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**Social relations and water management:
The impact of community-based water management in
the ≠Khoadi //Hôas Conservancy of north-west Namibia**

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Acronyms

CBNRM	Community-based natural resource management
CLRB	Communal Land Reform Bill
CWM	Community Water Management
DEA	Directorate of Environmental Affairs
DRFN	Desert Research Foundation of Namibia
DRWS	Directorate of Rural Water Supply, MAWRD
DWA	Department of Water Affairs, MAWRD
IRDNC	Integrated Rural Development and Nature Conservation
KHC	≠Khoadi //Hôas Conservancy
MAWRD	Ministry of Agriculture, Water and Rural Development

MET	Ministry of Environment and Tourism
NACSO	Namibia Association of CBNRM Support Organisations
NAPCOD	National Programme to Combat Desertification
NamWater	Namibia National Water Corporation
NGO	non-governmental organisation
NNF	Namibia Nature Foundation
NRM	natural resource management
O&M	operation and maintenance
WC	Water Point Committees
WILD	Wildlife Integration for Livelihood Diversification Project

EXECUTIVE SUMMARY

This paper looks at how the Community Water Management (CWM) programme in Namibia has impacted on social relationships in the ≠Khoadi //Hôas Conservancy¹ of the southern Kunene Region. Interviews were conducted in five rural settlements in ≠Khoadi //Hôas and with NGOs and government departments. Key findings of this research are as follows:

- *The Community Water Management (CWM) programme in Namibia was informed by the belief that by setting and enforcing rules, locally based water management institutions could co-opt people to manage water resources collaboratively.*
- *The research found that people in the high-risk semi-arid areas of Damaraland were instead driven by an imperative to survive, as attested by the significance of dynamic, reciprocal and patron-client relationships in shaping social interactions between settlement members. People thus perceived the CWM programme primarily in terms of how it might affect their chances of survival, rather than in terms of how they might collaborate to manage water resources.*
- *Through its rule setting and enforcement mandate, the CWM programme contradicted people's survival imperative and eroded relationships which are important for survival. Thus settlement members mostly ignored rules set by the water point committees (WCs).*
- *For instance, the monthly diesel or monetary contribution rule set by WCs was a burden on the labour, time and monetary resources of most settlement members. Besides, the rule was not perceived to be enforceable as WC members felt reluctant to enforce penalties against non-contributors, fearing that it would compromise their moral claims on the latter in times of stress.*
- *The social context of the settlements was characterised by the existence of a group of 'weekend farmers' who worked away during the week and only came back over the weekend or during long weekends. The monthly meeting rule was oblivious to the fact that without the participation of weekend farmers, decisions made at the monthly meetings would not stand.*
- *The CWM programme provided opportunities for settlement members to manipulate the contribution rule and break away from moral restraints. For example, a wealthy farmer at Condor Post who paid water fees was able to monopolise one of the water points amidst futile opposition from others. Similarly, WC members abused power associated with their positions for personal gains as confirmed by cases in two settlements. These incidents revealed that the CWM programme changed the delicate balance between reciprocal and patron-client relationships important for survival, thereby further marginalising the poorest of the poor by weakening their claims to resources.*
- *Situations like these happened due in part to the lack of monitoring mechanisms and sustained capacity building measures in the design of the CWM programme, and also because the resources of the Directorate of Rural Water Supply's (DRWS) are stretched thin by having to cater to a large number of widely dispersed settlements.*
- *Confusion over land and water rights, as well as ethnic and political differences, were divisive forces underlining a challenging social environment in which the CWM programme operated.*
- *While DRWS stressed independent operation of water points by rural settlements after handing them over, it also promised support to the settlements on major issues such as engine breakdown. These mixed messages might have prolonged the mindset of dependency lingering*

¹ Conservancies are administrative areas set up by MET, within which communal farmers are conferred legal rights to manage wildlife resources alongside farming activities. In each conservancy area, a management committee consisting of elected farmer members is set up and given responsibility for day-to-day management activities (DEA 2002).

from the pre-independence era, making it more difficult to help people develop the capacity necessary to manage their water resources.

- *It was found that the everyday plights of settlement members in ≠Khoadi were appreciably related to water and grazing-access problems, and conservancy activities had little relevance to these immediate concerns of the poor. While many donors and NGOs focused their energies on conservancy development, this was unfortunately at the expense of attention being given to crucial water issues. The active involvement of donor and NGO stakeholders was sorely needed in developing capacity-building programmes to help settlement members manage their water resources.*
- *It is suggested that with assistance from donors and NGOs, social and stakeholder analyses in combination with small-scale capacity-building action, will enable the CWM programme to address more effectively imminent livelihood concerns in the settlements.*

1. INTRODUCTION

Community-based natural resource management (CBNRM) is a burgeoning approach adopted by a wide range of development projects. CBNRM seeks to decentralise natural resource management from the state to local communities by establishing natural resource management (NRM) institutions managed by local people. It subscribes to the belief that these institutions provide an arena for collaborative NRM through a virtuous cycle of cooperation.

In Namibia, the Government started its community-based water management programme (CWM) in 1997 with the aim of engaging rural settlements to manage scarce groundwater resources communally. Due to the devolution of management responsibilities from the State to the settlements, the programme brings an inevitable shift of power within the settlements and vis-à-vis other stakeholders, as other CBNRM initiatives do (Jones & Mosimane 2000). Using interviews findings from five rural settlements in the ≠Khoadi //Hôas Conservancy in the southern Kunene Region in north-west Namibia and from meetings with NGOs and government departments, this report aims to discuss how the CWM programme has impacted on social relationships in the ≠Khoadi settlements. The research questions of interest are:

- What characterised social relationships in the five ≠Khoadi //Hôas settlements and why?
- How did the CWM programme impact on these relationships?
- How did the social context of rural settlements influence the CWM programme?
- What were the perspectives of government and non-government stakeholders on the CWM and other CBNRM programmes?

This report first describes the background of the ≠Khoadi //Hôas Conservancy and gives an account of CBNRM and CWM in Namibia. Research methodology and findings are then discussed, using cases studies to substantiate analyses of the impacts of the CWM programme. The final section concludes the findings and makes recommendations.

