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Managing change in collective action and collective identity to sustain Community Based Natural Resources Management (CBNRM) institutions in Namibia: A case study of Doro !Nawas Conservancy

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ABSTRACT

Conservation and community development are increasingly understood to require sustained collective action. This study postulates collective action and collective identity as necessary but vulnerable in the management of Community Based Natural Resources Management (CBNRM) institutions. The study uses purposive and snowball sampling to select key informants interviews and documentary analysis to augment the comprehensiveness. Conservancy members (47) and individuals from non-governmental organisations (NGOs) and government (9) with experience and knowledge of the conservancy were interviewed. The study adopted a thematic analysis approach with deductive analysis to interrogate the data. The adaptation framework based on the identification and affective commitment was used to organise and present the findings. The findings reveal the casual factors and excerpts that best described how respondents articulated change and stability in the identification and affective commitment. The paper concludes that for CBNRM institutions to function effectively management should be sensitive to heterogeneity within the collective. It further concluded that management should be aware of how members of the collective express themselves and be mindful of the nuances of the language they use. Lastly, management should appreciate that government and other agencies by acting as 'honest brokers' they can contribute to sustaining the collective action and collective identity in CBNRM and similar institutions.

1. Introduction

In Namibia, Community Based Natural Resource Management (CBNRM) is the legislated approach to management implemented by communities who claim legitimate rights to access and use common-pool natural resources on communal land (MET 1995). This legislation enables communities to constitute conservancies on communal land (NACSO 2010) subject to the following requirements: defined and uncontested area boundaries; defined membership; legal constitution; democratically elected management committee; and collective management with the common objective of providing benefits for local resource users (Mosimane 2012).

Conservancies are formally designated landholdings in communal areas, and the communities are required to act with a common purpose and within the law in their use of natural resources, establish structures and democratic processes that ensure that the Conservancy serves the interest of members (NACSO 2010). Should they fail, the government reserves the right to withdraw the rights granted to the community and disestablish the conservancy (MET 2013).

CBNRM institutions, such as communal area conservancies in southern Africa commonly exhibit periods of growth and decline of collective identity in response to changing needs, expectations and behaviour (Child 2004). Conservancies are experiencing challenges of weakening governance systems, members losing interests, committees not able to execute their mandates and failing to act as a collective (NACSO, 2010). This situation threatens the management of CBNRM institutions and natural resources management in southern Africa and Namibia in particular.

The study argues that if a conservancy is to endure, collective action must adapt to accommodate changing circumstances (Folke et al. 2005). Mosimane and others (2012) postulated that this is possible only when collective identity is resilient.

The study posits collective identity and collective action as necessary but vulnerable in the management of CBNRM institutions. The study, therefore, constructed the following propositions. First, the process initiated by and the associated actions of members of the VFA sub-committee is likely to cause identification as community members start to define themselves in the context of a conservancy and to develop affective commitment which is a sense of belonging to the collective. Second, satisfaction with the approach and actions of the conservancy management committee, the realisation of benefits and the participation of members in the activities of the conservancy are likely to reinforce identification and affective commitment thereby consolidating the collective identity. Third, discontent with the approach and actions of the CMC, declining benefits and limited opportunities for participation of members in the activities of the conservancy are likely to gradually weaken affective commitment and the cause the collapse of collective identity although identification remained strong. Last, the actions of the intervention by government, the concerned group, the conservancy disciplinary committee, the constitutional review committee, and the election of a new conservancy management committee are likely to a strengthened affective commitment to the conservancy.

2. Conceptual framework

As interdependencies increasingly determine well-being, there is a growing appreciation of the need for people to act collectively as they strive to avert future crises. Collective action implies a set of actions members of the collective institute to achieve common interest that individuals cannot obtain when acting alone (Meinzen-Dick, DiGregorio, and McCarthy 2004). Collective action refers to a group of individuals who self-organise and establish institutions to govern relationships among themselves and with the resource.

