly with the conservancy that enabled re-organisation and the drawing of disaffected members back into the collective. The collective was re-established with an identity reminiscent of the initial phase in that it was founded on prospects for benefits. It offers hope for collective action in support of the conservancy values and goals.

The new conservancy management committee has strengthened the collective through holding regular meetings and involving members, timely presentation of financial reports and distribution of benefits to members. With strengthening identification and affective commitment, the collective identity is being entrenched causing attitudes and behaviours to be more consistent with the collective. As conservancy members start to support conservancy activities, it should direct the trajectory of collective identity towards a more stable state as was evident in the consolidation phase. However, for this to happen, the conservancy management committee will have to continue on the current management trend.

The findings suggest that collectives are heterogeneous and individuals do not all react in the same way at the same time. In the face of disturbance there may be a contagious spread of dissatisfaction that weakens affective commitment and, if not addressed, also identification. Under these conditions the resilience of collective identity is largely determined by the collective actions of those who exhibit the highest levels of identification and affective commitment and who are slow to lose identification. It is their ability to identify the signs of weakening affective commitment and identification and to act collectively to contain the contagious spread and reconstruct the collective identity that determines the fate of the collective. The findings also suggest that for 'concerned individuals' to act collectively in support of the collective identity it is helpful if they are socially and politically connected and have the competencies that enable effective communication.

5.6 Summary

In this chapter, I examined the relevance of the adaptive framework to understand the organisation and growth, consolidation, collapse and reorganisation of the conservancy collective identity. The conservancy collective identity, in Doro !Nawas Conservancy over 11 years of existence, went through the four phases of the adaptive framework. Using identification and affective commitment as attributes of collective identity, I could interpret and track change in collective identity in the conservancy. The degree of identification and the amount of affective commitment influenced how conservancy members related to the collective identity and in turn impacted on the collective action to sustainably manage the use of wildlife and other natural resources.

In the organisation and growth phase of the conservancy the notion of potential benefits and the actions of the VFA sub-committee caused community members to define themselves in the context of the conservancy (identification) and to develop a sense of belonging to the conservancy (affective commitment). The collective identity became more stable and the registration of the conservancy reinforced the identification and affective commitment as the conservancy became operational. In the consolidation phase the conservancy members' satisfaction with the approach and actions of the conservancy management committee, wildlife management, the realisation of benefits and the involvement of members in the activities of the conservancy, reinforced identification and affective commitment thereby consolidating the collective identity.

In the collapse phase the discontent with the approach and actions of the conservancy management committee, the decline of benefits and the limited involvement of members in the activities of the conservancy, gradually weakened affective commitment and the collective identity. However, it is important to appreciate that in Doro !Nawas the collapse of collective identity did not imply a complete breakdown or loss of system characteristics, of collective identity, because the attitudes and behaviours of a significant number of members remained strong enough to enable the system to retain its identity (Cumming & Collier, 2005) in the face of internal disturbance arising from the failure of management. Members of the collective who identified most strongly with and were most committed to the conservancy engaged collectively to arrest the process of collapse.

In the reorganisation phase there were interventions to reorganise the conservancy collective identity. The actions of the constitutional review committee, the conservancy disciplinary committee and the election of a new conservancy management committee strengthened affective commitment to the conservancy. The current phase of the conservancy, after the election of new conservancy management committee was to rebuild the collective identity. The new conservancy management committee, through holding regular meetings and involving the members, timely presentation of financial reports and distribution of benefits, strengthened members' identification and affective commitment so that members' attitudes and behaviours started to become consistent with the collective identity.

The findings suggest that the Doro !Nawas conservancy as a system, followed an adaptive cycle with the variables identification and affective commitment exhibiting distinct lags but at different stages in the cycle. In the first phase identification builds quickly and affective commitment lags, building more slowly. When management starts to falter, the reverse happens as affective commitment declines and identification exhibits a lag.

Cumming and his colleagues (2005) have suggested that resilience is operationalised as the ability of the social ecological system to maintain its identity. The Doro !Nawas Conservancy can be interpreted as a social ecological system organised around a collective identity defined by the conservation and sustainable use of wildlife. It can be argued that the resilience of the social ecological system is therefore operationalised by the ability of members of the system to identify with and commit to the collective identity. I recognise however, that not everyone showed the same levels of identification and commitment in the conservancy collective identity at the same time. In chapter 6, I discuss the need for understanding the attributes of collective identity, how to detect trends in collective identity change and incorporating collective identity into an adaptive management process.

Chapter 6: Understanding collective identity attributes, detecting trends and a role for adaptive management

In chapter 2 I argued that, because managing the use of common pool resources is contingent upon collective identity through which actions are coordinated, it would be helpful if the collective was conscious of and managed its identity. I proposed two attributes, identification and affective commitment, that might be used to detect trends in collective identity and I presented a framework that illustrated how collective identity was constructed and deconstructed in an adaptive cycle. Because managing the use of common pool resources is usually a long term process, the framework was constructed around resilience and I argued that sustaining collective identity would contribute to resilience in social-ecological systems. In chapter 5 I presented the results of a longitudinal study that showed how collective identity was constructed around the concept of a conservancy, how it was sustained as the conservancy became operational, how it started to collapse when governance failed and how reorganisation was initiated. In this chapter I consider three issues that have emerged from the study: understanding the attributes of collective identity; detecting trends in collective identity and incorporating collective identity into an adaptive management process.

6.1 Understanding collective identity attributes in an organisational context

Weick and Sutcliffe (2007:23) have suggested that "... expectations create the orderliness and predictability that we count on when we organise" but that they create 'blind spots' such that we may not be aware of change until it has reached a stage that makes it very difficult to manage. They suggest that resilient organisations exhibit a high degree of 'mindfulness' which means that those involved are aware of the context and of deviations from the expected. I have suggested that collectives, such as conservancies, need to sustain collective identity because when this falters disruptive behaviours arise that make it difficult to recover. This understanding suggests a need for members of the collective, and particularly management, to be mindful of change in identification and affective commitment. It is important to detect change before it has progressed too far for remedial action.

Collective identity is an outcome of the extent to which individuals identify with and commit to a common cause. It is the outcome of personal preferences and choices and is reflected in the language used to express feelings toward the cause and in behaviours that range from supportive to destructive. The words 'we', 'us' and 'ours' convey very different sentiments from 'you', 'my', 'yours' and 'theirs'. They are personal pronouns that we use in everyday language to indicate whether we feel part of and identify with a collective or not, whether we feel 'included' or 'excluded'. And, in a similar way, the language individuals or groups use provides insight into their identification and affective

commitment to the identity and affairs of the collective. O'Malley (2000) has suggested that committed employees act in the interests of the company which may include a strong belief in the values and goals of the organisation (O'Malley, 2000), willingness to exert effort on behalf of the organisation and a desire to maintain membership (Mowday, Steers, & Porter, 1979). Because collective action is a critical determinant of successful conservancies, statements that indicate members act or do not act in the interests of the collective are indicative of their identification and affective commitment. I have argued in chapter 3 that it is reasonable to use such words and phrases to detect change in collective identity and collective action and this was demonstrated in chapter 5.

My results suggest that being aware of how members of the collective express themselves (being mindful of the nuances in language) provides early warning of changes in identification and affective commitment. When management is either unaware of, or chooses to deny that there may be an emerging crisis, it places organisational resilience at risk. While being mindful alerts an organisation to threats, it also alerts the organisation to emerging opportunities. By contrast, mindless organisations are typically 'routine-oriented', following recipes (Weick & Sutcliffe, 2007), encouraging members to expect the world to operate in a particular way. The resultant 'orderliness' causes members of the organisation to interpret the unexpected as something that should be corrected, rather than as something that might be indicative of a need to adapt. Being mindful however, is of little use if the individuals are not able to act, to do something about what they observe. Being able to act has much to do with the institutions that govern how the organisation operates.

My research showed that some members of the collective were mindful but they were powerless to act, partly because they could not access the information that would inform their perceptions but more particularly, because most members of the conservancy were not empowered sufficiently to engage the mechanisms that were available for resolving the emerging crisis. The governance structures and process that they should have been able to call on to enable collective reflection and organisational adaptation were ineffective. Even when members sought corrective action, the committee either failed to respond or responded in ways that were not helpful. The result was that as dissatisfaction spread affective commitment declined and for some, this was accompanied by weakening identification. A more accessible and responsive process would likely have contributed to a more resilient collective identity. It was only when the concerned group was able to mobilise government that a formal process that was accessible to all was instituted. But even then, the focus was reorganisation rather than reflection, learning and adaptation.

The absence of a formal process which all stakeholders (including government) can use for thoughtful reflection to inform decision making and for effective censure should it be required, emerges as a serious limitation in conservancy governance. In the Doro !Nawas conservancy organisational

resilience was largely determined by those members who were mindful and powerful enough to engage and influence the process. They were able to act and do something to contain the contagious spread of dissatisfaction that threatened collective action through initiating a process of reorganisation to avoid the collapse of the collective identity beyond a 'threshold' for reorganisation. In the case of Doro !Nawas, the intervention of mindful and powerful members, made the collective a mindful organisation that adapts. Later in this discussion I give consideration to a role for adaptive management as a process that institutionalises reflection and adaptation.

6.2 Detecting trends in collective identity

It is easy to comprehend that identification and affective commitment would jointly determine collective identity. Yet, how they do this is complex because, as I postulate in the framework (Figure 2.1), there can be times when both identification and affective commitment strengthen while at other times they may appear to behave independently of one another. For example, during the early phase of establishment of the conservancy both strengthened until most members of the community embraced the collective identity, but as governance faltered affective commitment declined without a concomitant change in identification. This is followed by a phase that involves an increase in affective commitment. It is important to appreciate that not all individuals respond in the same way and at the same time. Much depends therefore, on how one defines the term 'collective'. In the Doro !Nawas study there were times when the collective was small: a few individuals who showed high levels of identification with the concept and who set about enabling and encouraging other members of the community to also identify with and become committed to the concept. At the time the conservancy was authorised by government, the collective had grown to include most eligible members of the community.