2. BACKGROUND TO THE STUDY

2.1 *The water scarcity situation in Namibia*

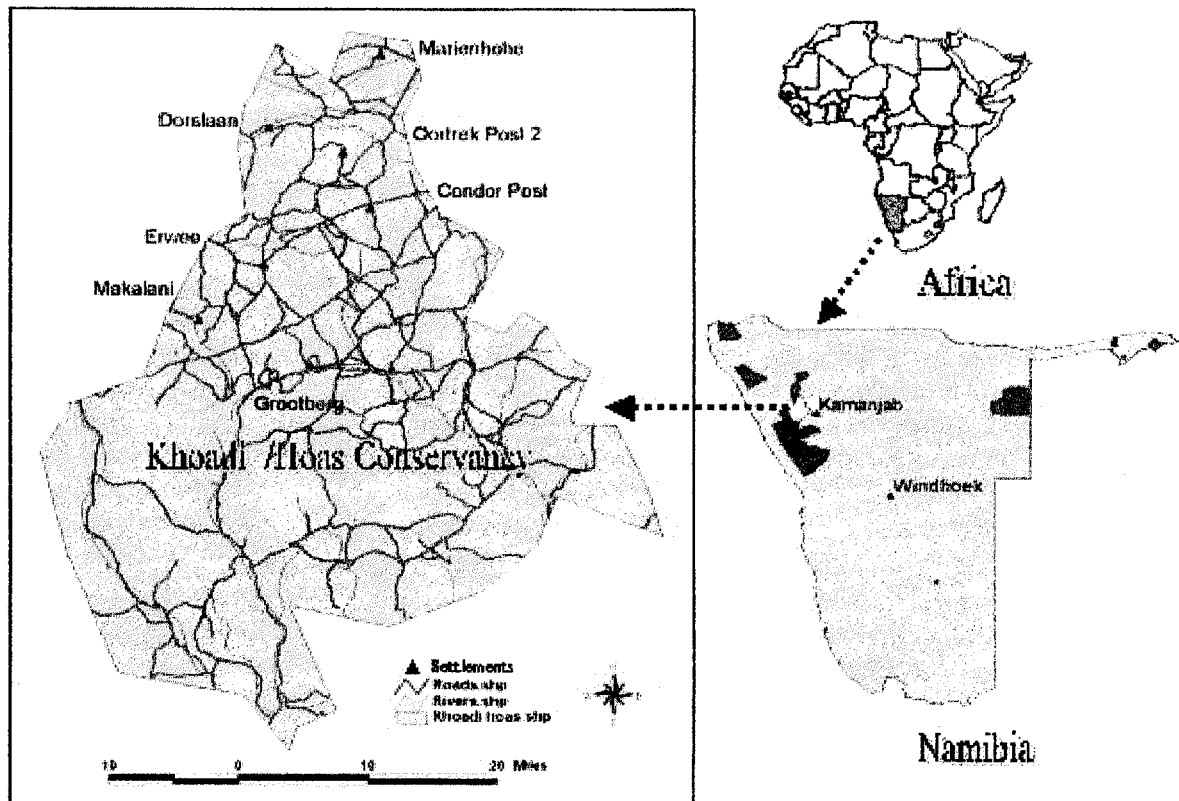
In the communal areas of north-west Namibia, groundwater pumped from boreholes is a crucial and often sole source of water for people and their livestock. Being the driest country in Sub-Saharan Africa, Namibia in general has limited surface water availability due to high evaporation rates and erratic, low rainfall (Heyns *et al.* 1998). Water from boreholes contributes 73 per cent of all water used in Namibia and less than 1 per cent of the total storage of underground aquifers is recharged on average (Ibid. 1998).

In the southern Kunene Region, the primary livelihood activity is keeping livestock, which relies on a reliable supply of water. Given the semi-arid farming environment and reliance on scarce groundwater sources, livelihood activities are highly risk-prone. As will be discussed in the findings section, this has a fundamental impact on how people interact socially.

2.2 Description of the field study area

The field study area in the Kunene-south region in north-west Namibia falls within the ≠Khoadi //Hôas Conservancy (KHC) situated just west of the Etosha National Park. Figure 1 shows the KHC area and the proximate location of the five settlements.

Figure 1: Map of ≠Khoadi //Hôas Conservancy and field study settlements



Sources: 1. Namibia and Conservancy map: DEA, MET, Government of Namibia
 2. Africa map: <http://www.orusovo.com/guidebook/images/naminafr.gif>

According to Jensen *et al.* (2002: 5), KHC “consists of some 362,000 hectares of semi-arid rangeland..., 223 farms [referred to as settlements in this paper] ... previously held by European farmers under freehold tenure ... [and subsequently] bought by the South African Government and redistributed [to black communal farmers]”. Since then KHC has been an area of state-owned land used primarily by some 3,000-3,500 sedentary livestock farmers of Damara and Herero ethnic origin for subsistence pastoralism (Ibid. 2002: 5). Damara and Herero farmers mainly farm with cattle, horses, sheep, donkeys and goats.

Vaughan (2002: 2-3) further describes KHC as follows:

“[In terms of biophysical characteristics] the area is a mopane (*Colophospermum mopane*) savannah. Grasses are predominantly annual and ephemeral with periodic high mortality of perennial grasses during times of drought. The area is semi-arid, with an east-west rainfall gradient of 300-240 mm (annual average), although rainfall is highly variable, both temporally and spatially. Water sources are mainly sub-surface, although the top of two ephemeral river catchments, the Hoanib and the Huab, arise in the area.

“The population is scattered throughout the area, with the main family (household) living at the old commercial farmsteads and smaller family units living at outlying cattle posts. Some infrastructure remains from the previous commercial farming days including fencing, buildings, boreholes, and farm dams. However, much of the infrastructure is in poor condition. The most important NRM factor affecting NRM practices is the large number of water points (WPs) ... [powered by different types of pumps such as diesel and windmill] ... and the presence of fencing. The fencing means that some farmers still practice rotational grazing and are able to keep their stock separate from other people. Some areas are less open access than others ... [with an assortment of NRM practices] varying from areas where people fence and farm their own livestock within [fenced off, private] areas, to those where livestock mingle and move (about) freely.”

2.3 The social context of the ≠Khoadi settlements

Results from field investigations revealed a situation of uncertainty over land settlement rights in the settlements, which fostered an atmosphere of dissent between people. This presented a major obstacle to the successful implementation of NRM interventions such as the CWM programme.

The land rights confusion arose because of a lack of harmonisation between the Namibian Constitution and long-standing customary rights. In rural areas of Namibia as in many African countries, traditional leaders have long been regarded as custodians of the land, with power to allocate settlement rights. Although their status has been eroded over the years, many rural settlers still acknowledge their land allocation authority (Jones & Mosimane 2000). This perception contravenes a declaration in the Namibian Constitution that “all persons shall have the right to ... reside and settle in any part of Namibia”² (Government of Namibia 1990). In one settlement visited, a number of existing Damara residents complained that newcomers (Herero migrants) had never obtained settlement approval from the Traditional Authority and as such were “illegal settlers who should be kicked out”. Newcomers disputed this view and quoted the Constitution to legitimise their abode. The forthcoming Communal Land Reform Bill (CLRB) – still to be passed – attempts to address the land issue by creating new regional administrative units – Communal Land Boards – which will effectively take over “ultimate authority over ... the allocation of communal land from traditional leaders” (Corbett and Jones 2000: 5). It remains to be seen whether the CLRB will clear the confusion over land settlement rights.

The social context of the settlements was also characterised by the existence of a group of ‘weekend farmers’ who worked away during the week and only came back over the weekend or during long weekends. These ‘weekend farmers’, who are usually the better-off members of the settlements, kept a herd of livestock at home as a store of wealth and a means to occupy land. Often, family members or others in the settlements were hired to look after their livestock and to take on other casual jobs.

Ethnicity was another factor shaping the social context. While relations between Damara and Herero farmers were on the whole harmonious, conflicts between people were sometimes accentuated by ethnic differences. In one settlement visited, where ethnic conflicts have been rampant, a group of Damara households accused other Herero households of being troublemakers in the community.

² This is stated in Chapter 3, Article 21, Clause H.

2.4 Background of CBNRM and CWM in Namibia

The CBNRM programme in Namibia comprises initiatives in several sectors such as forestry, water, fisheries, and wildlife, launched after the country became independent in 1990. Of the different sectoral initiatives, the conservancy programme implemented by the Ministry of Environment and Tourism (MET) is the most established (Blackie & Tarr 1999). In the water sector, prior to 1990, water supply in rural areas was provided free of charge to residents by the Government under South African rule. In 1997, a national community-based water management (CWM) programme, articulated in the 1993 Water and Sanitation Sector Policy, was implemented so that rural settlements bore the full costs of water supply at the end of the 10-year programme (Ibid. 2000). The CWM programme consists of three phases starting in 1997 and with a targeted completion date of July 2007.