Collective action facilitates ownership of the resources through decision making and planning by resources users (Lachapelle & McCool, 2005). Ownership refers to the participation of resource users as individuals and members of the collective in decision making and implementation of the decisions (Gruber, 2010). Individuals and members of the collective develop feelings of ownership, through association with the collective, which in turn influence their attitudes and behaviour towards the collective action and thus shape their collective identity (Mayhew, Ashkanasy, Bramble, & Gardner, 2007).

Collective identity is the identity of the individual as a member of the collective, which is shared or held in common with other members (Simon and Klandermans 2001). The collective identity bestows on members a sense of belonging, distinctness from others and respect from similar others, and meaning from which to interpret and understand the social world (Klandermans 2002; Klandermans et al. 2002). It provides a degree of homogeneity and distinctive characteristics to the collective based on shared meaning, experiences and expectations.

When members share a collective identity, it facilitates collective action in the management of shared resources (Mosimane 2012; Ostrom 2000). A shared understanding of the collective identity enables members to contextualise their appreciation and expectations of the collective as it evolves.

This study uses two attributes of collective identity, namely identification and affective commitment that provides the premise for interpreting how collective identity influences the state of collective action. Identification is the process whereby people come to view themselves in relation to the collective. It shows the level of awareness of an individual's membership to the collective and reveals an individual's cognitive link to the collective (Bergami and Bagozzi 2000; Jackson 2002). The cognitive link implies that individuals would group themselves with others who express attitudes that are similar to the collective and therefore accept the values of the collective as their own. An individual first develop an interest in the collective to satisfy a desire to belong. Acquiring knowledge of the values, behaviour and expectations of the collective allows the individual to become involved in the activities of the collective, and helps to establish a relationship between the individual and the collective (Levine et al. 2010). The common interest and understanding necessary to facilitate and sustain collective action are actualised and reinforced through collective identity (Mosimane, Breen, and Nkhata 2012).

Affective commitment is when an individual holds a sense of belonging and feels emotionally involved with members of the collective and to the collective identity.

Usually expressed as an emotional attachment and sense of belonging (Bergami and Bagozzi 2000) it signifies the state of the relationship. The state of collective action defined in terms direction and pace of change is determined by the level to which people identify with and feel emotionally committed to the collective (Abel, Cumming, and Anderies 2006; Mosimane, Breen, and Nkhata 2012).

This study uses an adaptation framework (Mosimane et al. 2012) based on the identification and affective commitment to analyse the change in collective action and collective identity (Figure 1).

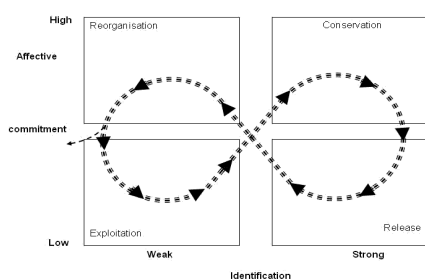


Figure 1: A framework based on the identification and affective commitment to analysing the change in collective action and collective identity. Source: Adapted from (Holling 2001; Mosimane et al. 2012).

Social-ecological system studies adopted the adaptive cycle as a useful way of organising and interpreting a collection of ideas (Anderies, Janssen, & Ostrom, 2004). For example, Holling (2001) argued that change in the two dimensions (identification and affective commitment) is thought to determine the evolution of the four phases of the adaptive cycle. In the exploitation phase, conservancy members accumulate capital that allows it to grow and mature.

While capital accumulates slowly, strengthening connectedness leads to enhanced stability thereby transforming the conservancy from exploitation to conservation phase. As the conservation phase develops, and more capital accumulates, connectedness becomes more rigid amongst conservancy members, exposing the conservancy vulnerability to disturbances which may trigger the collapse of the conservancy into a collapse phase in which accumulated capital is lost. The collapse phase is followed by a reorganization of the conservancy where the potential for capital accumulation is high but connectedness amongst conservancy members is relatively low. Depending on circumstances, the conservancy would either resume the adaptive cycle or possibly change some of its properties to transform into a new organisation altogether.