My results show that as governance faltered, affective commitment started to decline (Figure 6.1) even though individuals still identified with the conservancy and particularly, with the benefits streams that were being generated. The decline in affective commitment to and later, identification with the collective reflect the personal circumstances of each individual. For example, some farmers expressed a desire to return to farming (see green arrow Figure 6.1), suggesting a decline in both identification with and affective commitment to the conservancy. Had their preference been realised there would have been a return to a state similar to what existed before the establishment of the conservancy. Other members who identified strongly with and were committed to the concept of a conservancy sought to establish a conservancy of their own. Had this group's preference prevailed the outcome would have been two quite different approaches to resource management. And for yet others failed governance and declining benefits caused them to lose interest and neither lobby for change nor support revival of the conservancy. Their influence on the future is indirect in the sense that when the

number of members no longer meets the requirements of the agreement with government, it is incumbent upon government to intercede.

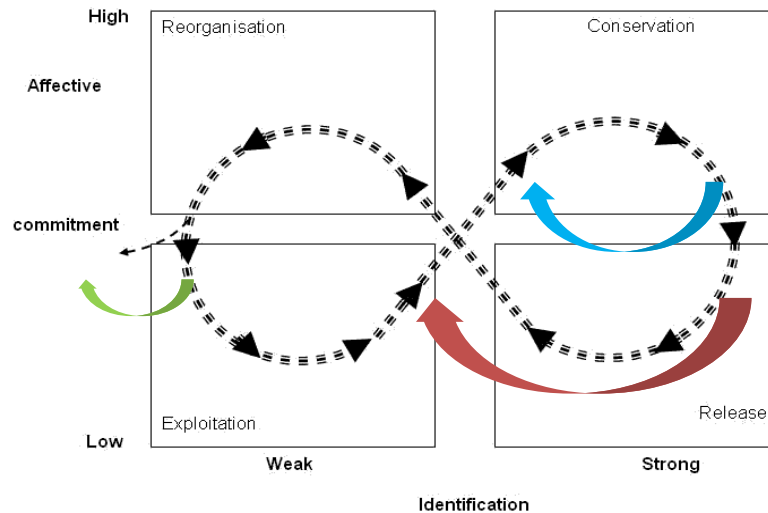


Figure 6.1: Responses of members of the Doro !Nawas conservancy to the failure of governance. The brown arrow illustrates the trend displayed by most members. The blue arrow shows the trend among the ‘concerned group’. The group whose intention was to return to farming is depicted by the green arrow. They were willing to allow a change of state from the conservancy.

While the adaptive cycle framework (Figure 6.1) provides a generalised model of the behaviour of collective identity my results suggest that it is important to appreciate that collectives are collectives of individuals whose cohesion is tenuous. Members do not necessarily share the same levels of identification with and commitment to (in this case) the conservancy and it should be expected that they will respond differently to disturbances. Because conservancies are established in locations and under conditions where people commonly do not have experience of managing such enterprises (NACSO, 2008, 2010) and because the benefit streams (and their value to individuals) are variable over time as they reflect natural cycles (NACSO, 2010) one can anticipate disturbances that will initiate a process of collapse (Anderies et al., 2004; Janssen et al., 2007).

Once the governance systems that are put in place falter, the collective becomes a group of people who start to respond in different ways and at different rates. The collapse of collective identity is thus a return not only to a situation of people behaving independently but it may also result in different collective identities arising among smaller groups, some of which may be antagonistic to reorganisation of the original collective identity. This was evident in the study of Doro !Nawas where two new collectives emerged (farmers and the new conservancy) that supported the deregistering of

the conservancy. It is readily appreciated that if collapse meant complete breakdown of collective identity, it becomes more difficult to foster identification and affective commitment.

In Doro !Nawas it required intervention from a concerned group and the government to avoid the collapse that would lead to a change of state and allow the collective identity to reorganise. Had government not intervened in support of the concerned group (shown by the blue arrow in Figure 6.1) contagious spread of dissatisfaction may have reached a level in which both identification and affective commitment were so low that members of the community could not reorganise and achieve a level of membership required by government. The dotted arrow on the left of Figure 6.1 indicates the collective identity would have moved toward a different state and a new identity established. My results suggest that Holling's adaptive cycle framework was helpful to understand and interpret what happened in Doro !Nawas conservancy. The results further indicate that for an organisation to function effectively, conscious attention should be given to sustaining the collective identity.

In the context of community conservancies in Namibia, Doro !Nawas in particular, and more widely in southern Africa, government is an important factor in sustaining the collective identity. The government plays an important role in purposive design of institutions that authorise and sustain conservancies. Suggesting that perhaps in the case of Doro !Nawas had the conservancy not been constituted under government authority, the concerned group may have had considerably more difficulty containing the contagious spread of dissatisfaction and collapse may have reached a threshold bringing about a change of state, a reversion to the state that existed before the establishment of the conservancy or the emergence of a new state. In a sense the government is a powerful force external to the collective that is able to reconstruct or effect a change of state by withdrawing authorisations that are necessary for the operation of the conservancy. Government although external to the SES plays a stabilising role, conferring resilience on the SES.

Longitudinal studies enable us to understand and perhaps more importantly, to anticipate and to respond to change. My research applied longitudinal study to help understand change in collective identity and how it might be managed to support resilience in collective action. Mine was not the first longitudinal study of change in the identification and affective commitment. Longitudinal studies have been reported by a number of authors (Bateman & Strasser, 1984; Bernhardt, Donthu, & Kennett, 2000; Côté & Morgan, 2002; Maier & Brunstein, 2001) in organisational literature. The focus of these studies was largely directed at being able to assess the impact of change in these attributes on the performance of an organisation. I also showed this, but what sets my research apart is that I conceptualised them as determinants of the resilience of collective action. I analysed them as attributes that together determined the state of collective action. This approach evinced a deeper understanding of change in collective action and led to suggesting how dramatic change may be

anticipated through the language and expressions of those who may be most sensitive and thus respond soonest to change. I also showed when such individuals were powerless to influence change, collapse became inevitable, but when the individuals are powerful they create conditions that favour resilience.

My research illustrated the importance of understanding collectives, including organisations, as collectives of individuals and groups of individuals who express differing levels of identification and affective commitment. The diversity is always present and is a latent platform on which individuals or groups of individuals construct their responses to what is happening in the collective. The consequence is that once something starts to go wrong, management may be faced with diverse responses that challenge winning back support. While longitudinal studies reported in the organisational literature imply the incorporation of identification and affective commitment into a management system, the focus was on managing the impact (Bateman & Strasser, 1984; Bernhardt et al., 2000; Côté & Morgan, 2002; Maier & Brunstein, 2001). Because I took a resilience approach, I accepted that change was continuous in social ecological systems. This made it necessary to envisage management as being mindful of and adapting to change and one way in which this could be done would be to incorporate collective identity into adaptive management.

6.3 Strategic adaptive management: a role for collective identity?

I argued in chapter 2, that adaptive management is concerned with adapting stakeholder behaviours to reflect new understanding. In this sense it is a social process that requires collective action which is facilitated when social cohesion is exhibited in a collective identity. The more strongly individuals identify with and are committed to the vision, goals and the need for an adaptive approach, the more likely it is that they will modify their behaviours and commit to effective actions in support of emerging understandings (Klandermans, 2002; Klandermans et al., 2002; Mosimane, Breen, & Nkhata, 2012). The term adaptive management acknowledges change (Armitage, 2005; Roux & Foxcroft, 2011) and in the context of social ecological systems this should be understood as change in both the social and ecological subsystems. I have shown that in the Doro !Nawas conservancy social change, particularly the new opportunity to benefit from wildlife and later the collapse of governance, motivated distinctly different behaviours, one supportive and the other destructive of the collective action that is necessary for achieving the intent of the conservancy.

This understanding raises the question of whether social change is adequately considered in the process of adaptive management. Understanding the social process through which individuals as members of collectives and the collectives learn, self-organise and adapt in response to the dynamics in their social ecological system while maintaining the collective action is fundamental to strategic adaptive management. The ability and willingness of individual members of collectives and the

collectives to learn from their successes and failures and to collaborate in decision making to effect change when there is uncertainty, determines their capacity to adapt (Armitage, 2005). Because the origins of adaptive management in a conservation context are deeply rooted in ecosystem management (Folke, 2006; Holling, 2001; Van Wilgen & Biggs, 2011) it would not be surprising if the process was more strongly oriented to the ecological and less strongly to the social subsystem.

Strategic adaptive management recognises uncertainties in social ecological systems, encourages learning by doing and adaptation to emerging new situations (Armitage et al., 2008; Holling, 2001; Kingsford & Biggs, 2012; Kingsford, Biggs, & Pollard, 2011; Rogers, 2003). These characteristics position strategic adaptive management as appropriate for the management of the dynamic and complex nature that defines the relationship between collective identity and collective action. The contested nature of common pool resources, the competing interests and values of stakeholders which results in frequent differences of opinion, even conflict, and the complex social relations that govern use and management make collective identity and collective action necessary in strategic adaptive management. The success of collectives depends on collective action which requires collective identity, yet strategic adaptive management which is a widely accepted management approach to manage complex social ecological systems, currently does not give explicit attention to collective identity. In the next paragraphs I examine strategic adaptive management as implemented in southern Africa, in particular in the Kruger National Park (KNP), through reviewing strategic adaptive management literature.