The Directorate of Rural Water Supply (DRWS), under the Department of Water Affairs (DWA) of the Ministry of Agriculture Water and Rural Development (MAWRD), is responsible for implementing the CWM programme. The main objective of the CWM programme is to establish a water point committee (WC) in almost every rural settlement in the country to manage the roughly 5,100 water points in existence (Heyns et al. 1998; MAWRD 1997, quoted in Blackie & Tarr 1999). A water point association is also set up in a given area to oversee the activities of several local WCs falling within that area. A WC is a locally based CBNRM institution whose membership consists of people from a settlement, and is mainly responsible for the day-to-day management of WPs in the settlement. This includes maintaining the WPs in working condition, collecting a user fee from each household, and organising monthly meetings whereby water issues are discussed and settlement members jointly make decisions.

The Government of Namibia has set a target that “by 2003 some 4,000 rural water committees for community-based management will have been established” (Heyns et al. 1998). However, to date the CWM programme has lagged behind the expected rate of progress³.

2.5 Water point committees – fostering cooperation by means of rules

Underpinning the CWM programme is an implicit assumption that water point committees are a conduit for organising settlement members to manage water resources jointly, and this is enabled by the sense of collective ownership that WCs would in theory create among water users (Ostrom 1992, 1990; Bromley and Cernea 1989). Further, it is assumed that rules need to be set and enforced in order to ensure cooperative behaviour.

In a strategy paper, DRWS describes the act of “assisting in the planning, design and construction phase and a formal handing over of the facilities” as a criterion expressed by rural communities as necessary for “enhancing their sense of ownership [of the WPs, hence leading to successful community participation in managing them]” (DRWS 1994). A DWA document asserts that “delegation of responsibility for water supply and sanitation fosters motivation and commitment [among rural water users]” (DWA 1993: 32). These statements reflect a belief that devolution of water management responsibilities would lead to collaborative WP management by rural settlers.

In relation to rules, DRWS states that WC constitutions provide “the rules and regulations concerning the use of the water point by its members... [and WC members] have the legal right to force [settlement] members to stick to the agreed principles and rules” (DRWS 2000: 26). Similarly,

³ An interviewee from DRWS confirmed that given current progress, by the original programme completion date of 2007, fewer than 20% of the settlements could be expected to become self-sufficient in managing their WP's.

in an Agenda Memorandum for Cabinet, MAWRD points out that “legal status is another prerequisite [for empowering the community] ... [which will] define the rules and regulations of a particular water point and give [the WC] the authority to enforce discipline on the users...[and] go into joint agreement with other ... institutions” (MAWRD 1998: 6-7).

2.6 The process of establishing a water point committee

The process of establishing a WC at a settlement involves drafting a WC constitution and electing WC management members (WC committee members) through a voting session among people in a settlement. After a WC has been established, if DRWS considers the WP equipment to be in satisfactory working condition, the WP is formally handed over to the settlement which assumes full responsibility for managing and maintaining the WP. The timing of handing over a WP varies between settlements.

A WC constitution, once drafted and signed by DRWS and people from the settlement, becomes a legal document stipulating the rights and responsibilities of settlement members (DRWS 1994). A key tenet of the WC constitution concerns the setting of rules that pertain to different aspects of WP management (DRWS 2000). Throughout the WC establishment process, the need to enforce rules is also emphasised (MAWRD 1998).

An important rule set by WCs is to collect a monthly contribution of diesel and/or money from each household (DRWS 2000). Diesel is collected to power the engine that pumps water, whereas the monetary contribution typically goes into an ‘operation and maintenance’ (O&M) fund kept by the WC to pay for minor repairs of water point equipment. Another rule espoused by WCs stresses the need to have regular monthly meetings, during which settlement members are expected to discuss water-related issues and make decisions jointly. The impact of these rules on social relationships will be a focus of subsequent discussions in this report.

3. RESEARCH METHODOLOGY

3.1 Site selection

Five settlements – Condor Post, Dorslaan, Marienhohe, Erwee, Makalani – were selected for research on the basis of six criteria:

- How long the WC have been established?
- Whether WPs have been handed over to the settlement?
- Number of households
- Extent of urbanisation⁴
- Type of water pump used
- Where there have been known cases of ethnic conflicts

Logistical constraints and input from the WILD project staff and from key informants also influenced the choice of sites⁵. Table 1 lists characteristics of the five settlements in relation to site selection criteria.

⁴ The extent of urbanisation is defined by the presence of local shops, access to main roads, clinics, schools, and electricity.

⁵ All five settlements were selected from the KHC area, primarily because the base camp of the host organisation’s (WILD Project) Kunene field research team was situated in KHC. Using donkey carts meant that the number and choice

Table 1: Characteristics of settlements

Settlement	WC established	WF included over	Total number of households (number of households interviewed in brackets)	Extent of urbanisation	Type of pump	Other criteria
Condor Post	1997	Yes; in 2001	31 (9)	Peri-urban	Solar, windmill	None
Dorslaan	2000	No	14 (7)	Rural	Diesel, windmill	None
Marienhoe	1998	No	24 (11)	Peri-urban	Diesel	Ethnic conflict
Erwee	2001	No	44 (22)	Urban	Diesel, windmill	None
Makalani	2000	Yes; in 2001	10 (9)	Rural	Diesel, windmill	None

3.2 Research methods

At each settlement, a resident first sketched a map then placed households into wealth groups according to his/her criteria (two of the maps are reproduced in Figures 2 and 3). A random and roughly proportionate number of households from each wealth group were then selected for semi-structured interviews. Group discussions with settlement members and with WCs were also held. Table 2 summarises the wealth ranking information of each settlement.

Table 2: Summary of wealth ranking information

Settlement	Number of households in each wealth group					Criteria
	Rich	Somewhat rich	Average	Poor	Very Poor	
Condor Post	1	4	7	9	9	Number of livestock, has bank account, has job
Settlement	Rich		Average	Poor	Very Poor	Criteria
Dorslaan	5		3	3	4	Number of livestock, job
Settlement	Rich		Average	Poor	Very Poor	Criteria
Marienhoe	5		7	1	11	Number of livestock, job
Settlement	Above Average		Average	Poor	Very Poor	Criteria
Erwee	17		14	5	6	Job, can afford to put children up in school hostel
Settlement	Rich		Average	Poor	Very Poor	Criteria
Makalani	2		5	3		Number of livestock, job

It should be noted that an interpreter bias was potentially introduced into the research at Erwee, where the original translator had to be replaced⁶.

of sites was constrained due to travel speed and the need to handle logistical uncertainties, e.g. finding new donkeys and carts from time to time, dealing with the death of a horse and donkeys that ran away.

⁶ An ex-teacher from Erwee was hired to replace the original translator. Being a long-time resident of Erwee, the new translator might have introduced a bias into the subsequent interviews, as respondents would have likely exercised restraint in sharing information in the presence of a neighbour. However, as far as possible, all information was crosschecked with more than one informant.