3. Materials and methods

3.1 Study Site

The Doro !Nawas Conservancy (DNC) registered in 1999 is the focus of this study. DNC covers 4,073 km² of semi-desert in northwest Namibia (Figure 2). The conservancy is geographically located in northwest Namibia within the Namib Desert. The area is mountainous and receives an annual mean rainfall of 50mm. The vegetation is rather sparse due to the low precipitation.

The Doro !Nawas Conservancy borders the /Uibasen and Sorris Sorris Conservancies to the east, the Skeleton Coast to the west, Torra Conservancy to the north and the Tsiseb Conservancy to the south. The conservancy has several archaeological sites identified and documented marking areas hunter-gatherers used over a thousand years ago.

The study uses purposive and snowball sampling to select conservancy members (47) and individuals from non-governmental organisations (NGOs) and government (9) with experience and knowledge of the conservancy. Besides, the conservancy members should have the capacity to reflect on the change in collective identity and collective action, and their opinions should have ranged from being positive to negative about change. To be selected a member had to: have lived and participated (although not necessarily consistently) in conservancy activities since its formation to have acquired knowledge and experience of the operation and be willing to participate in the study.

Individuals from government and non-governmental organisations were selected if they had supported institutional development and natural resources management for the conservancy. A year later, after analysing the interviews, further interviews were conducted to verify information and themes. Because of documentary analysis usefulness in probing insight into the "how" and "why" questions generally associated with case studies (Miller and Alvarado 2005), it was employed to augment the comprehensiveness of the study.

The study adopted a thematic analysis approach with deductive analysis to interrogate the data (Fereday and Muir-Cochrane 2008). Computer-aided software, Nvivo, and manual analysis were used to organise the data into causal factors and predetermined sub-themes. Interviews were examined for themes that expressed conservancy members interests (identification) in the conservancy and the resultant actions, such as participation in conservancy activities.

Change in interest and participation reveals a change in an individual's level of identification with the collective conservancy identity. Interviews were searched for words that characterise positive emotions (affective commitment) for example, feelings such as happy, trust and proud, which suggest high commitment. Similarly, interviews were searched for words that symbolise feelings or resentment, negative emotions, such as not proud, hate, unhappy, and mistrust that imply low commitment (Watson, Clark, and Tellegen 1988).

The analysis presented in the results section yielded causal factors and excerpts that best described how respondents articulated change and stability in the identification and emotional commitment for the period 1999 to 2013.

4. Results

The study presents the results using an adaptive framework (Figure 1) phases of exploitation, conservation, collapse and reorganisation to interpret the change in collective identity using two attributes of collective identity, identification and affective commitment.

4.1 Exploitation phase

In the exploitation phase, although there were collective identities [e.g. tribe and Versteendewoud Farmers Association (VFA)] the study assumed that because individuals might not be aware of, or understand the concept of a conservancy, there would be no collective conservancy identity.

The study constructed the proposition: The process initiated by and the associated actions of members of the VFA sub-committee is likely to cause identification as community members start to define themselves in the context of a conservancy and to develop affective commitment which is a sense of belonging to the collective.

Together they could strengthen overtime for a sufficiently entrenched collective conservancy identity to emerge that would result in the necessary change in members' attitudes and behaviours towards wildlife. Table 1 shows the causal factors and their influence on identification and affective commitment.

Table 1. Causal factors and evidence for the change in identification (attitude and behaviour) and affective commitment (emotion) during the exploitation phase.