It is generally argued that the engagement process is a critical early step in strategic adaptive management (Kingsford & Biggs, 2012; Roux & Foxcroft, 2011). This process, also referred to as a visioning process to build the sense of common purpose (Roux & Foxcroft, 2011), is important to establish institutions, facilitate cooperative and good governance processes (Kingsford & Biggs, 2012), develop collective understanding and create stakeholder commitment to the common purpose (Rogers, 2006). While I appreciate the role of the engagement process in bringing stakeholders with different social values together to develop a common purpose, the process should also take into consideration a longer term perspective of the dynamic nature of the social ecological systems. The manner in which the engagement process is portrayed suggests an assumption, although not explicit, that the process facilitates the formation of a collective identity.

In my research I used collective identity as a way of interpreting and responding to the dynamic nature of the social subsystems, recognising that there might also be other ways. Collective identity is the common meaning that defines the behaviour of the members positioning them to take action on behalf of the collective (Klandermans, 2002; Mosimane et al., 2012). The process of collective identity formation is facilitated through ongoing interaction because it requires social relations and

learning to construct and reorganise the collective identity and to change behaviour as new knowledge becomes available and shapes the purpose for the collective (Kim, 2004; Klandermans, 2002; Melucci, 1996; Starkey, Tempest, & McKinlay, 2004; Wenger, 2004). This process requires individuals to connect through relationships, have ongoing interaction and sustain a sense of belonging, and to share individual and collective experiences (Melucci, 1996; Simon & Klandermans, 2001; Wenger, 2004). This suggests that while a platform for collective identity may be established through an engagement process as envisaged in adaptive management, it requires continued interaction and co-learning to embed shared meaning that is a necessary foundation for the behavioural change that may be required for collective action.

Van Wilgen and Biggs (2010) recognise the need to revisit the engagement process after some years, suggesting that collective identity can be constructed during an engagement 'event'. Not surprisingly then, the process for involvement of stakeholders is poorly described in strategic adaptive management and the uncertainties of the social subsystem are not appropriately acknowledged. For example, unlike for the ecological subsystem, the aspects of regular feed forward and feedback flows of information and communication to enhance learning among stakeholders are not well defined. Nkhata and Breen (2010) suggest that the flow of information to the governance process and the management process is essential for learning to take place in social ecological systems. Notable is that the engagement process (Figure 6.2) in the strategic adaptive management frameworks (Foxon, Reed, & Stringer, 2009; Pollard & Du Toit, 2007; Roux & Foxcroft, 2011) is placed outside the feedback process and, where there is an attempt to incorporate it in the feedback process, there is no explanation of its involvement.

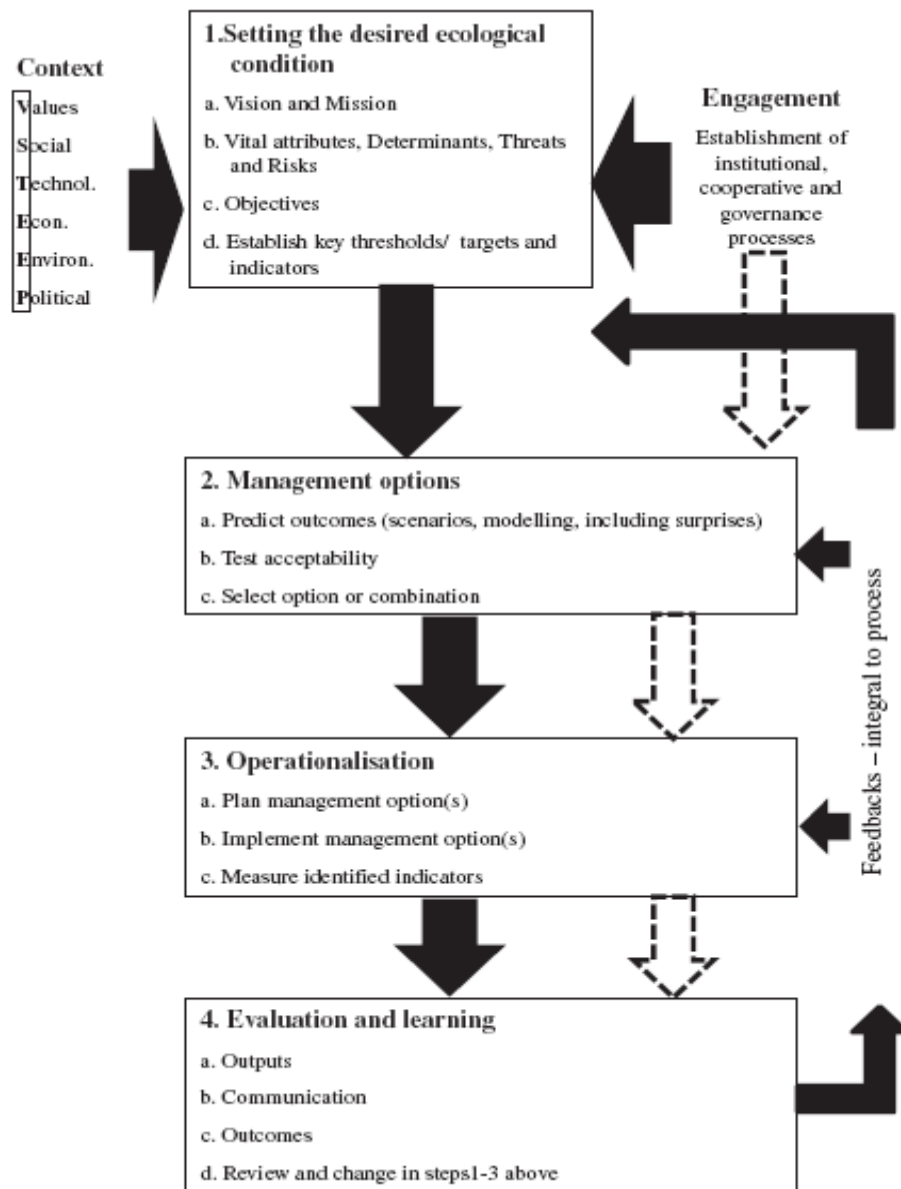


Figure 6.2: Four steps in the Strategic Adaptive Management (SAM) framework for protected areas and their rivers (Source: Kingsford & Biggs, 2012; Pollard & Du Toit, 2007)

The figure suggests that the flow of information mostly takes place in the management process (Nkhata & Breen, 2010) where much closer and more continuous interactions are portrayed between the scientists, managers and field staff (Pollard & du Toit, 2005; Pollard, du Toit, & Biggs, 2011) compared with apparently limited involvement of the stakeholders who were participants in the engagement process. Perhaps this reflects a sense that the envisaged collective action embodied in adaptive management does not require engagement by all stakeholders who participated in the initial engagement process. However, as my research has shown, even within the ‘management system’, barriers to communication can arise that allow individuals to ‘drift’ apart and lose identification and affective commitment. Pollard, du Toit and Biggs (2011:1) suggest the role of stakeholders in the

following statement, “The development of a new stewardship, based on a stakeholder-centred vision and on learning-focused management, has been a main achievement for the KNP”. But, stewardship suggests sustained engagement and collective action. The statement affirms the role of the stakeholders in developing a vision that is taken further in the adaptive management process through which learning takes place. The continued involvement of the stakeholders in the learning process is however, not clearly articulated. Even though the wider social economic system has become central to the conceptualising of strategic adaptive management (Pollard et al., 2011) the involvement of the stakeholders (other than those who implement management) in the learning process remains unclear and uncertain. Ineffective communication among the stakeholders and those implementing management leads to marginalisation, undermines learning and erodes the collective identity constructed during the engagement process.

Rogers (2006) suggested a framework to facilitate understanding between scientists, civil society and service agencies for collective decision making and learning together. Although this study is helpful in understanding the relationship between the three ‘stakeholder groups’ within the engagement process and the process for reaching consensus and commitment to a vision, it does not address the need for continued interaction between stakeholders to respond to changing social ecological systems. It would seem that although broad spectrum stakeholder groupings are encouraged to participate in developing and identifying with the purpose so that they become members of the collective, their role in collective action is limited to the definition of values, purpose and goals. A separate ‘management collective’ emerges whose collective action includes implementation. The risk is that this management collective operates outside of the larger collective to the extent that, for those not involved with management, collective identity weakens and with it, commitment to collective action.

Implied in the process of strategic adaptive management is the assumption that the relatively short engagement process is sufficient for participating stakeholders to internalise and become committed to the vision and objectives and to support management. My research shows that not only does it take time for an individual to develop identification and affective commitment to the collective identity (common purpose), but individuals progress at different speeds. This implies a process that is more than the consensus process that is envisaged in strategic adaptive management. The results of my research and that of others suggests that only when individual members develop identification with the collective identity, do they categorise themselves with the identity and enhance their support for and cooperation with the collective (Ashmore et al., 2004; Bergami & Bagozzi, 2000; Simon & Klandermans, 2001). Conservation is a long-term goal and it is thus important that stakeholders identify with and commit to the collective identity which requires something more than just holding shared values and agreeing with the goals.

Research shows that it takes time to gain a sense of belonging and for an individual to develop the emotional attachment that is necessary for committed support (Ashmore et al., 2004; Ellemers et al., 1999). Developing these attributes of collective identity requires something much more personal than appears to be a feature of the engagement process used to develop a common purpose for strategic adaptive management. It requires the individual to interact with, learn about and develop a collective identity with other members of the collective. It may involve shifts in understanding, beliefs and values as individual stakeholders construct identification and affective commitment to the common purpose. If engagement in strategic adaptive management was envisaged as a process that sustained collective identity, it would surely view engagement differently. There would be much greater emphasis on understanding the relationship that individual stakeholders develop towards the collective identity.