4. SOCIAL IMPACTS OF THE CWM PROGRAMME

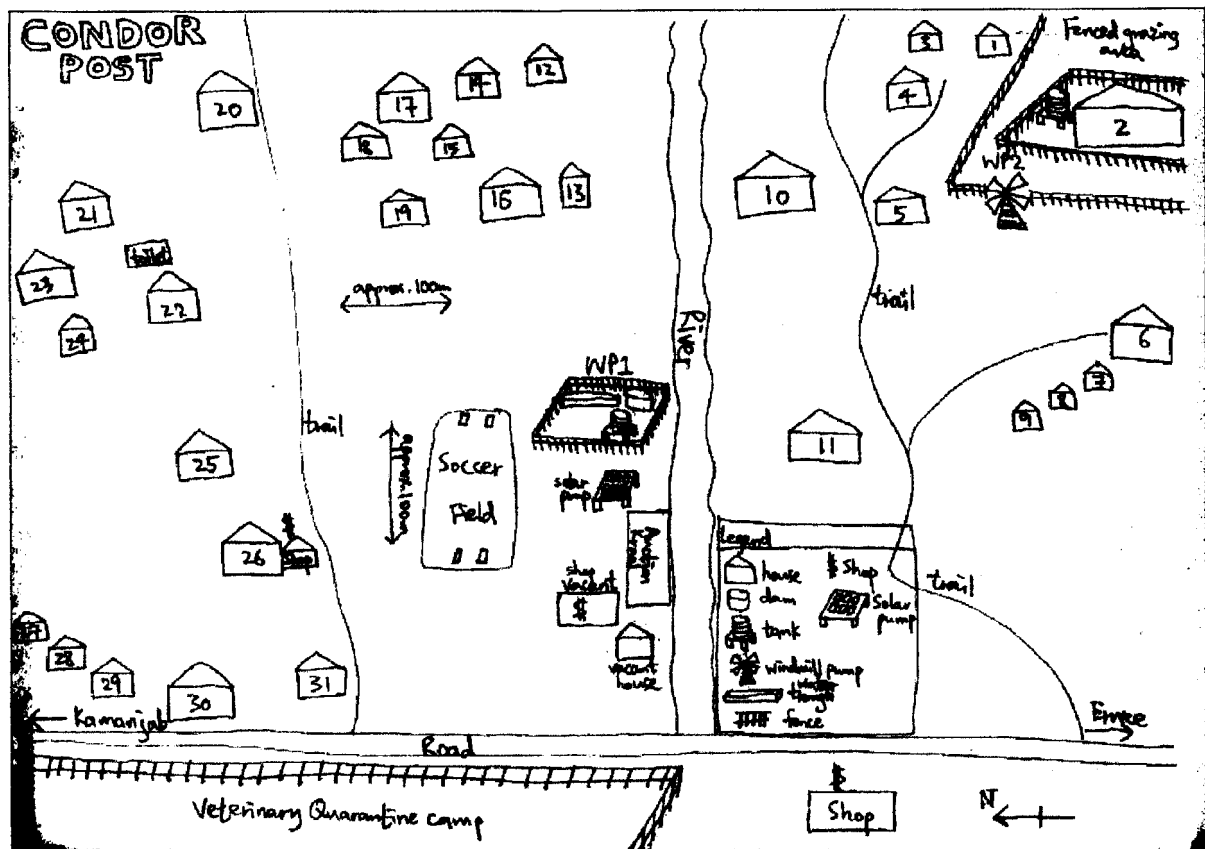
In this section, the social background and organisation of the five ≠Khoadi settlements are first described, followed by an analysis of what characterised social relationships in the settlements. The discussion then looks at how the payment and monthly meeting rules were perceived by settlement members. This is followed by an analysis of the impact of rules and the social context of the settlements.

4.1 Social background and organisation of the five settlements

4.1.1 Condor Post

This settlement of 32 households is located next to the road that runs from the closest town, Kamanjab, through to Erwee and beyond. The presence of one particularly wealthy farmer and an influential shop owner has shaped social relations in this settlement to a large extent. The residents are all Damara people except the wealthy household headed by a government employee, whose wife acted as vice-chairlady of the WC. The interviews did not reveal apparent conflicts or divisions along family lines. It seems most residents moved here from other settlements over time and the population is therefore relatively heterogeneous in terms of family composition. The fact that there are no clusters of families attests to this. The presence of a solar pump in addition to the original windmill pump means that there is no need to collect diesel and that water is relatively abundant. This factor has had a positive impact on social cohesion in the settlement.

Figure 2: Social map of Condor Post settlement

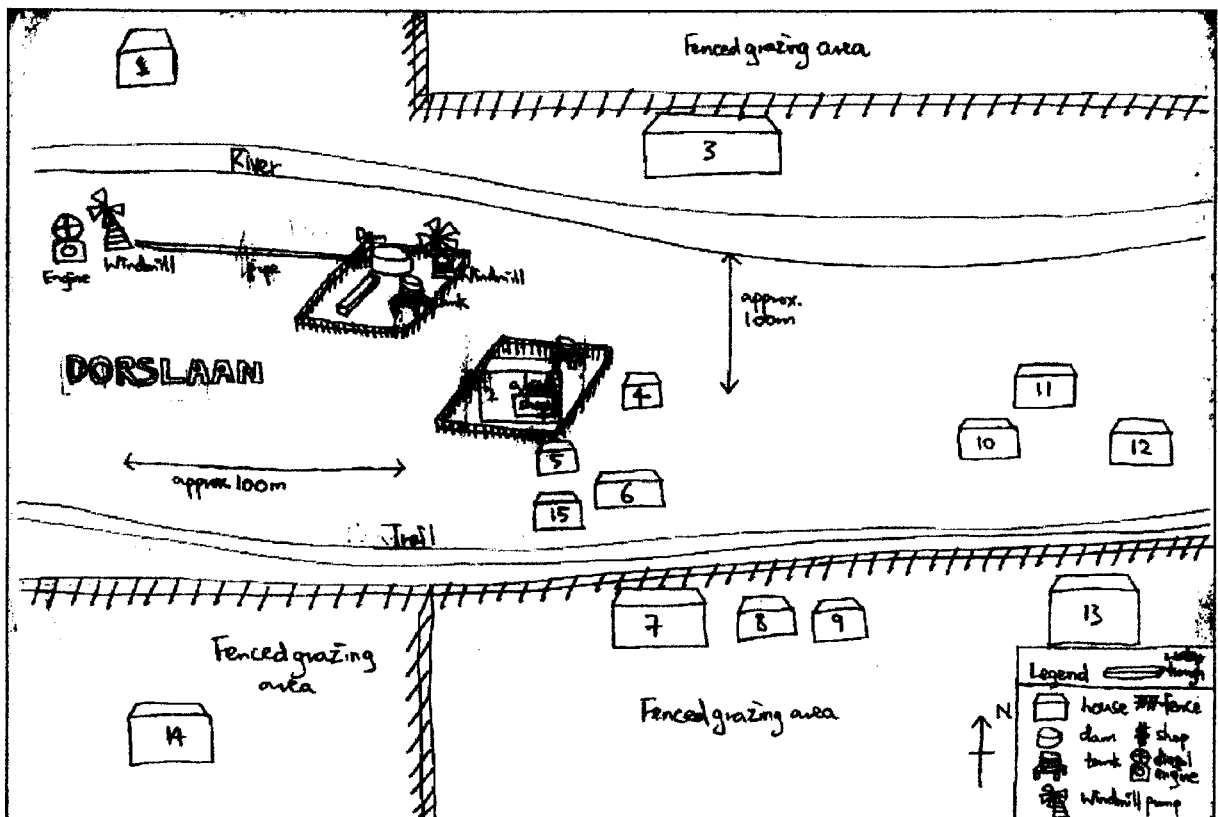


The social maps in Figure 1 above, and 2 below, illustrate the households and their location in relation to the water point and other key resources. The maps were drawn in discussion with key community participants and key informants. They provide a common arena for the discussion and dialogue of social relations and the management of water points and other resources. The maps were used for a number of group meetings to explore the extent to which certain households cooperated around water management and other resources, e.g. sharing livestock management practices.