Causal factors	Evidence	Identification and Affective commitment
Pre 1988: Costs without benefits	Farmers lost livestock to predators without compensation (Owen-Smith 2002) “..not happy because predators were attacking our livestock.” (CMI 16)	Attitude: wildlife a threat Behaviour: poach wildlife Emotion: Not happy
1988: Versteendewoud Farmers Association (VFA)	VFA established (CMI 08) to promote farming (Farmers Association Constitution, 1988).	Attitude: Interest (among some members), wildlife potential resource
1996: Mobilising support for establishing the conservancy; Projecting benefits	“..introduce the concept to the farmers and the broader community” (CMI 44). “First people were not interested; we hold meetings to convince the community.” (CMI 38) “Conservancy members were regularly visited on the farms” (CMI 06). “..lodges and campsites will be built. We had an interest because we wanted to benefit.” (CMI 38)	Behaviour: promote/support conservancy, attend meetings and monitor wildlife. Some register as members
1998: Constitution approved; Conservancy Management Committee (CMC) elected; Member registration Conservancy registered	Conservancy constitution adopted on 28 March 1998. CMC appointed subject to registration of the conservancy (DNC Constitution). The policy requires majority support formation of the conservancy (MET 1995). 46% (295) of eligible individuals registered (Mosimane, 2000). No objections raised so MET accepts that even if not registered, they agreed to the formation of the conservancy (Government Official, Interview 50) DNC registered. (MET letter, 16 December 1999)	Emotion: Happy, proud, trust; Sense of belonging

Note: (Community Member Interview (CMI), Conservancy Management Committee (CMC))

The statements in Table 1 show that before the introduction of the CBNRM policy in 1996, inhabitants could not legally benefit from wildlife and behaviours conflicted with conservation. The VFA constituted in 1988, provided a platform from which a conservancy initiative could be launched. However, to succeed in the establishment of a conservancy, the VFA sub-committee had to effect the necessary change in the manner people identified with and committed to wildlife.

4.2 Conservation phase

In conservation phase, the study constructed the proposition: Satisfaction with the approach and actions of the conservancy management committee, the realisation of benefits and the participation of members in the activities of the conservancy are likely to reinforce identification and affective commitment thereby consolidating the collective identity.

Table 2. Causal factors and evidence for a change in identification (attitude and behaviour) and affective commitment (emotion) during the conservation phase.

Causal factors	Evidence	Identification and Affective commitment
Conservancy managed according to the constitution	<p>“Regular meetings... increase communication...strengthen accountability and transparency” (NACSO 2005).</p> <p>“Meetings....kept us interestedshared problems.... projects and activities.” (CMI 37)</p> <p>“We were happy and wanted to see how the finance of the conservancy was managed.” (CMI 02)</p> <p>"The committee looked after the conservancy for the benefit of the community." (CM 33)</p> <p>“...members owned the conservancy.” (CMI 47)</p>	<p>Attitude: Interested, willing, supportive</p> <p>Behaviour: Participate, cooperate, communicate and manage the use</p> <p>Emotion: Happy, pride, sense of belonging and ownership</p>
Benefits flow	<p>“...interested because I receive a salary and meat.” (CMI 16)</p>	

	“We are benefiting from wildlife....elderly people and the people farming in the wildlife-rich areas are given meat”. (CMI 01)	
Wildlife management and use	Trophy hunting agreement (CMC letter to Black Nossob Safari, dated 15.07.2004). “The farmers support conservation.... because wildlife is community resource... (CMI 01).	
Tourism development and employment:	“I am proud because we built a lodge and campsite.” (CMI 23) “It makes me happy. The conservancy office and lodge offers employment.” (CMI 09)	

Note: (Community Member Interview (CMI), Conservancy Management Committee (CMC))

Statements in Table 2, indicate the possibility for members to accept responsibility for and to benefit from wildlife management was realised when the conservancy was registered. The assumption of responsibility and benefits encouraged a shift in attitudes and behaviours to align with the common expectations for the conservancy (Table 2). For example, members became active in conservation, reporting poaching with some accepting appointment as Community Game Guards. This reduced poaching and increased game populations (NRWG 2009).