Another assumption, although not explicit, is that the common purpose that stakeholders agree to would remain stable for some years (Van Wilgen & Biggs, 2011) which would facilitate the implementation of management actions to achieve the set long-term objectives and targets. Although stakeholders in a collective remain individuals and their values provide stability to the social systems, because they generally change slowly over time, they do change (Armitage, 2005; Burke, 2006). When management operates outside of the larger collective it may be unaware that stakeholder identification and affective commitment are weakening and that it should no longer assume the support of a collective identity and committed collective action. Strategic adaptive management in conservation is premised on a collective identity established through the engagement process but it does not adequately convey the roles of stakeholders, other than those directly concerned with management, in collective action through which stakeholders reinforce their identification and commitment. Because conservation is usually concerned with public goods, such as wildlife, collective identity and the resultant commitment to collective action assumes particular relevance for management.

Elephant management in the Kruger National Park provides an interesting example of what can happen when the management collective operates outside of a larger collective of stakeholders. The management collective in the Kruger National Park implemented an elephant management plan that involved culling elephants to control numbers (Du Toit, Biggs, & Rogers, 2003; N. Owen-Smith, Kerley, Page, Slotow, & van Aarde, 2006; Whyte, Aarde, & Pimm, 1998). The plan was implemented until 1995 largely in isolation from the external stakeholders. A stakeholder collective with different views, values, and competing interests challenged the elephant management plan and it was placed on hold until an inclusive stakeholder process was implemented. Interestingly the plan was challenged on its scientific credibility and it was determined that the scientists could not defend their assumptions (N. Owen-Smith et al., 2006). This illustrates that because the management collective was not linked

to other stakeholders it established a routine that made it less mindful of the context than it should have been. It may even have allowed management to disregard suggestions. The introduction of a strategic adaptive management approach provided a platform for reflection on alternative approaches to managing elephant populations. This example illustrates the importance that should be attached to ongoing participation of stakeholders to ensure that the collective identity is aligned with the evolving context.

A review of strategic adaptive management literature demonstrates that strategic adaptive management contributed to better understanding of the ecological subsystem compared to the social subsystem (Armitage et al., 2008; Kingsford & Biggs, 2012; Roux & Foxcroft, 2011; Van Wilgen & Biggs, 2011; Venter et al., 2008). Strategic adaptive management literature recognises the dynamic and complex nature of the social subsystem but only a few studies (Armitage, 2005; Nkhata & Breen, 2010; Rogers, 2006) contribute to understanding the dynamic nature of the social subsystem. My research demonstrates that collective identity is dynamic, uncertain and complex, therefore changes over time when the social, economic and ecological context changes. Understanding the dynamic nature of the social subsystem would contribute to strategic adaptive management being mindful of the conditions under which the social subsystem changes and remains stable and how it behaves over time to build resilience in complex social ecological system. I contend that incorporating collective identity in strategic adaptive management would make the management process mindful of the collective identity. Sustaining a collective identity helps create conditions that favour the collective action which is a pre-requisite for successful management of common pool resources management.

Collective identity was incorporated into SAM well aware of the limitation of the research design of the study in terms of generalisability. While I was not able to generalise my research findings to the studied population, I could generalise about the change in collective identity and its potential importance to conservancies and other social ecological contexts. Strategic adaptive management is an active management process that is generaliseable to any natural resources management context, hence the reason for incorporating collective identity findings in SAM. I anticipate that my research hold relevance in other situations across a range of social and ecological scales.

6.4 Summary

The motivation for the thesis was to understand how to manage collective identity in order to sustain collective action. I have suggested that sustained collective action is required if the long term conservation and social development intentions of conservancies are to be realised, particularly because there are many factors, both internal and external, that can weaken affective commitment and identification with the conservancy. This suggests that conservancies, for example, should be 'consciously designed' to maintain performance (they should be robust) when exposed to

perturbations that arise from within or external to the system (Anderies et al., 2004). How to improve the design of conservancies to make them more robust provides an interesting direction for further research.

I argued that collective identity is unstable and essentially vulnerable to changing social, economic and ecological contexts therefore need to be incorporated in the management process. The question thus became what are the trends we can use to understand change in collective identity and how can these be incorporated into strategic adaptive management. My research demonstrated how the attributes of collective identity, identification and affective commitment change and behave over time with changing context. Using the literature relating to conservation that involves management of public goods, I was able to elucidate shortcomings in the way adaptive management is conceptualised and practised. I suggest how it may be more appropriately conceptualised and how collective identity could be incorporated in the governance of strategic adaptive management. In chapter 7 I conclude the study and suggest research that might advance our understanding of how to sustain collective action in institutions that involve the management of public goods.

Chapter 7: Conclusion and future research

This chapter brings the thesis to a conclusion and suggests directions for future research emanating from the results of the study.

7.1 Conclusion

This study set out to contribute to the understanding of how change in collective identity affects collective action. This was based on the proposition that understanding the dynamic nature of the relationship between collective identity and collective action is fundamental to management of common pool resources. In the same vein, understanding the dynamic complexity of collective identity change is critical for the analysis of resilience in collective action. The resilience based framework I developed supports the proposition that the strength of collective identity is a predictor of collective action, and contributes to detecting and understanding change in the relationship between collective identity and collective action.

The framework I proposed to understand how identification and affective commitment influence collective action was helpful as a general model but it tends to convey degrees of cohesion and homogeneity that do not reflect the real situation, particularly during the 'collapse' phase. Notwithstanding a collective identity that may have been constructed, collectives are aggregations of individuals who differ in their levels of identification and affective commitment. Thus, when a disturbance occurs, individuals respond in different ways and at differing speeds. Although the process of establishing a collective identity may be viewed as 'coupling' individuals, what results is, for the most part, a somewhat loosely coupled aggregation of individuals. Collectives, including organisations, should be understood as collectives of individuals and groups of individuals who express differing levels of identification and affective commitment. Thus, for collectives or organisations to function effectively, management should be sensitive to heterogeneity within the collective and give conscious attention to sustaining the collective identity.

Narratives can be used to track identification and affective commitment in collectives. Changes in the levels of identification and affective commitment have the potential to cause members to behave differently towards the collective and to each other. The identification and affective commitment of members is reflected in the language they use to express feelings, thoughts and experiences toward the collective and behaviours that are supportive or destructive. The personal pronouns and words that members use in everyday language such as: 'we', 'us', 'ours', 'you', 'my', 'yours', 'theirs', 'happy', 'trust', 'proud', 'unhappy', 'mistrust', 'not proud' indicate whether they identify with and feel part of a collective or not. The language individuals or groups use provides insight into their identification

and affective commitment to the collective identity. Being aware of how members of the collective express themselves and being mindful of the nuances in language they use, provides early warning of changes in identification and affective commitment. In collectives such as conservancies, statements that indicate members act or do not act in the interests of the collective are indicative of their identification and affective commitment, and thus are critical determinants of collective identity to sustain collective action. My research indicates that in the Doro !Nawas conservancy and probably also in other conservancies, being able to respond constructively to early warnings poses a significant challenge to members who in many instances, are not empowered to engage effectively. These limitations and the effectiveness of the institutions of governance are shown to negatively affect resilience.

Incorporating collective identity in strategic adaptive management would draw attention to it and make management mindful of and sensitive to change in the collective identity. They would be more inclined to purposefully manage collective identity in order to achieve and sustain collective action which is a pre-requisite for successful common pool resources management. Strategic adaptive management in conservation is premised on a collective identity established through the engagement process but the process as generally applied does not facilitate continued interaction for stakeholders to identify with and commit to the common purpose. Developing collective identity attributes, identification and affective commitment requires the individual to interact with, learn about and develop a collective identity with other members of the collective. It may involve shifts in understanding, beliefs and values as individual stakeholders construct identification and affective commitment to the common purpose.

It is constructive to envisage strategic adaptive management as a process that sustains the collective by placing much greater emphasis on understanding the relationship that individual stakeholders develop towards the collective identity. The collective that forms around implementation of management actions should be linked to other stakeholders and be mindful of the importance of continued interaction and co-learning with stakeholders to ensure that the collective identity is aligned with the evolving context. My research suggests that integrating collective identity in strategic adaptive management will help to confer resilience in social ecological systems. By sustaining identification and affective commitment members of the collective will show greater commitment to managing perturbations when they arise.

7.2 Future research

Based on the results of my research I identified four issues for further research in community based collectives: institutional arrangements, benefit sharing, strategic adaptive management, and the design of collectives to be robust to disturbances. First, my research illustrates that a collective is always a

collective of individuals and each one identifies and commits differently to the collective. This is particularly so when there are multiple types of benefits and when these are valued differently. Some identify and commit strongly, while for others the commitment may be weak, both of which are dynamic. Because willingness to engage collective action reflects the levels of identification and affective commitment and these vary across the collective, management is challenged to sustain identification and affective commitment among a sufficient number of the members if collective action is to be sustained across the collective. However, as the dissenting voices of those who have always had or whose identification and affective commitment may have weakened, can be propagated through the collective, it is necessary for management to pay attention also to the dissenters. Particularly important among this group within the collective is to discern whether the collective identity is reflective of the context in which it is situated.

My research showed that dissenting voices may arise when individuals no longer identify with the purpose but also when they disagree with the way of achieving the purpose. Thus it can arise that while collective identity and its purpose remain contextually relevant, it fails because there is dissatisfaction with the means of pursuing the purpose. At other times a group within the collective may be seeking to sustain an identity and purpose that others perceive to be no longer contextually relevant. My research shows that at least in an African context where management is commonly weak, sustaining the collective identity may depend on the strength of the collective identity among, and the influence of a group of individuals. I suggested that the institutions in Doro !Nawas conservancy were not designed to be responsive and this resulted in long lag times during which dissatisfaction spread and strengthened making it more difficult to effect remedial action. This suggests need for research that focuses on the how to design institutional arrangements for conservancies and similar organisations that are more accessible and responsive to the collective.