4.1.2 Dorslaan

The distinct social aspect of this Damara settlement (there is one Herero household) is the apparent polarisation between two Damara families (one with two households, the other with 12). Arguments revolved around who should have access to grazing areas, diesel collection, and accusations that the WC technician from one of the families only turned on the pump when his family needed water. It was also said that some households fenced off grazing areas despite warnings from traditional leaders. The drying up of the two boreholes from time to time further adds to the tension. In the two-household family, both households have large herds of livestock and are located to the north of the settlement across the river. The other family of 12 households is clustered in the central and eastern part of the settlement. The single Herero household occupies a plot of land to the south-west.

Figure 3: Social map of Dorslaan settlement



4.1.3 Marienhohe

Marienhohe had five main extended families – a Damara family of eight households stretched along the western end of the settlement; another Damara family of three households to the south occupying dam number two for their own use; a Herero family of five households to the north-east; another Herero family of three households to the west; and a third Herero family of two households to the south-east. The remaining inhabitants were individual Damara or Herero households. Interviewees identified the Damara family of eight households as the poorest members of Marienhohe, with very few livestock and other assets. Most of the Herero households were relatively well off, farming with herds of cattle, sheep and donkeys. The atmosphere in this settlement was one of deep distrust. Arguments between Damara and Herero families escalated into armed conflicts on several occasions. The vice-chairlady of the WC (who belonged to the family of three Damara households and whose husband was the chairman of the WC) was involved in one such confrontation concerning who had the right to turn on the water pump. The inefficient design of the diesel pump and periodic drying up of the borehole had much to do with the tension between settlement members, as did arguments about who had grazing access and who was fencing off communal areas for private grazing. Due to deep-seated distrust between residents, cooperation in diesel collection had completely broken down and diesel contribution was ad-hoc, without any agreed arrangement to co-ordinate collection.

4.1.4 Erwee

Many of the mostly Damara inhabitants moved to Erwee from nearby settlements to work at the government facilities. Some of the households came to Erwee in the 1970s, while others came in the 1980s. There are extended families of about five to seven households converging on the western side of the settlement. These families belong to the group of 'newcomers'. Lack of social cohesion characterises the atmosphere in Erwee, and interviewees pointed to social problems such as livestock theft and drugs. These problems could be partly attributed to the transient nature of the population – when children finish schooling, parents would move back to their home settlements. As one child put it, "I do not like living here... it is not a safe place and there are people fighting and stealing." The clusters of about 20 households living on the western side draw water from the NamWater supply, using self-assembled pipes linked to one household headed by a local teacher. The latter household acts as a water re-distribution point for those other households (apparently this is not permitted, as NamWater is meant to supply only paying institutional users such as the school). Using pieces of metal pipes and leaking rubber tubes connected on ends, the self-assembled pipes cause much wastage of water, as confirmed by observation. Notwithstanding, a number of households (including the vice-chairman of the WC) were using the limited supply to water backyard gardens, growing flowers and vegetables, while other households do not get water for days.

The relationship between these households and the NamWater technician (whose job it is to connect the pipes at certain times of the day and to maintain the equipment) was tense – some households accused the technician of favouritism and appropriation of water, while the technician branded those households as "non-paying users using leaking pipes to illegally extract water from the NamWater supply" (interestingly, observation confirmed that his own house was also connected by leaking pipes to the NamWater supply). Many interviewees showed disregard for the WC chairlady, complaining that she only wanted the position to assert power. Along with a number of earlier settlers, she claimed that newcomers (who were the original group of WC members) "had no right to make decisions about community affairs". Certain interviewees said, "We voted for her in the WC re-election because she made a lot of noise... we wanted to see what she can achieve... but she did nothing to change the water situation."

4.1.5 Makalani

Makalani is a small settlement of 10 Damara households, who have lived together since the early 1970s. All except two belong to the same family. Water is relatively abundant in the settlement. These are the main factors contributing to a relatively harmonious atmosphere and there is evidence of collaborative activities to resolve communal water problems. When water point equipment broke down in 2001, four income-generating activities were organised by the WC. However, it was the social cohesiveness already existing in the settlement that provided an environment conducive to WC activities, not vice-versa. The discussion in a later section will reveal that beneath the apparent harmony, there were disputes between family members in relation to diesel collection and the setting up of gardens.

4.2 Characteristics of social relationships in the settlements and their significance

The interviews revealed that social interactions in the rural settlements are characterised to a large extent by reciprocal relationships. The examples in Box 1 illustrate this finding.

Box 1: Examples of reciprocal relationships

1. In relation to the monthly money/diesel contribution rule set by the WCs, an informal understanding among settlement members was evident at all five settlements. Poorer people were given a grace period to pay in arrears, sometimes indefinitely. For those who could not pay, they were asked to contribute labour by doing jobs such as cleaning the water tanks and animal drinking compounds, fixing broken fences, or cooking meals for others who worked at the water points. Some interviewees emphasised an obligation to allow poorer neighbours continued access to water notwithstanding their failure to make the monthly contribution. Reciprocal relationships were reinforced by the perception that every Namibian has the right to free water.
2. In Erwee, where water shortage and leaking pipes were serious problems, neighbours allowed one another to use their own pipes.
3. Helping neighbours to carry water buckets from the water point by walking or by donkey cart was commonplace in all five settlements, although at times this required compensation.
4. Similar considerations prevailed in dealing with outsiders. At Condor Post, Dorslaan, Marienhohe and Makalani, in spite of a previous agreement among settlement members to charge outsiders for bringing in their livestock to graze and to drink water, this rule was not enforced. Asked why, WC members in Makalani responded by saying that, "We help our neighbours as human beings." It will be noted that most of the peripheral fences surrounding the settlements were in disrepair, making exclusion of outsiders difficult. The decision to allow outsiders in should, therefore, be seen as driven by a combination of reciprocal considerations and logistical limitations.

In the semi-arid, high-risk environment of the settlements, reciprocal relationships play a key role in ensuring survival of rural settlers by acting as a social safety net against the risks of livelihood failures. The significance of reciprocity is reflected in the perception of a 'community' as "people who help one another with their problems".

However, such reciprocal relationships are not driven by altruism. Access to resources has often been granted after extensive negotiations between settlers, even on seemingly trivial transactions such as using a neighbour's donkey; and reciprocal relationships entail an expectation of returned favours. A 'community' is then a loosely defined idea and 'people helping one another' very much depends on particular circumstances.

In fact, the distinction between reciprocal and patron-client relationships is blurred, and the kind of relationship that dominates a particular situation hinges on the specific circumstance. Social interactions are characterised by a context-specific interplay of both types of relationships. What appear to be exploitative patron-client relationships could also be interpreted as acts of mutual help.

As such, patron-client relationships are acceptable arrangements to the exploiter and the exploited, and are no less important for survival than reciprocity (Scott 1976; personal discussion with Okali and Sumberg). The examples in Box 2 illustrate the delicate balance between exploitation and help, and how this balancing act shapes social relationships in the settlements.