4.3 Collapse phase

Declining management accountability characterises the collapse phase. In Holling (2001) model, collapse does not necessarily imply a complete breakdown or loss of system characteristics, of collective identity in this case. .

The study interprets collapse as the spread of dissatisfaction among members of the collective. The levels of identification and affective commitment among a sufficient number of members of the collective determine the capacity of the system to re-organise.

The spread of dissatisfaction and the process of collapse could be contained and reversed if the number of members remains high enough. This implies that reorganisation and change of state become impossible when collapse approaches a threshold. The study constructed the proposition: *Discontent with the approach and actions of the CMC, declining benefits and limited opportunities for participation of members in the activities of the conservancy are likely to gradually weaken affective commitment and the collective identity although identification remained strong.* Table 3 shows the causal factors and their influence on identification and affective commitment.

Table 3. Causal factors and evidence for a change in identification (attitude and behaviour) and affective commitment (emotion) during the collapse phase.

Causal factors	Evidence	Identification and Affective commitment
Progressive deterioration of management accountability	<p>“....no cooperation between the community and the CMC.” (CMI 19)</p> <p>"I became tired of making an effort to attend meetings. Meetings were postponed because of no quorum."(CMI 21)</p> <p>Only 78 Conservancy members attend AGM (DNC Report 2005a).</p> <p>“....this approach that brought dissatisfaction and conflicts.” (CMI 08)</p> <p>“I was not happy with the mismanagement of funds by the conservancy committee.” (CMI 21)</p>	<p>Attitude:</p> <p>Concern, frustration, disillusionment</p> <p>Behaviour:</p> <p>Concerned members establish CG and DC, others stop participating, MET engages/instructs</p>
Benefits and distribution	<p>“....thought the conservancy would be beneficial.... it would eradicate poverty and create employment....committee broke the trust and enthusiasm.....” CMI 25)</p> <p>“....not happy with the unfairness..... It will not be possible to provide benefits without proper management and administration. (CMI 36)</p>	<p>Emotion:</p> <p>unhappy, 'hurt', 'mistrust.'</p>
A small group who retain high levels of identification and affective commitment secure government intervention to arrest the collapse	<p>135 Conservancy members dissatisfied with management. Concerned Group (CG) established to raise issues with the CMC. (Ad hoc Committee !Garibasen letter to MET, 26.06.2005)</p> <p>Accusations of mismanagement of finances and assets, (CG letter to CMC 9.03.2005).</p> <p>March 2008, CG complained that CMC failed to present audited financial reports for the years</p>	

	<p>2006, 2007 and 2008 (CG letter to MET 27.03.2008).</p> <p>Disciplinary Committee (DC) established to mediate in conflict situations. (DC minutes 13.10.2008)</p>	
Government intervention	<p>Minister attends the mediating meeting.</p> <p>Resolution: revision of constitution and election of new CMC instead of de-registering (DNC 2005b).</p> <p>The review took two years because it required full participation and education. The constitution adopted (9 February 2008) and came into effect later. CMC remained in office (NACSO 2008).</p> <p>DC informs them of management challenges experienced in the Conservancy (DC minutes, 23 September 2009). "... bank accounts are suspended" (MET letter to CMC, 7.08.2009).</p>	
Commitment to conservation persists among some members.	<p>"I would report anyone poaching. We are looking after wildlife." (CMI 23)</p> <p>"The farmers support conservation....When people poach, we report to the CGGs and the committee." (CMI 01)</p>	

Note: (Community Member Interview (CMI), Conservancy Management Committee (CMC))

Table 3, statements demonstrate that some members of the Conservancy continued to display well-aligned attitudes and behaviours with the collective identity, despite considerable dissatisfaction with the conservancy management. For example, wildlife monitoring continued, and there was no substantial increase in poaching (NRWG 2009).

Members expressed dissatisfaction by not attending meetings and demanding a change of the CMC. Members formed a Concerned Group (CG) and later some of these members were appointed into a Conservancy Disciplinary Committee (CDC) to engage the CMC and the government to resolve issues.