Second, my research shows that people come together to establish a conservancy because of the social relationships and the promise of benefits. When people were receiving the benefits they were supportive of the conservancy but when the governance faltered and benefits were not delivered or the expectations of benefits were not realised, things started to go wrong. The conservancy members fractured into groups instead of coming together to jointly solve the issues. Benefits play an important part in the social process of building relationships between groups and individuals in collectives and similar organisations. It should not be assumed however, that members of a collective associated with a conservancy attach the same meaning to a benefit. For one, a benefit may mean survival, while for another it may seem trivial and have little meaning. Even the timing of the supply of a benefit can have consequences for the meaning an individual or family attaches to the benefit. Because meanings are strong determinants of behaviour (Burke, 2006; Melucci, 1996), it can be argued that understanding the meanings members of a collective attach to the benefits would enable management

to better use benefit sharing to build social relationships, encourage identification with and commitment to the conservancy, and to sustain the collective identity. Currently benefits in conservancies are deemed as money or meat and not in the more comprehensive context of ecosystem services as expounded in the Millennium assessment (Assessment, 2005). They are not understood as determinants in a process to help understand the community, its interactions, needs and aspirations. I suggest research on understanding the role and influence benefit sharing can have in sustaining a collective identity that is supportive of conservancies would contribute to making these systems more resilient.

Third, my research illustrates that strategic adaptive management has a strong systems approach to the ecological subsystem and a much weaker focus on the social subsystem. The imbalance reflects the ecosystem origins of adaptive management and the inadequate application of a systems approach to the social subsystem. Because of the central position of communities in conservancies and community based conservation, there is little prospect for sustaining collective action until strategic adaptive management is inclusive of and dynamically connects both subsystems. With this understanding I suggest further research to determine how strategic adaptive management can be restructured and implemented in conservancies and protected areas so that it helps to sustain a collective identity and the collective actions that are required to secure them for future generations.

Fourth, I have suggested that it is helpful to understand conservancies as social ecological systems that experience internal and external perturbations that can be destructive. In this light I have argued the need for resilience in chapter 2. But, scholars have suggested that notwithstanding the importance of the ability to self-organise (resilience) social ecological systems can be designed to be robust in the face of disturbance. Anderies and co-authors (2004), for example, suggested that “..one approach to enhance robustness of a SES would be to focus on governance that enhances the resilience of an ecosystem configuration that produces a desirable bundle of goods and services”. I have shown that weakness in governance, particularly as it relates to benefits (goods and services), challenged the resilience of the Doro !Nawas conservancy and I have suggested that this may be a weakness in many community based conservation organisations. This raises the question of whether the long term intentions of community based conservation might be better served if the instruments of governance and the procedures for their application were engineered (Anderies, Janssen, & Ostrom, 2004) to make these social ecological systems more robust and if so, how this might be achieved.

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Collective identity and resilience in the management of common pool resources

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Abstract: Effective management of common pool resources through collective action is dependent upon the efforts of the resources users to establish an identity that is held collectively. It is widely accepted that the term common pool resources implies a resource that is common to a ‘pool’ of people, the resource users. Their interests in the resource connect users and potential users, and we propose that the more strongly they identify with the resources and commit to act collectively, the stronger the collective action. Achieving sustainable use of common pool resources is thus determined by the interplay between collective identity and collective action. But collective identity as defined by the resource and its users is dynamic, making the identity vulnerable in directing the behaviour of users. In this paper, we draw on collective identity and resilience theories to develop a framework for exploring the role of collective identity in understanding collective action in the management of common pool resources. We suggest that two key attributes of collective identity – identification and affective commitment, provide the premise for interpreting, tracking and directing change in

collective identity. We interpret how the interactions between the two attributes contribute to resilience of common pool resources as complex social-ecological systems.

Keywords: Affective commitment, change, collective action, collective identity, common pool resources, identification, resilience.

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1. Introduction

Most natural resources that are subject to joint-use and support human wellbeing across multiple levels of social organisation are increasingly being viewed as common pool resources (CPRs) (Berkes and Farvar 1989; Agrawal 2001; Fernandez-Gimenez 2002). CPRs are those from which it is difficult to exclude potential users (weak or low excludability) and where use of the resources by a potential user reduces availability for other users (subtractability). In this way, management of the use of CPRs such as grazing, water, forests, fisheries and wildlife requires collective action that supports coordinated responses to the challenges of excludability and subtractability (Wade 1987; Berkes 1989; Ostrom 1999; Burger 2001; Araral 2009; Poteete et al. 2010). Examples in CPRs literature (Berkes 1989; Ostrom 1999; Dietz et al. 2003; Laerhoven and Ostrom 2007) show that people tend to cause destruction through over-utilizing and under-investing in maintaining commonly owned resources where there is no confidence to invest in collective activities. Collective action embodies the organisational endeavours of a group of individuals in the management of the use of CPRs for collective benefits. This understanding essentially entails that collective action requires the involvement of a group of people that voluntarily engages some kind of coordinated action based on their shared experiences and expectations towards the achievement of a common interest (Meinzen-Dick et al. 2004).

Research attention to the concept of collective action, especially as it relates to natural resource management and rural development, has increased in tandem with the efforts to devolve management to local communities (Araral 2009). Although the literature in general provides several examples of successful collective action (Dietz et al. 2003), there are studies that still reveal many examples of failed collective action for which research should continue to seek better understanding

(Meinzen-Dick et al. 2004). In the last three decades, salient debates in the literature on collective action have focussed on factors which impede or facilitate collective action. While some studies have emphasized the physical characteristics of common pool resources such as scarcity, size and proximity to markets, others have stressed the importance of the characteristics of resource users themselves such as age and origin, wealth, salience, group size and heterogeneity (Wade 1987; Subramanian et al. 1997; Agrawal and Gibson 1999; Agrawal 2001; Poteete and Ostrom 2004). Although there is general agreement that both types of factors are relevant to the enhancement of collective action, little attention has been given to the importance of these factors in fostering dynamic long-term collective action (Araral 2009).

Meinzen-Dick et al. (2004) have called for renewed focus of research to understand how collective action is developed and sustained over time. This call is based on the understanding that long-term collective action embodies dynamic human processes which evolve over time. Despite a few exceptions (Folke et al. 1998; Janssen et al. 2006), few studies have attempted to understand collective action from a dynamic perspective. Yet, collective action occurs in complex, dynamic and uncertain situations in which diverse and conflicting human interests that tend to change over time (Dietz et al. 2003). To understand such situations, we need to understand the dynamic human processes through which resource users influence each other's behaviours over a period of time to advance a common purpose.

This paper seeks to contribute to the understanding of how change in collective identity over time affects change in collective action. We argue that understanding the dynamic nature of the relationship between collective identity and collective action is fundamental to management of common pool resources. We draw on collective identity and resilience theories to develop a framework for exploring change in collective action. Two key attributes of collective identity – identification and affective commitment, provide the premise for interpreting, tracking and directing change in collective action. We interpret how the interactions between the two attributes contribute to desirable resilience in collective action. Based on the framework, we illustrate how change in collective action is dependent upon the temporal changes in the attributes of collective identity that differentiate a group of people – in other words the collective – from other similar social units. Such an identity, which we herein refer to as collective identity, is defined by shared meanings which direct the behaviours of resource users (Berkes et al. 1989; Ostrom 1999; Araral 2009). The shared meanings in turn define and underpin the actions of the members who act on behalf of the collective. Thus, collective identity can be considered as a precursor that facilitates or impedes collective action in the use of CPRs (Melucci 1996; Polletta and Jasper 2001; Snow 2001).

Resilience theory provides a useful means of understanding how collective action as a system responds to change when its integral components change (Holling 1973, 2001; Folke 2006; Nkhata et al. 2008; Duit et al. 2010). We use resilience theory both as an approach (a way of thinking) to analyse change in collective action (Holling 1973, 2001; Folke 2006; Nkhata et al. 2008; Duit et al. 2010) and in broad terms as a system property to refer to the ability of collective action to maintain its configuration in the face of internal change and external shocks (Brand and Jax 2007; Cumming and Colliers 2005). Although we argue that resilience theory (Holling 1973) is helpful in understanding the dynamics of collective action in the management of common pool resources based on collective identity, we are keenly aware that the concept of resilience has many interpretations and is applied across various scientific disciplines (Adger 2000; Brand and Jax 2007; Nkhata et al. 2008, Norris et al. 2008). While some authors (Brand and Jax 2007) consider that the ecological meaning of the concept has been broadened and the term has become ambiguous, its positive influence in facilitating communication and research across disciplines is generally considered useful (Cumming and Collier 2005; Anderies et al. 2006; Folke 2006). In the same vein, for the purposes of this paper, we define resilience as “the ability of a system to absorb disturbance and self organise while undergoing change so as to still retain essential functions, structure, identity and feedback” (Folke 2006, p. 259).

2. Collective action, collective identity and resilience

The concepts of collective action and collective identity have long been a focus of social science research. The relationship between collective identity and collective action has been extensively explored particularly in social movement literature (Melucci 1996; Polletta and Jasper 2001; Snow 2001; Holland et al. 2008). Elsewhere, social psychology has been helpful in clarifying the connection between the individual and the collective as they relate to collective action and collective identity (Simon and Klandermans 2001; Klandermans 2002; Klandermans et al. 2002; Ashmore et al. 2004). The literature suggests that in order to achieve collective action members of a user group need to develop a collective identity which is founded on a shared understanding. The shared understanding enables members to contextualize their appreciation and expectations of the collective as it grows and evolves. It allows for continuous self-organisation as the collective identity adjusts to reflect variability in the supply of benefits due to diverse and changing demands on CPRs. This implies that where it is necessary for collective action to be sustained in the long-term, as in the use of CPRs, it is important for members of a user group to be conscious of and responsive to change in collective identity.