Box 2: Examples of patron-client relationships

At Condor Post, a wealthy, gainfully employed 'weekend farmer' had fenced off a part of the communal grazing land for his livestock. In addition, after a solar pump had been installed in the settlement in the early 1990s, he started to monopolise the original windmill-driven water point in the settlement for his large stock and built a private tank in his house to directly abstract water from that water point. In doing so, he ignored an earlier decision by other settlement members that the windmill-driven water point should be reserved for human and small stock consumption. A number of settlement members resented this situation but dared not oppose him, partly because he employed other settlement members to look after his livestock and for other casual jobs, and also since he was the only one at Condor Post with a car to give people lifts. Another interviewee said the situation was acceptable to her, as the wealthy farmer provided casual employment to others, and "he pays our water fees".

At Condor Post, a shop owner, seen as an influential and active participant in local affairs, operated an informal "food credit scheme", i.e. he loaned food and alcohol to people in the area on credit, who paid him back by casual labour or by cash. He was able to charge substantially higher prices for his goods than in nearby towns partly because of an implied interest payment and the fact that transportation was difficult and expensive for most people. Transactions were not always benevolent. On one occasion during the research, a fierce argument broke out between the shop owner and a client who could not repay his debt, in which the former threatened to cut off the line of food credit to the latter permanently. These seemingly exploitative transactions continue to operate, because they sustain an important means of survival for most settlement members who often have no choice but to buy food on credit.

The significance of reciprocity and patron-client relationships confirmed that settlement members were preoccupied with one consideration – how to survive making best use of limited resources. Settlement members thus perceived the CWM programme primarily in terms of how it might affect their chances of survival; hence impacts of the CWM programme have to be judged on this basis.

4.3 How settlement members perceived the rules

4.3.1 The water payment rule

Enforcing the rule on the collection of a monthly diesel or money contribution from households was a primary responsibility of WCs and a key part of the CWM programme. Case study one describes how people in the settlements perceived the payment rule and reacted to it.

Box 3: Case Study 1 – Reaction to the Monthly Contribution Rule

More than 90% of the respondents felt that paying for water or contributing one's labour in lieu of payment was reasonable. They reasoned that the water points would one day be given over to the settlements to manage themselves. In actuality, fewer than half of those interviewed made the monthly money/diesel contributions regularly and few contributed their labour towards fixing fences or cleaning tanks. Typical reasons given were that: (1) they were unemployed and had no money; (2) they were not getting enough water from the borehole; (3) that others with more livestock were paying the same fees; (4) they had no time. The money collection imperative of WCs created resentment among settlement members. One woman at Condor Post asked, "How can they expect me to pay knowing that I do not have enough to eat?" Another had this to say about cooking meals for those who cleaned the water tanks, "I have no choice but to do it because I am not paying."

A combination of factors might explain why settlers ignored the payment rule. First, the pre-independence government under South African rule provided water and maintenance services for free, fostering a dependency mindset and the perception that every Namibian had the right to free water. Second, people considered water inseparable from the land from which it came, and the confusion as to land-settlement rights translated into confusion about water-access rights and who should pay for it. Third, for most households, the monthly contribution was a drain on their labour,

time and monetary resources, therefore exposing them to greater risks and compromising their survival 'bottom-line'. Fourth, the contribution rule was not perceived to be enforceable, because WCs were seen as lacking in authority, and more importantly because settlers knew that the 'enforcers', i.e. WC members, would hesitate to enforce the rules.

In short, settlers evaluated the contribution rule against survival considerations and decided it was not in their interests to comply.

How did WC members perceive the contribution rule? Observation at Erwee suggests that they felt reluctant to enforce penalties against those who did not contribute. The reason was two-fold. First, if they cut off the water supply of a non-paying settlement member, it would be tantamount to sealing off a potential source of future help should they face hardships. As one respondent put it, "We are all people from the same community and if I become hungry one day, I need their help."

Second, WC members were mindful of the need to avoid openly exercising sanctions, or even the appearance of trying to do so. An enforcer was seen as someone showing no compassion towards his/her neighbours under duress. This would have distanced the enforcer from the rest of the settlement, compromising his/her moral claims on others in times of stress. Strict enforcement of penalties ran counter to the survival strategy of people in the settlements; hence rules were rarely enforced.

4.3.2 The monthly meeting rule

Another rule commonly enshrined into WC constitutions stressed the need to have regular monthly meetings, during which settlement members would discuss water-related issues and make decisions jointly. This rule symbolised public meetings as an arena where people would purposively organise themselves to manage their groundwater resources in a cooperative and mutually beneficial manner.

At Condor Post and Makalani, prior to WP management responsibilities being handed over to the settlements by DRWS, monthly meetings were facilitated by DRWS. Thereafter, settlements were told to continue holding monthly meetings on their own. The fact was, after the handovers, regular meetings stopped. There were two reasons for this. Many saw no point in meeting unless there were important issues to deal with. One respondent at Condor Post asked, "Why should we get together if there are no problems?" Another interviewee at Marienhohe saw "no need to meet because this year the borehole has no problems". Monthly meetings were seen as draining precious household resources of time and labour.

The value of having monthly meetings was also questioned on the basis that many neighbours were not around to attend them. Thus monthly meetings were held irregularly, and decisions made during meetings were often disputed afterwards. Many 'weekend farmers' were usually not around, and those left behind had limited time to attend to matters at home. In Dorslaan, Marienhohe and Makalani, 'weekend farmers' disagreed with decisions made by the WCs (especially decisions involving money) when they came back. The WCs thus decided to delay meetings until most settlement members were present, feeling that only then could binding decisions be made. This finding agrees with Cleaver's observation in western Zimbabwe that "villagers believe ... everyone potentially affected by a decision should be present ... and every attempt is made to hold ... meetings at times when all can attend" (1998: 13-14). A MAWRD extension officer passing by Marienhohe confirmed that dismal attendance at WC meetings and 'weekend farmers' disputing WC decisions were equally prevalent in the Kunene-north Region.

People thus opposed monthly WC meetings for several reasons. First, the monthly meeting rule contradicted an important norm in the settlements – that decision-making by consensus is valued by

settlement members. Second, decisions made in the absence of more influential ‘weekend farmers’ were not likely to stand. Third, ‘weekend farmers’ provided casual employment to those who stayed behind at the settlements, so that the latter were reluctant to make decisions without consulting the former.

4.4 Impact of the rules

4.4.1 Changing the balance between reciprocal and patron-client relationships

The CWM programme provided opportunities to manipulate the rules. The examples in Box 3 reveal how settlement members tried to improve their bargaining position with others using the payment rule.

Box 4: Examples of how people manipulated the payment rule

An example of a patron-client relationship was described above, where a wealthy weekend farmer at Condor Post appropriated grazing and water in the settlement in exchange for providing casual employment to others and giving people lifts to towns (Box 2). Asked what he thought of paying for water, the farmer declared that, “I pay for poor people in this place to use water.”

In Marienhohe, two non-paying Damara households revealed that others who made the monthly water contributions claimed they “should have more say in making decisions than others because we pay”, although those people “do not disregard our opinions”. This seemed to coincide with a situation described by another respondent – that three Herero households ignored a rule about locking up the gates around the water point. This rule was meant to alleviate the water shortage situation by rationing animal drinking times and blocking out outside livestock. According to the respondent, the Herero households said, “Since we are paying for water we should be able to get it any time we wish”.

Interestingly, the two Damara households at Marienhohe quoted in the previous example were said to demand the right to set up gardens if they were to start paying the water fees.