4.4 Reorganisation phase

The reorganisation phase is characterised by interventions to reorganise the collective conservancy identity. The study constructed the proposition: The actions of the intervention by

government, the concerned group, the conservancy disciplinary committee, the constitutional review committee, and the election of a new conservancy management committee are likely to a strengthened affective commitment to the conservancy. Table 4 shows the causal factors and their influence on identification and affective commitment.

Table 4. Causal factors and evidence for a change in identification (attitude and behaviour) and affective commitment (emotion) during the reorganisation phase.

Causal factors	Evidence	Identification and Affective commitment
Disciplinary Committee mediates conflicts and facilitates elections.	On 12 December 2009, DC organised a consultative meeting to reach agreement on procedures for the elections. (DNC meeting, 12 December 2009). February 2010 AGM. Observers declare elections free and fair. (MET 2010). September 2010, CMC held its first meeting to report progress (MET, 2010).	Attitude: appreciate, interest Behaviour: consult, report, participate, attend meetings, support Emotion: happy, feel attached, trust
New Conservancy Management Committee elected.	"We have feelings...only when things are done right shall we attend meetings." (CMI 04) "...How community members feel about the conservancy will change for the better, with better conservancy management." (CMI 01)	
Improved management and distribution of benefits	The atmosphere has changed. The committee attends to the needs of the people, which interest us in attending meetings. (CMI 34)	

	<p>The community is currently very happy. They were applauding the committee (CMI 01)</p> <p>“....We could see change.... meat is distributed.. members receive financial reports.... there is an accumulation of finance. The committee is working closely with the Traditional Authority (Traditional leader, Community leader, 05)</p>	
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Note: (Community Member Interview (CMI), Conservancy Management Committee (CMC)

The statements in Table 4 shows that reviewing the constitution and electing a new CMC gave members hope for better governance and reinstatement of benefits and rekindled a sense of belonging and emotional attachment. A sense of belonging and emotional attachment was reinforced as governance became more transparent and accountable. Meat distribution and timely access to financial reports evinced positive emotions, which indicate increasing levels of affective commitment.

5. Discussion

Enduring CBNRM institutions that are required to sustain the flows of benefits in social-ecological systems must foster collective action. Moreover, to endure such institutions need to sustain an identity that informs individual and collective behaviour (Polletta and Jasper 2001). Although collective identity confers a degree of homogeneity, because members do not share the same levels of identification and commitment cohesion is tenuous, and members respond differently to disturbances.

It is particularly so for CBNRM institutions whose members at this time have little experience of managing such enterprises and where benefit streams and their value to individuals is variable. Over eleven years, the DNC conservancy collective identity went through the process of exploitation, conservation, collapse and reorganisation.

5.1 Exploitation phase

In the exploitation phase, the identification and affective commitment jointly determined collective identity (Ashmore, Deaux, and McLaughlin-Volpe 2004). The development of affective commitment required identification during construction, and over time, they reinforced each other leading to behavioural change and a firmly held collective identity (Figure 1).

The findings in Table 1 confirm the proposition that the process initiated by and the associated actions of members of the VFA sub-committee caused identification as community members. The notion of potential new benefits articulated in the policies facilitated to develop identification with the concept, and this became a motivator for identification with the conservancy.

Identification with the conservancy concept emerged after sub-committee visits to the farms and meetings with community members.

The members started to define themselves in the context of a conservancy and to develop affective commitment which is a sense of belonging to the collective. The findings show that the sense of belonging engendered by the process and prospect of benefitting evinced emotive expressions indicating emerging affective commitment. Registration of the Conservancy in December 1999 formally acknowledged the collective and its identity and engendered a sense of achievement that further reinforced identification and commitment among those who had registered. Those who did not register raised any objections suggesting indifference or weak identification with the initiative.