While the literature in natural resource studies has in the past few decades focused on collective action under conditions in which groups of resource users self-organise to govern resources on which

they depend (Ostrom 1999; Ostrom et al. 1999; Wade 1999; Agrawal 2001; Dietz et al. 2003; Meinzen-Dick et al. 2004; Araral 2009; McGinnis and Walker 2010; Poteete et al. 2010), an appreciation of the concept of collective identity in understanding collective action has been largely missing. In this paper, we attempt to illustrate that management of common pool resources through collective action is dependent upon collective identity. We argue that collective action is facilitated and sustained where there are shared interests and understandings that are actualized and reinforced through collective identity. Although collective action may in some instances not last when those interests are no longer shared and thus the group loses its collective identity, we contend that collective identity facilitates a degree of homogeneity which transforms individual experiences into collective experience (Simon and Klandermans 2001). In other words, collective identity confers on the group unique characteristics based on shared meanings, experiences and expectations around which the group members coalesce (Cerulo 1997; Snow 2001). Such characteristics are expressed through the unique attributes of a resource user group, the resource it exploits, and the governance system that regulates use. In this way, the construction, maintenance and collapse of collective action can be understood as a dynamic system nested within a larger social-ecological system defined by the resource, its users and the institutions.

We acknowledge that the resilience of collective action may not be socially desirable in all instances and that some undesirable states of collective action may often be highly resilient. This is particularly necessary if we are to identify those attributes that can help us recognize, interpret and manage change in collective action (Ellemers et al. 1999; Roccas and Brewer 2002; Ashmore et al. 2004). From this perspective, accepting the importance and vulnerability of collective identity in directing behaviours of resource users towards the collective highlights the need to develop understanding of how to foster resilience in collective action. Burke and Cast (1997) suggest that collective identity is a process that can either be static or dynamic depending on particular circumstances. Collective identity continuously changes in response to discrepancies that may develop between individually held meanings (self meanings) and collective meanings (Burke 2006). These changes occur within a dynamic system that is self-regulating (Burke and Cast 1997; Burke 2006). Changes in collective identity may also occur in situations where multiple identities that share similar sets of meanings emerge and activate at the same time (Burke and Cast 1997).

For example, resource user groups in wildlife conservancies in Namibia have been shown to have different collective identities each defined by a different pattern of resource use (Mosimane 1998, 2003; Nacso 2005, 2006). Such groups include divergent resource users ranging from livestock farmers to users who engage in wildlife tourism activities. While each of these groups represents a

distinct collective, some users align with more than one collective identity. In such situations, when change is slow or actions are taken to ensure that the discrepancies between collective meanings are small, collective identity may evolve slowly and remain relatively stable most of the time. When developing collective identity, strategic and conscious changes of behaviour can be used to reduce discrepancies between self-meaning and collective meanings.

In such situations, self and collective meanings are continually realigned such that discrepancies remain small and collective identity appears stable (Burke 2006). In contexts where shared meanings are not deeply entrenched, collective identity is more susceptible to collapse as tensions develop between individual and collective meanings. Given such potential consequences for a common pool system, collective action ought to be resilient in its response to emerging meanings so that user actions are aligned with the shared meanings of the collective.

The development of collective identity has mostly been studied from initiation to maturity at which stage it has been considered to remain relatively stable or to collapse. Collapse of collective identity, for example, would happen when the reasons for collective action no longer exist (Polletta and Jasper 2001; Holland et al. 2008). Despite this understanding, collective identity has not been interpreted in the contexts of resilience. Given that a long-term perspective is required in management of joint-use of CPRs, we postulate that the state (or configuration) of collective identity is an important determinant of resilience in collective action.

The resilience approach has been adopted in social-ecological systems studies as a useful way of organizing a collection of ideas for interpreting complex adaptive system (Anderies et al. 2006; Folke 2006). For example, Holling (2001) adaptive cycle has been used to interpret the dynamics and resilience of complex ecological and social systems. In an adaptive cycle, four phases – exploitation, conservation, release, and reorganisation – are recognized that may or may not follow one another sequentially in the development of a complex system. Essentially, an adaptive cycle reflects discontinuous change in two dimensions of a complex system: capital that is inherent in accumulated resources; and connectedness among the elements that make up the system (Holling 2001). Change in the two dimensions is thought to determine the evolution of the four phases of the adaptive cycle.

In the exploitation phase, a complex system accumulates capital that allows it to grow and mature. While capital accumulates slowly, strengthening connectedness leads to enhanced stability thereby transforming the system from exploitation to conservation phase. As the conservation phase develops, and more capital accumulates, connectedness becomes more rigid exposing the system's vulnerability to disturbances which may trigger the collapse of the system into a release phase in which

accumulated capital is lost. The release phase is followed by reorganisation where the potential for capital accumulation is high but connectedness is relatively low. Depending on circumstances, the system would either resume the adaptive cycle or possibly change some of its properties to transform into a new system altogether.

While Holling's adaptive cycle has been applied in a range of the studies involving both ecological and social systems (Abel et al. 2006; Nkhata et al. 2008; Baral et al. 2010), it has in some instances been criticized for over-generalizing reality and being too broad. Cumming and Collier (2005) suggest that the broad application of the adaptive cycle renders it a meta-model that fits many social and ecological systems. On the other hand, Holling (2001, p. 393) describes the adaptive cycle as a "heuristic model, a fundamental unit that contributes to the understanding of the dynamics of complex systems from cells, to ecosystems, to societies, to culture." Thus, although one might argue that the resilience approach is intended to have wide application, in this paper we consider the adaptive cycle model as a useful metaphor for organizing ideas about the resilience of collective identity (Carpenter et al. 2001). Our consideration is based on the understanding that resilience theory allows the use of Holling's model on condition that the selected system is describable (as in the original ecological context) in dynamic terms and is able to move into multiple states (Holling 2001; Nkhata et al. 2008).

We propose that the adaptive cycle model offers an approach for understanding the continuous dynamic processes inherent in the relationship between collective identity and the collective action. It offers a systematic way of identifying and understanding the processes of how change in collective identity affects change in collective action over time. Without an understanding of such change and how collective identity affects collective action, research risks omitting important determinant variables. The use of the resilience approach does not only enable some measurement of the resource users' willingness to cooperate, but also their ability to work together at different stages of collective action. It also provides a useful perspective for understanding stability and change insofar as the resilience of collective action is concerned. We incorporate the collective identity framework of Ashmore et al. (2004) into Hollings' adaptive cycle (2001) to provide a unique approach to understanding change in collective action based on collective identity.

3. A resilience-based framework for understanding change in collective action

We posit that identification and affective commitment are two attributions of collective identity that are helpful in understanding change in collective action. We realize that the terms identification and

self-categorization have at times been used interchangeably in literature (Bergami and Bagozzi 2000). For the purposes of this paper, identification is the process in which people come to view themselves in relation to the collective. It exemplifies the cognitive link of an individual to the collective and reflects the levels of awareness of an individual's membership to the collective (Ellemers et al. 1999; Bergami and Bagozzi 2000; Jackson 2002). An important aspect of collective identity is that people first have to identify with the collective before developing other dimensions of their identity. Identification is the first and most basic attribute of collective identity, which gives people a sense of meaningfulness (Ashmore et al. 2004) and allow individuals to assimilate collective goals as their own (Bergami and Bagozzi 2000). We are keenly aware that identification on its own may not be sufficient for people to behave in terms of the collective, especially when they do not feel committed to a particular collective identity (Bergami and Bagozzi 2000; Ellemers et al. 1999). However, we also acknowledge that the extent to which people identify with the collective determines the inclination to behave in terms of the collective. Identification is thus characterised by an individual first recognising the collective of which the individual is a member, followed by an appreciation of the individual's membership to the collective (Jackson 2002).

The term affective commitment refers to a state in which an individual feels emotionally involved with the collective and other members of the collective. It embodies the emotional link of an individual to the collective (Ellemers et al. 1999; Bergami and Bagozzi 2000). It is usually defined in terms of emotional attachment and sense of belonging (Bergami and Bagozzi 2000; Ashmore et al. 2004). The extent to which individuals feel affectively attached to the collective influences how they respond to the demands placed by the collective (Ellemers et al. 1999). Emotional attachment is an outcome of a process through which individuals merge their sense of self with the collective (Ashmore et al. 2004). The basic fundamental need to belong allows people to form positive and stable relationships that conform to the subtleties of the collective (Baumeister and Leary 1995). Affective commitment is thus much more than identification and is developed through strong ties, bonds and a sense of interconnectedness (Jackson 2002; Ashmore et al. 2004). It is characterised in terms of emotions (such as love or hatred, happiness or unhappiness, and likeness or dislikeness) arising from attraction to the collective (Bergami and Bagozzi 2000; Jackson 2002).

Although the two attributes of collective identity do not necessarily provide the only perspective for examining resilience in collective action, we suggest they provide a useful approach for analyzing the nature and substance of change in collective action especially as it relates to the management of CPRs. We consider the adaptive cycle of collective action as a representation of how collective identity based on the two attributes varies over time. As such, the two attributes are important in understanding how collective identity links members of the collective to a set of meanings, which if

stable would produce consistent actions aimed at the collective (Burke and Reitzes 1991). Conversely, a change of meanings may result in actions that are inconsistent with the collective.

We contend that the degree of identification and the amount of affective commitment influence how people relate to the collective identity and in turn impact on the collective action to manage the use of CPRs. The degree of identification is a measure of how closely the meanings held by an individual or sub-population of individuals accord with the collective meanings (Ellemers et al. 1999; Bergami and Bagozzi 2000). However, when there is a discrepancy in the two sets of meanings, the individual or group may not willingly identify with the collective. Affective commitment is a measure of how emotionally involved an individual or group of individuals is with the collective meanings, identity and associated actions (Bergami and Bagozzi 2000). In this way, the more emotionally involved people are the more committed they are to collective action.

3.1. The adaptive cycle of collective action

Change in collective action can be interpreted through understanding the extent of change in collective identity defined by identification and affective commitment. We propose that identification and affective commitment provide the basis for interpreting how collective identity influences the state of collective action, which may remain quasi-stable for long periods while going through phases of an adaptive cycle. The development of identification and affective commitment represents the process through which collective identity evolves, matures, collapses, and reorganises as it adapts to reflect changing context of collective action. Change in collective action is controlled by either fast or slow changes in identification and affective commitment (Abel et al. 2006). The extent to which people identify and feel affectively committed to the collective determines the direction and pace of change and thus the state of collective action.