The payment rule gave paying settlers an excuse to justify resource appropriation to improve their survival positions. The wealthy farmer at Condor Post described himself as a provider to others in his settlement who “[pays] for them to use water”. This enabled him to make exclusive claims on one of the water points. Nonetheless, manipulation of the payment rule was not limited to wealthier members of the settlements. The two non-paying Damara households in Marienhohe perceived the rule as leverage to bargain for the right to set up gardens, perhaps after seeing how their wealthier brethren manipulated it. According to a DRWS official, the same scenario was also widespread in the Omaheke and Hardap Regions in eastern and central-southern Namibia where “rich farmers who pay a large portion of the water fees try to dominate the water points”.

The payment rule provides an incentive to break away from moral restraints thus changing the delicate balance between reciprocal and patron-client relationships important for survival. It thus further marginalises the poorest of the poor.

4.4.2 Abusing rules

It was found that just as people were manipulating rules to gain an advantage in interpersonal dealings, WC members were abusing power associated with their positions for personal gains. These cases are described in Box 4.

Box 5: WC members abusing power

In Marienhohe, the chairman, vice-chairlady and caretaker of the WC from the same Damara family, used a separate dam/tank for themselves while others in the settlement shared the main dam/tank. Respondents expressed resentment that the chairman looked after his own interests and drew excessive quantities of water while the borehole was already drying up.

In Makalani, three households complained about gardens and diesel collection. One interviewee claimed the whole community was aware of fraudulent practices in diesel collection. She alleged that WC members withheld 5 litres of the 25 litres diesel collected from households for themselves and told others that the payee came up short by 5 litres. A similar allegation about cash collection was made. Settlement members chose not to have an open confrontation with WC members, in consideration that most people came from the same extended family. Instead they opted to start a new arrangement in which a household, which did not belong to the extended family, was appointed the new diesel collector. A receipt would be issued every time diesel was collected.

Another household was told not to set up a garden by the WC, while certain WC members themselves “have big gardens” (confirmed by observation). A respondent also pointed out that two of the households (Household A which is the family of a WC member, and the relatively well-off Household B which has several gainfully employed members) had a close relationship, in which household A partially depended on Household B for financial support. Household B was allowed to set up two gardens and was also granted extended grace periods for monthly water payments. While this was happening, Household A asked other households to contribute diesel in consecutive months contrary to the rule that everyone should be taking turns.

The fact that certain WC members abuse their authority has the same effect as people manipulating the payment rule – it changes social relationships and arguably further marginalises the poorest of the poor. These situations arise in part due to the lack of monitoring mechanisms and sustained capacity building in the design of the CWM programme. As one WC committee member at Erwee confirmed, training for them was limited to a one-week crash course at Sesfontein. Without the necessary capacities for self-management and monitoring, settlements were asked to organise themselves and manage water resources, while the resources of DRWS are stretched thin by having to cater to a large number of widely dispersed settlements. There was simply a lack of willingness among settlement members to manage water resources communally and monitor the activities of those in power, so that the well-being of disadvantaged settlement members was left at the mercy of the elites’ integrity, which could so easily be eroded given the corrupting incentives and negative examples bombarding elites.

4.5 Social context of the settlements

As discussed in the background section, confusion over land rights and ethnicity are two of the factors shaping the social context in which the CWM programme has to operate. Confusion over land rights constitutes a profound destabilising force prescribing an atmosphere of dissent between people. Uncertainty over land-settlement rights also translated into confusion over water rights and responsibilities, insofar as people do not differentiate between land and water as separate resources. These uncertainties are accentuated by ethnic differences, e.g. in Marienhohe, a group of Damara households accused other Herero households of being “illegal settlers” who disrupted harmony in the settlement. Some interviewees also expressed strong opinions against neighbours who had different political affiliations than their own. The combination of ambiguous settlement and water access rights, as well as ethnic and political differences are all divisive forces underlining a challenging social environment in which the CWM programme operates.

5. STAKEHOLDER PERSPECTIVES ON THE CWM PROGRAMME

Comments made by an interviewee from a water authority in Windhoek shed light on the Government's perspectives on the CWM programme. The interviewee pointed out that because rural areas spanned large distances, DRWS, lacking the resources to cover all rural water points, initiated the CWM programme to devolve management responsibilities to the local settlements. Since CWM "has been proven to work on commercial farms...it is the only alternative for communal areas," although "the social dynamics in communal areas are much different than in commercial farms". When asked if DRWS considered the underlying forces causing conflicts in the settlements while implementing the CWM programme, he replied that DRWS was a technically oriented government department that could not be expected to deal with the social interactions between people in the settlements. He acknowledged that raising awareness and building capacity in the settlements were crucial tasks, but that these should be the job of NGOs and that DRWS could only be expected to set up WCs.

Another interviewee, an official from DRWS, confirmed that, "it is a policy principle that if settlements cannot meet the costs of maintaining their WPs after 2007 (when the programme is due to be completed), DRWS must intervene to help".

Based on the above information and from observation, it is notable that, in executing the CWM programme, while DRWS stressed independent operation of water points by rural settlements, it also promised support to the settlements on major issues such as engine breakdown. Such support was pledged beyond the CWM programme completion date of July 2007. These courses of action are likely to have sent out contradictory messages to settlement members, who became confused about what was expected of them and what support they should expect from DRWS and from the WCs. This might have prolonged the mindset of dependency lingering from the pre-independence era and made it more difficult to help people develop necessary capacities to manage their water resources.

Partly out of a conviction that what worked on commercial farms would also work in communal areas, the water authorities felt that the CWM programme would achieve its set objectives in communal areas. However, they could have been more sensitive to the intricacies of social realities in the settlements, and of the social impacts of the programme.

The key questions to ask about the CWM programme are related to its long-term effects – had the programme considered fully social realities in the settlements which might have led it astray? Had the programme empowered settlement members by building their capacities, so that long after its completion people would be capable of resource management on their own? More importantly, the CWM programme presumably carries with it the intent to alleviate poverty in rural settlements. This would imply that only when the vulnerabilities of marginalised groups and individuals have been effectively reduced could the programme bring about long-lasting changes to the lives of the intended beneficiaries. Given this, in what way was the programme designed to be sensitive to the needs of those most vulnerable to livelihood shocks?

In respect of donor and NGO stakeholder groups, from observation, not many of them have extensive rural water programmes that addressed poverty at the household or individual levels. As a DRWS official confirmed, donor and NGO involvement in rural water supply projects has dwindled since 1990. DRFN did disseminate a detailed WP management manual to WC members during training sessions conducted by DRWS a few years ago, but this seemed to have reached few of the settlement members.

From interviews with NGOs, some of them seemed preoccupied with conservancy development and proclaimed its merits as a model of development. This is understandable, as the highly regarded and publicised conservancy model delivered high-profile success stories to the international community which placed an emotional premium on conservation and wildlife matters. Conservancy development was unfortunately achieved at the expense of attention being given to crucial water issues. Certain interviewees seemed convinced that wildlife-generated benefits of the conservancy would naturally trickle down to the poorer members of settlements, and that the conservancy represented a model of democracy which could lift poor people out of their troubles.

This research, however, has delivered clear findings to the contrary: first, the everyday plights of settlement members in ≠Khoadi //Hôas are closely related to water and grazing access problems; and second, conservancy activities have little relevance to these immediate concerns of the poor. As many settlement members (especially the poorer ones) pointed out, benefits from the conservancy never reached them and just “fattened” the elites in charge of conservancy affairs. Granted, many of the NGO stakeholders have a specific development or research focus, e.g. conservation, but if we again assume that all the work being done cannot and should not be divorced from a people-centred poverty focus, water issues with an immediate impact on settlement members would warrant attention from donors and NGOs. This could entail developing capacity-building programmes down to the settlement and household level, mandating detailed community organising work. This is one of the topics of discussion in the next section, in which the findings of this research are concluded and a number of recommendations made in relation to the CWM programme.