5.2 Conservation phase

In the conservation phase, the findings in Table 2 confirm the proposition that conservancy members satisfaction with the approach and actions of the conservancy management committee, the realisation of benefits and the participation of members in the activities of the conservancy reinforced identification and affective commitment thereby consolidating the collective identity. The Conservancy Management Committee (CMC) assumed rights, privileges, duties and obligations conferred regarding the legislation and was required to administer the conservancy in the interests of members and accordance with the constitution. Ownership rights for huntable game, capture and sale of the game, use of protected game after applying for a permit and concessional

rights over commercial tourism (MET 1995) permitted the CMC to enter into agreements with companies to use conservancy hunting quotas and develop tourism infrastructure in the conservancy after registration.

Statements in Table 2 further support the findings of Mosimane (2000) who concluded that during the early years of conservancy operation, the CMC administered the conservancy transparently and fair, and regularly informed members of decisions. By sustaining member interest and participation in the conservancy activities, encouraging behaviours aligned with the collective identity, fostering a sense of belonging and ownership, and stimulating emotional attachment, the CMC strengthened identification with and affective commitment to the conservancy which encouraged collective action for the benefit of all. Employment favours registered members, although meat distribution benefits households with a registered member. Benefits reinforced identification and encouraged others to identify with the conservancy.

According to Simon and Klandermans (2001), collective identity is a product of the level to which individuals identify with a common cause and their commitment. It reflects personal preferences and choices and is evident in the language individuals and collectives use to share emotions toward the cause and in their behaviours. Implied is that narratives in Table 2, used in everyday language convey sentiments indicating whether or not the individual feels part of and identifies with a collective, and feels 'included' or 'excluded'. Words such as 'we', 'us', 'ours', 'you', 'my', 'yours', 'theirs', 'happy', 'trust', 'proud', 'unhappy', 'mistrust', 'not proud' are used to show they identify with and feel part of the collective.

It is also evident in responses conveying an association with collective actions such as participating in meetings, protection of wildlife and in employment. When individuals assimilate the collective identity, their attitudes and behaviours are aligned with the collective identity. This self-reinforcing process over about four years should theoretically have enhanced the resilience of collective identity and consequently, also of the conservancy.

5.3 Collapse phase

In the collapse phase, the findings in Table 3 confirm the proposition that discontent with the approach and actions of the CMC, declining benefits and limited opportunities for participation of members in the activities of the conservancy gradually weakened affective commitment and the collective identity although identification remained strong. Collective identity weakens when one or both of identification and affective commitment decline.

In this phase, the findings demonstrate that when management is compromised, the contagious spread of dissatisfaction among members undermines collective identity. Growing and spreading mistrust reduced emotional attachment and sense of belonging to the collective, weakening collective identity. Declining benefits, perceptions of unfairness in the distribution of benefits, and resentment continued to reduce emotional attachment and sense of belonging. During collapse affective commitment weakened more quickly than identification because while members had the experience of the benefits and could identify with the concept, their commitment waned.

Despite weakening affective commitment, some members continued to identify with the Conservancy. Identification provided the foundation for both constructions of the identity at the start and reconstruction after the collapse. Notwithstanding members frustrations, their continued monitoring of wildlife suggests the persistence of identification among some members and that they continued to identify with the conservancy. Members who strongly identified with the conservancy engaged the CMC and the government to resolve issues that were weakening the collective identity. The government addressed the discrepancy between the individual and collective meaning as a corrective measure due to the collective action of the concerned members.

Had there not been a sufficient number of members with these attributes who retained high levels of identification and affective commitment, the process of collapse would likely have continued leading to deregistration of the DNC. Implying that a conservancy collective action and collective identity could have collapse beyond reorganisation (Holling 2001) which would give way to new collective action and collective identity in the conservancy.

The finding suggests that government and other agencies who are not members of a collective by acting as 'honest brokers' can contribute to sustaining the resilience of collective identity in CBNRM and similar institutions. Especially when they are aware that collapse within enduring institutions provides an opportunity to reflect, learn, reorganise and enhance resilience.