This understanding is illustrated through a representation of an adaptive cycle of collective action in Figure 1. When compared with Holling's adaptive cycle model, the attribute of identification corresponds with the connectedness dimension and affective commitment with that of capital. As depicted in Figure 1, the exploitation phase in the development of collective identity may arise when people perceive and seek to make use of an opportunity that may be optimally realized through collective action. Such a period occurs when people engage with each other through social relationships to establish a collective identity (Child 2004). In the conservation phase, identification and affective commitment continue to increase, thereby strengthening collective identity. While there is always potential for opportunistic behaviour, the degree of identification and amount of affective commitment could be sufficient enough to enable individual behaviours that are shaped by members'

understandings of the collective identity (Ellemers et al. 1999). Whereas the collective identity is consolidated during the conservation phase, the collective identity becomes increasingly rigid and vulnerable to disturbances. Increased identification results in complex social interactions with potential to stabilize or change meanings without disrupting the collective identity. Persistent disturbances may cause collective identity to change its configuration of meanings slowly or to collapse, causing the conservation phase to give way to the release phase. The release phase is when the accumulated affective commitment that sustains collective identity is lost. Although affective commitment is weakened individuals still have strong identification with the collective, which in itself presents opportunities for the system to reorganise. The reorganisation phase arises when the level of affective commitment increases as individuals seek to renegotiate the meanings underlying the collective after identification has weakened.

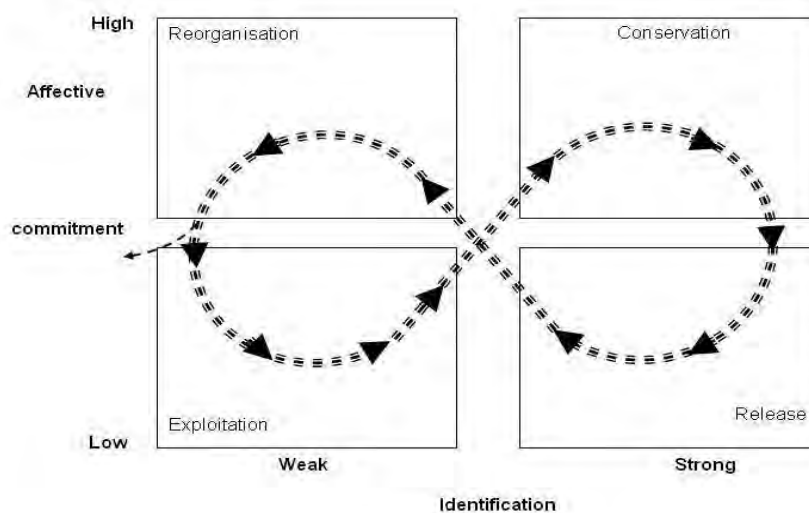


Figure 1: A framework based on identification and affective commitment for analyzing the evolution of collective action and collective identity. Source: Adapted from (Holling 2001; Nkhata et al. 2008).

Based on the framework in Figure 1, we postulate that the strength of collective identity is a predictor of the trajectory of collective action. To illustrate this postulation, we use a case study presented by Nkhata et al. (2009) of fisheries management on the Rovuma River in Mozambique. This case study provides a useful example of the changing context of collective action as it relates to common pool resources. It shows how collective action for the management of the Rovuma River fishery over time evolved through phases of an adaptive cycle of collective action from a conservation phase through release into a reorganisation phase.

During the pre-colonial period of Mozambique, the state of collective action was more or less in a conservation phase. During this period, there were indications of strong identification and affective commitment within the local community reflecting highly developed collective identity. Under these conditions, rights of access and fishing practices were regulated and the fishery operated as a common pool resource. In those times, the Chief of the area determined who could fish and groups of fishermen had 'exclusive rights' to fish a particular area. People from outside the community had to approach the Chief for permission to fish and such permission was used and reciprocated with a gift of fish to the Chief. It was believed that failure to comply could bring bad luck in fishing and perhaps even more serious misfortune (Nkhata et al. 2009). The traditional fishery was characterized by clear distinction of a 'group of users' to whom property was common. This arrangement allowed for the users to strongly identify with the collective, with positive ramifications for affective commitment. It is suggestive that collective identity was relatively high during this phase. Hence, the assumption that collective action during this phase operated under a regime that provided for the management of common pool resources.

The case study of Nkhata et al. (2009) characterises the period during the colonial administration as a release phase. This is because it was during this period that people associated with the Rovuma River fishery started to exhibit signs of low levels of identification and affective commitment. During this period, it became apparent that collective action was no longer effective. The levels of identification and affective commitment of the community members had changed from ones that viewed the fishery as a common pool of food to one that saw it as an open access regime. The elders within the community elaborated that self-interest had led to an erosion of collective identity and group ownership over the resource. The Mozambican civil war in the post-colonial era drove many people into exile in Tanzania leading to local community linkages to be weakened. While the arrival of the Catholic Church might have led to new external linkages, the Church had little effect on collective identity because its belief system was strongly resisted. By contrast, the introduction of a market economy by the colonial administrators as well as the return of the refugees from camps in Tanzania after the end of the civil war had affected the levels of identification and affective commitment. The N'dunas, who previously were mere headmen, started to behave like Mwenyes (Chiefs) and instead of going back to their original locations chose to settle elsewhere so they could gain more power and influence. It was claimed that the collapse of power relations fractured the community by weakening collective identity, which in turn affected the state of collective action. This situation led to the degradation of the fishery.

Reorganisation in the Rovuma community-based governance system is evidenced in the present state of the post-colonial era through the Chipanje Chetu Community-Based Natural Resource

Management (CBNRM) initiative (Anstey 2005). This initiative aims at ‘the transfer of rights and responsibilities for land and resource management to local level user groups (a village community or group from within a village)’ (Anstey 2005, p. 183). Although not explicitly stated, the initiative also has the goal of rebuilding collective identity. The fishery now has elements necessary for the development of a collective action system in which some claim traditional rights and others claim rights through use. In such a contested situation, it is hard to envisage establishing an effective collective action system until there is agreement on property rights. But, for purposes of this paper, this will also require that the levels of identification and affective commitment that are supportive of collective identity are strengthened.

Nkhata et al. (2009) contend that the increase in societal heterogeneity was perhaps the main driver for the release. It changed internal relationships and weakened further the collective identity thereby deinstitutionalising the collective action regime that had been undermined during the colonial period. The external social forces influenced the relationships among the local people, who could neither read and write Portuguese nor express their own opinions. Illiteracy was a mechanism the colonial administrators used to resist change to Christianity to the extent that the local people would not attend school. Nkhata et al. (2009) suggest that at one time there were strongly developed norms, relationships, trust and respect, but these were challenged by the new social forces. In the context of this paper, however, this case study is indicative of a deconstruction of collective identity and a subsequent breakdown of collective action. This is as a result of a number of interlinked factors; traditions and authority were weakened; the definition and cohesion of the group of fishermen were disrupted; tenure over the resource was no longer defined either in location or in person; and there was no legitimate control over who harvests where, when, how and how much. It was even not possible to sanction those that were clearly breaching the norms and traditional regulations for fishing. Consequently, there was a self-reinforcing cycle resulting from an absence of collective identity with more and more people engaging in practices that were not supportive of collective action.

4. Implications for collective action processes in the management of common pool resources

The main contribution of this paper lies in understanding how collective action can be sustained over long periods of time through the evolution of collective identity. In the same vein, understanding the dynamic complexity of identity change is fundamental for the analysis of resilience in collective action. The conceptual framework presents two attributes that are fundamental to sustaining resilience in collective action. The behavioural responses to change depicted in the framework illustrate how collective identity can remain stable enough to allow for organised collective action and yet change

slowly over time in response to disturbances (Burke and Cast 1997). Changes in the levels of identification and affective commitment have the potential to cause members of the collective to behave differently towards the collective (Ellemers et al. 1999; Bergami and Bagozzi 2000). We contend that failure to manage the drivers of change influencing identification and affective commitment could result in the collapse of collective action.

Desirable resilience in collective action can be sustained longer in the conservation phase through allowing small changes to identification and affective commitment over time that enable collective action to change according prevailing conditions. Understanding collective identity change allows members of the collective to reinforce their identity in order to reduce the emergence of undesirable behaviour, or to intervene to remedy undesirable behaviour, or to facilitate change that makes the identity relevant to the collective members. Continuous slow change increases the resilience of collective action and the ability of members to develop a behavioural pattern that conforms to coordinated actions. In this way, prospects are enhanced for collective action to develop the capacity to cope with change and prevent the system to change into socially undesirable ways that would impede collective action. Resilience in collective identity would thus sustain collective action as it evolves in relation to the change in collective identity.

It is fundamental to be able to identify when the attributes of collective identity are weakening so as to implement appropriate strategies before the change affects collective action. We propose that change in identification and affective commitment as a determinant of the state of collective identity could be an indicator that drives interventions to direct the collective action system towards a socially desirable state. The two variables highlight the need to understand and develop indicators that could help monitor collective action over time. We propose that identification and affective commitment could be managed by identifying the drivers of change and processes in the system that governs the dynamics of the attributes. The consequences of failure to recognize such drives is exemplified in situations where collective action developed with assistance from external donors collapses once the support is withdrawn in the conservation phase (Child 2004; Nacso 2006, 2007, 2008; Baral et al. 2010). Such collapse is usually attributable to lack of capacity in the system to cope with change and to self re-organise. In most cases, local resource users do not have the necessary support structures to self reorganise the collective identity to sustain the collective action.