6. CONCLUSION

The CWM programme in Namibia is informed by the belief that through setting and enforcing rules, locally based WCs provide a platform through which people would be co-opted to collaboratively manage scarce water resources, resulting in benefits for everyone including the poorest and most vulnerable.

Field research conducted in the ≠Khoadi //Hôas Conservancy produced results to the contrary. It found that social interactions in the settlements were driven by an imperative to survive, and to this end reciprocal and patron-client relationships served a critical purpose. The CWM programme, through its rule setting and enforcement imperative, contradicted people’s survival imperative by inadvertently reshaping social relationships. It also offered settlement members an opportunity to manipulate WC rules and to abuse the authority associated with WC positions. Based on these findings, it is reasonable to conclude that the activities and mandates of WCs do not bring about collaborative action among settlement members as theory might dictate.

This study also revealed that the social context of the settlements created a challenging environment within which the CWM programme operated. Furthermore, the CWM programme needed to better address complex social realities in the settlements, obstacles hindering its successful implementation. The programme also could have better focused on developing the capacities of local people for self-management. Finally, donor and NGO involvement in water-related capacity building programmes was much needed and their preoccupation with the conservancy as an idealised model of development might be explained in part by stakeholder priorities.

Based on the above research findings, the following suggestions concerning the CWM programme are made:

- A focus on social research and analysis would help to develop an understanding of the underlying social factors and dynamics that promote or hinder the programme. The programme can be modified accordingly to become more relevant to the needs of people in the settlements.
- Such analysis, conducted in a number of representative settlements across the country on a regular and recurrent basis, would help reveal social factors specific to each region and establish the foundation for participatory monitoring and evaluation mechanisms. This could be one way to build a self-sustaining CWM programme tailored to each region.
- It is suggested that ongoing stakeholder analyses be made an integral part of social analyses to understand the impact of stakeholder interests on settlements and on the CWM programme itself.
- Furthermore, small-scale action oriented towards building social cohesion in the settlements would add value to the research process and this would create the necessary conditions conducive to the CWM programme's devolution initiatives. Through small-scale actions, much could be learnt about social interactions in the settlements to inform larger scale interventions (Mosse 1995). It could also serve as an initial platform to build local capacity and enhance social cohesion. An example is to help start a soccer league in a settlement where people have expressed a desire to do so during interviews (such as at Marienhohe). Small-scale action requires that implementing personnel take on the dual role of researcher and development worker.
- Attracting interest from donors and NGOs to become partners in the research and capacity-building process is crucial, and this requires the realisation that stakeholders have to gain something in return for lending their support (Mosse, forthcoming). To this end, the CWM programme needs to be re-packaged into a marketable success story which gives donors and NGOs an incentive to participate. This could be done by incorporating a focus on income-generation activities into the CWM programme, e.g. an initiative to start a local craft centre with assistance from an NGO and using the proceeds to buy diesel. This type of initiative, compared to existing WC activities, is also better placed to engage settlement members to participate, as people can easily relate to tangible benefits. Hence different stakeholders, by getting something they need out of the programme, will be more willing to participate and the programme might have greater long-term impacts.
- These types of combined research-and-development interventions must be based on a programme design that works from the ground up, involving people in the settlements. There is nevertheless always a possibility that a programme hailing the ethos of participatory empowerment and democratisation might simply create superfluous structures enabling elites to capture benefits. To minimise this possibility, an emphasis on social analysis throughout the life cycle of the CWM programme would an important contribution.



7. REFERENCES

- Blackie, R. and Tarr, P. 1999 Government Policies on Sustainable Development in Namibia. *DEA Research Discussion Paper No.28*. Department of Environment Affairs. Windhoek: MET
- Bromley, D. and Cernea, M. 1989 The Management of Common Property Natural Resources: Some Conceptual and Operational Fallacies. *World Bank Discussion Papers, 57*. Washington D.C.: The World Bank
- Cleaver, F. 1998. There's a right way to do it – Informal Arrangements for Local Resource Management in Zimbabwe. *Waterlines, 16(4): 12-14*. Intermediate Technology Publication. London.
- Corbett, A. and Jones, B.T.B. 2000. The Legal Aspects of Governance in CBNRM in Namibia. *DEA Research Discussion Paper No.41*. Department of Environment Affairs. Windhoek: MET
- DEA (Directorate of Environmental Affairs, MET). 2002 A Simple Guide to Namibia's Communal Area Conservancies.
http://www.dea.met.gov.na/programmes/cbnrm/cons_guide.htm
- DRWS (Directorate of Rural Water Supply). 2000. Guidelines for the Implementation of Community-based Management in Rural Water Supply, Version II. Windhoek: MAWRD
- DRWS (Directorate of Rural Water Supply) (1994) Rural Water Supply Schemes and Individual Water Points. *Strategy Paper No. S1*. Windhoek: MAWRD
- DWA (Department of Water Affairs). 1993. A Digest of the Water Supply and Sanitation Sector Policy of the Government of Namibia. Windhoek: MAWRD
- Government of Namibia. 1990. The Constitution of the Republic of Namibia.
<http://www.orusovo.com/namcon/>
- Heyns, P., Montgomery, S., Pallett, J. and Seely, M. (Eds.). 1998. Namibia's Water: A Decision-maker's Guide. Department of Water Affairs, Ministry of Agriculture, Water and Rural Development and The Desert Research Foundation of Namibia. Windhoek: MAWRD and DRFN
- Jensen, S., //Gaseb, A. and /Nawaseb, G. 2002 An Overview of Desertification Issues in the ≠Khoadi //Hôas Conservancy. *Namibia's Programme to Combat Desertification Discussion Document 1/2002*.
- Jones, B.T.B. and Mosimane, A.W. 2000 Empowering Communities to Manage Natural Resources: Where does the New Power Lie? Case Studies from Namibia. *DEA Research Discussion Paper No.40*. Department of Environment Affairs. Windhoek: MET
- MAWRD (Ministry of Agriculture, Water and Rural Development). 1998. Agenda Memorandum for Cabinet: The Implementation of the Community Management and Cost Recovery Aspects of the Water Supply and Sanitation Sector Policy (WASP). Windhoek
- MAWRD. 1997. Proceedings of the National Wrap-up workshop on Community Management of Water Supply. *Unpublished Report*. Windhoek
- Mosse, D. (forthcoming) The making and marketing of participatory development. In: *Philip Quarles van Ufford and Ananta K. Giri (Eds.) A Moral Critique of Development: In Search of Global Responsibilities*. London and New York: Routledge (EIDOS series)
- Mosse, D., with the KRIBP project team. 1995. Social analysis in participatory rural development. *PLA Notes No. 24*. London: IIED
- Okali, C. and Sumberg, J. 1999. Policy Implications of Enterprise Agriculture as a Component of Rural Livelihood Diversification in West Africa. *ESCOR Grant No. R6780, Final Report*. Overseas Development Group. UK: University of East Anglia
- Ostrom, E. 1992 *Crafting Institutions for Self-Governing Irrigation Systems*. San Francisco: Institute for Contemporary Studies

- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press
- Scott, J.C. 1976 *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. New Haven: Yale University Press
- Vaughan, K. 2002. *An Overview of Community Livelihood Profiles and Community-based Natural Resources Management in ≠Khoadi //Hôas Conservancy, Kunene region. WILD Project Working Paper No. 5*. Department of Environment Affairs. Windhoek: MET

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