5.4 Reorganisation phase

In the reorganisation phase, the findings in Table 4 confirm the proposition that the actions of the intervention by government, the concerned group, the conservancy disciplinary committee, the constitutional review committee, and the election of a new conservancy management committee strengthened affective commitment to the conservancy. As intervention gained traction, the level of affective commitment to the collective identity among disaffected members gradually strengthened.

With the reinstatement of responsible management and participation of members in decision making, identification started to spread among those who were disaffected, contributing to the rebuilding of collective identity within the broader community. Conservancy members expressed attitudes and behaviours that were supportive of the collective identity. Regular meetings to involve members in the management of the conservancy elicit cooperation as members gain confidence that Conservancy is managed according to the constitution. Conservancy members timeous access to financial reports strengthens identification with the Conservancy.

The findings indicate that the longer reorganisation takes, and the more emotional commitment declines, the more difficult it becomes for members to assume leadership, establish trust and reorganise. In such cases, it may be beyond the capacity of members to reorganise, and external influence may be required which was evident in our study when the concerned members drew on the government to confer legitimacy on the reform process.

The outcome gave disaffected members confidence in the prospects for accountable governance and reinstatement of benefits. The government was a force external to the collective that had the authority to effect a change of state by withdrawing registration and rights for the operation of the conservancy but chose instead support the internally motivated reorganisation of the collective.

5.5 Relationship between collective action and collective identity

This study shows the dynamic nature of the relationship between collective identity and collective action. The results suggest that it is essential to appreciate that collectives are collectives of individuals whose cohesion is tenuous. Levels of identification and affective commitment vary among members of the collective even though they may have developed shared beliefs that are reinforced through collective action and have experience of the benefits of collective action. During times of stress, heterogeneity within the collective creates conditions that favour the contagious spread of disaffection, if not arrested, can lead to lobbying for an alternative collective identity.

However, it also can make reconstruction possible when there are sufficient, capable members with a strong sense of collective identity which provide leadership. In this sense, heterogeneity contributes to the resilience of the collective identity. Diversity within collectives is expressed in both identification and affective commitment but once constructed first signs of the vulnerability of collective identity become evident in affective commitment suggesting it may be a useful indicator for adaptive management.

Janssen and Anderies (2007) argued that failure and recovery as experienced in DNC, develop institutional feedback loops that enable informed response to disturbance. The findings suggest that CBNRM and similar institutions should accept disturbances that cause short term failures as learning experiences and plan to benefit from them. In DNC, the cycle was initiated by institutional failure confirming that social resilience is conferred by institutions (Adger 2000). This study makes a modest contribution to understanding the relationship between collective action and collective identity in CBNRM and similar institutions. Further research is required to understand the types of disturbances in CBNRM and similar institutions.

6. Conclusion

This study was based on the proposition that understanding the nature and dynamics of collective identity and collective action and how they can be sustained in CBNRM institutions. The study concludes that to sustain the collective identity and for CBNRM institutions to function effectively, heterogeneity within the collective must be managed consciously.

The study reveals that CBNRM institutions should be aware that the process of establishing a collective identity may be viewed as 'coupling' individuals. These individuals who are loosely coupled, differ in levels of identification, and affective commitment. Therefore, when a disturbance occurs, how individuals respond and the speed will be different, affirming that collectives are an aggregation of individuals.

The study further concludes that members behave differently towards the collective and to each other due to changes in the levels of identification and affective commitment. Therefore, being mindful of the nuances of the language they use and being aware of how members of the collective express themselves provide early warning of changes in identification and affective commitment that affect collective identity.

Lastly, the study suggests that when failure is underway, recovery is determined by those, perhaps only a small number, who can reverse the process and who are most committed to the collective. Government and other agencies who are a force external to the collective should be aware that, by acting as 'honest brokers' they can contribute to sustaining the collective action and collective identity in CBNRM and similar institutions.

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