We concur with (Shivakoti and Ostrom 2002) that self organised resource user collective action might be likely to have a resilient collective identity to remain longer in the conservation phase, compared to collective action organised by government or non-governmental organisations. It is therefore reasonable for the management of common pool resources to plan for the release, reorganisation

and exploitation phases of collective action. This can be in similar lines with the planning for the release and reorganisation phases through adaptive management that is widely used in the management of complex systems (Folke 2006). When a collective action system collapsed, it implies that appropriate structures and processes have to be developed in the system for it to self-organise or to access interventions from outside the system to direct the system to a socially desirable state. The resource users would have to be capacitated to self-organise to reinforce collective identity that sustains collective action. The capacity to manage the drivers of change and processes also needs to be established through structures that could support resources users.

This study is particularly instructive in that it illustrates how collective identity is continually defined and structured by the underlying meanings which in a sense describe the collective, and its members (Burke 2006). Given that meanings shape behaviour and that identity and behaviour are strongly linked, it can be postulated that a resilience approach requires that members of a user group adjust and adapt their behaviours to conform to the evolving meanings held by the collective (Burke and Cast 1997; Burke 2006). Because meanings are rooted in the values and norms of a culture, they are slow to change and confer stability on collective identity. As long as meanings are shared, individuals will identify with the collective identity and adapt behaviours accordingly (Burke and Cast 1997; Burke 2006). However, should discrepancies arise that cannot be resolved, behaviours may not adapt in some situations, resulting in the waning of commitment and collapse of identity and with it the ability to secure collective action to manage the use of CPRs.

It is important to emphasize that people managing the use of CPRs may have multiple collective identities with shared meanings. Multiple collective identities may become active at the same time in an individual only when the individual's self-meanings align with those collective identities. Individuals identify with and commit to collective identities that espouse the same meanings. As individuals move to engage a larger, more encompassing collective identity discrepancies may arise among the meanings associated with different identities. For example, livestock farmers who eliminate predators being subsumed within a collective identity of a conservancy in which wildlife preservation is a core value can illustrate this. To achieve a collective identity that can accommodate both identities (wildlife and livestock) the discrepancies of both the collective identities would have to shift towards each other and therefore the self-meanings and the collective identities of both would change to bring about shared meaning or transform into a new all-encompassing identity. The extent of change would depend on the amount of commitment towards each of the collective identities (Burke 2006). The collective identity with the stronger commitment is likely to change less compared to the other with less commitment.

5. Conclusion

We set out to contribute to the understanding of how change in collective identity over time affects change in collective action. This was based on the argument that understanding the dynamic nature of the relationship between collective identity and collective action is fundamental to management of common pool resources. The framework we developed supports the proposition that the strength of collective identity is a predictor of collective action, and contributed to understanding change in the relationship between collective identity and collective action. Importantly, the framework facilitates the understanding and building of resilient collective identity in the management of use of CPRs in social-ecological systems. It provides a systematic analysis to the process of collective action formation and how it can be sustained. The framework helps us to think about the attributes that explain change in collective identity and how such an understanding contributes to management of the use of common pool resources through collective action.

The application of adaptive cycle raised three limitations in its application in the study. First, the paper had a limitation in accurately reflecting the level of identification and affective commitment in the release and reorganisation of the cycle. The cycle shows that the relationship between these variables diverges while sustaining weakened collective identity. Although we could observe similar trends to what is proposed in the adaptive cycle, there was no substantial evidence to support the divergence relationship beyond doubt. The application of social system on the adaptive cycle would require focussed research on operationalizing the variables better to collect information that could support the correlation between the variables.

Second, the application of adaptive cycle in collective identity, especially in a qualitative study lends itself to subjectivity of analysing the information in terms of the four cycles. However, the advantage is the flexibility of qualitative methods to adapt to local situations and provide better understanding to the process of collective action emergence and its sustainability. Future research should consider combination of qualitative and quantitative when using adaptive cycle to understand collective action.

Third, the adaptive cycle suggests a dramatic collapse of the system into release phase, however our findings shows that the collapse of collective identity is not always rapid. Rather we observed a long slow process of collapse that was perpetuated by lack of intervention to direct the system into a socially desirable state from within and outside the system. We assume that in most cases collapse in collective action to manage the use of common pool resources would follow the slow process which provides opportunities for interventions.

Further research on collective identity attributes, in particular identification and affective commitment, is needed to deepen understanding of collective action processes in the context of CPRs and social-ecological systems. In particular, research is required to advance understanding of the dynamics and complexities that underpin the management of social-ecological systems from the perspective of collective identity change. A collective identity perspective is one of multiple perspectives for understanding complex social-ecological system (Anstey 2005; Gruber 2010). Collective identity system has the potential to self-organise. The collective identity system in terms of attributes of resource users and of the state of the resources is an influential driver in the collective action to manage the use of common pool resources. We suggest that collective identity of resource users and the state of the resource provides an effective foundation for the management of behaviour in social-ecological systems (Melucci 1996; Polletta and Jasper 2001).

Collective identity gives the management of a social-ecological system an inclusive identity, constructing the collective 'we' sense of identity, which serves important psychological functions for members of the collective managing the social-ecological system. We contend that collective identity makes 'free riding' less attractive because it provides the rationale for participation in collective action (Gupta et al. 1997; Klandermans 2002). We believe that collective action in the use of CPRs with a resilient collective identity contributes to the resilience of complex social-ecological system. A resilient collective identity system has the potential to prevent a social ecological system from moving into an undesirable configuration.

We hope that our approach on integrating resilience theory and collective identity theory to understand collective action to manage common pool resources promotes a pluralistic understanding of common pool resources management. This is a unique character of the commons with its interdisciplinary origins (Laerhoven and Ostrom 2007).

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Annexure 2: Interview schedule

Definitions of key concepts and purpose

COLLECTIVE ACTION	COLLECTIVE IDENTITY
<p>Definition: the set of actions the members of the collective institute to manage the use of common pool resources for common purpose.</p> <p>(a set of action members of the collective institute to affect the meaning they have about the CPRs)</p> <p>Purpose: To examine the relationship between collective identity and collective action in building a resilient social-ecological system in Doro !Nawas conservancy.</p>	<p>Definition: the meanings that describe both the collective and those of individual members in relation to the collective meaning.</p> <p>Purpose: To examine the relationship between collective identity and collective action in building a resilient social-ecological system in Doro !Nawas conservancy</p>

Questions for key concepts

COLLECTIVE ACTION	COLLECTIVE IDENTITY
<ol style="list-style-type: none"> 1. Please, tell me about your involvement in the conservancy. <ul style="list-style-type: none"> • What was your capacity? • How long have you been involved? • What is your current relationship with the conservancy? 2. Why did the community form a conservancy? 3. Why did you become a member of the conservancy? 4. Please, tell me about changes that took place in the conservancy over the years? <ul style="list-style-type: none"> • Discuss and give examples 5. What keeps the community together in the conservancy? 6. What are the things you do only because you are a member of the conservancy? 7. How did the conservancy change people's behaviour towards wildlife and tourism? 	<ol style="list-style-type: none"> 1. What does the conservancy mean to you and why? 2. Is the meaning of the conservancy the same to all members of the conservancy? Why, explain? 3. How did the meaning of the conservancy change or remain the same over the years? <ul style="list-style-type: none"> • Give examples 4. What caused the meaning of the conservancy to change? 5. How did you/community respond to the change in the conservancy? 6. How did change in the meaning of the conservancy affect your relationship with the conservancy? 7. How has change in the meaning of the conservancy influenced your actions or behaviour towards the conservancy?

Definitions of key variables and purpose

IDENTIFICATION	AFFECTIVE COMMITMENT
<p>Definition: the degree to which people come to view themselves in relation to the collective identity.</p> <p>Purpose:</p> <ul style="list-style-type: none"> • Investigate how collective identity attribute identification, vary over time in Doro Nawas conservancy; • How identification link members of the conservancy to a set of meanings of the conservancy to produce consistent actions towards the conservancy and how change of the meanings of the collective may results in actions that are inconsistent with the conservancy. 	<p>Definition: the degree people feel emotionally involved with the collective identity and members of the collective.</p> <p>Purpose:</p> <ul style="list-style-type: none"> • Investigate how collective identity attribute affective commitment, vary over time in Doro Nawas conservancy; • How affective commitment links members of the conservancy to a set of meanings of the conservancy to produce consistent actions towards the conservancy and how change of the meanings of the collective may results in actions that are inconsistent with the conservancy.

Questions for key variables

IDENTIFICATION	AFFECTIVE COMMITMENT
<ol style="list-style-type: none"> 1. Describe your relationship with the conservancy, and why? 2. How do you view your relationship with the conservancy? <ul style="list-style-type: none"> • Why, explain? 3. How did the way you view yourself in relation to the conservancy change over time? <ul style="list-style-type: none"> • Give examples 4. When did the way you view yourself in relation to the conservancy change and what caused the change? <ul style="list-style-type: none"> • Give examples 5. How did change of conservancy meanings influence how you view yourself in relation to the conservancy? <ul style="list-style-type: none"> • Give examples 6. Does the way you view yourself in relation to the conservancy influence your actions and behaviour towards the conservancy? <ul style="list-style-type: none"> • Give examples • Explain. 	<ol style="list-style-type: none"> 1. Do you have any feeling or emotions for the conservancy, and why? <ul style="list-style-type: none"> • Describe the feeling. • What causes the feeling you have? 2. Which meanings of the conservancy do you feel attached to and why? <ul style="list-style-type: none"> • Discuss the meanings you are attached to? 3. How did your feelings/involvement in the conservancy change over time? <ul style="list-style-type: none"> • Give examples • When? • What caused the change? 4. How did change of conservancy meanings influence your feelings towards the conservancy? <ul style="list-style-type: none"> • Give examples 5. Does the feelings/involvement in the conservancy affect your actions towards the conservancy? 6. What makes you proud about the conservancy?