Institute of Natural Resources

# INTEGRATING SOCIO-ECONOMIC AND CULTURAL VALUES AS ADDITIONAL COMPONENTS OF THE CRITERIA FOR ESTIMATING AND MANAGING THE 'RESERVE' WITH AN EMPHASIS ON RURAL COMMUNITIES

Report to the

Water Research Commission

by

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## EXECUTIVE SUMMARY

The National Water Act defines rivers as a resource that must be sustained in order to safeguard the supply of goods and services to society. To achieve this the Act makes provision for reserving a quantity of water of appropriate quality to meet the basic needs people have for water and to sustain aquatic ecosystem functioning. This is known as the Reserve. Implied in the reservation of water to sustain river systems is the assumption that by doing so, rivers will continue to provide for the needs of society. It is well known that rural people rely on the goods and services of rivers to sustain life. This encourages us to perceive the needs rural people have of river systems to be defined in material terms such as water, fish and construction materials and commonly fails to take account of spiritual needs.

As the intention of the environmental component of the Reserve is to sustain ecological processes in rivers, it is established largely through ecological determinations. Consequently, it may be that human dependencies are not adequately taken into account and the patterns of flow defined in the determinations of the Reserve may not meet the requirement of rural people. If they do not, the intentions of promoting collaboration in the management of river systems may be jeopardised.

The premise of this project is that if the needs of rural people are not adequately taken into account in the determination and implementation of the Reserve, the pressures rural people feel in meeting these needs will confound attempts to sustain the Reserve as defined in the Act.

The project sought to improve our understanding of the nature of the relationships between the needs of rural households, the river system and sustainable use. Since much is already known about material needs, the research was directed at two issues namely, improving our understanding of the role of non-material needs, particularly traditional and contemporary belief systems and values, and how use of river system goods and services is regulated. Since belief systems and values define the norms that in turn direct behaviour, they are strongly connected to regulatory systems.

In order to gain insight into how belief and regulatory systems are changing and how these changes might be harnessed in co-management, the research focused on a community that was in transition from rural to urban.

Notwithstanding their peri-urban situation, the people of Salem make extensive use of the Mlazi River for a variety of uses such as washing, bathing, and watering livestock, but they also use the river frequently for rituals and ceremonies. Some of these relate to traditional beliefs and values whilst others are founded in contemporary Christian religions. The traditional belief systems and values persist, but are weakening whereas the belief systems and values associated with the Zionist Christian Church may be strengthening. Both the traditional and contemporary belief systems show strong connections with the river and therefore offer opportunity for promoting co-management, particularly as respondents indicated concern for river condition.

Respondents in the survey observed that there was no control over access to and use of river resources. The “Traditional Authority”, whilst having a stronger presence in the area than elected councilors, has lost much of its influence. It is suggested that there should still be a role for the Traditional Authorities in co-management. It is also suggested that constituencies such as the Zionist Christian Church that have spiritual connections with river systems should be encouraged to participate in co-management. All parties would however need to be empowered to do so. This requires that there are opportunities to participate. At present a structure and process for co-management does not exist in the area and people have no opportunity to participate. It is also clear that they have neither the self-confidence nor the competencies for effective participation. Suggestions are made for a structure, the characteristics of constituencies that might participate, and for agreements that would define roles and accountability of participants in co-management.

# RESEARCH REPORT

## 1. INTRODUCTION

The National Water Act promotes equitable, efficient and sustainable use of the nation's water resources. To achieve these intentions, the Act defines rivers as the resource that must be sustained and makes provision for a basic supply of water to sustain life. The quantity of water of defined quality that is required to satisfy basic human needs and to protect aquatic ecosystems is termed the Reserve. The shift from defining water as the resource to rivers as the resource is significant because it implies an intention to sustain the flow of diverse goods and services that are necessary to sustain life. But, what are these goods and services and are they accounted for in the estimation and delivery of the Reserve?

The human component of the Reserve is defined narrowly in terms of the daily amount of water required to sustain life. It therefore considers only one good and not the spectrum of goods and services that may be required to sustain life, particularly among the poor and rural populations. The underlying assumption is that if the ecological functioning of rivers systems is sustained, then people will have access to the range of goods and services they require for survival. Since the environmental component of the Reserve is established through ecological determinations, it may be that human dependencies are not fully appreciated and are not adequately reflected in the estimations of the Reserve. It can be anticipated that in such situations where the relationships and dependencies of communities on a range of goods and services are not adequately understood and considered, those communities become vulnerable to disruption of their life support system. As they respond to consequences of disruption and adapt their livelihood and lifestyle strategies, the patterns of use of river-related goods and services change in ways that may threaten the capacity to sustain use in the long term.

The premise of this project is that if the needs of rural people are not taken into account, the pressures of meeting these needs will confound attempts to sustain the Reserve as defined in the Act and to achieve equity and efficiency. The project sought to improve our understanding of the nature of the relationships between the needs of rural households, river system resources and sustainable use. There are two parts to the study. The first seeks to learn about the nature of the goods and services people derive from

rivers and the second focuses on regulatory structures and processes at community level that might be harnessed in the promotion of sustainable use. The aims of the project were defined in terms of rural communities and their needs with respect to the Reserve:

## Aims with respect to rural communities and their needs

- Understand the patterns of resource use
- Understand the vulnerability of rural households to disruption in respect of access to these resources
- Help understand the roles and responsibilities of rural communities in respect of their use of the resources
- Understand the relevance of the findings for the determination of the Reserve and River Class.

## Aims with respect to the Reserve

- Understand the implications of the Reserve for rural communities
- Incorporate the needs of rural communities into the management of the reserve.

Rural communities were selected as a focus because of their likely dependency on resources derived from river systems. The first section of this report explains the selection of the community for study. Research methods are briefly described. The research findings are presented in six sections:

- an assessment of the use of goods and services from the river in order to establish the validity of pursuing the notion that traditionally based belief, value and regulatory systems persist within the community despite the changes it continues to experience;
- an overview of findings on the nature belief and value systems and how these relate to use of river goods and services;
- an overview of the role of traditional authority in the regulation of use;
- a discussion on development of co-management;
- an assessment of the extent to which the aims of the project were achieved;

The last section is a report on capacity building. The findings are drawn largely from research dissertations conducted for the degree of Master in Environment and Development by Chris Tham and Sandile Zeka.

## 2. SELECTING THE COMMUNITY FOR STUDY

South Africa is a developing country and the effects of development and modernisation are felt in every corner. The result is that there is a continuum of exposure to these forces of change and of responses to them, and it was necessary to decide on where to focus in this continuum. Because change is directional from rural to urban, there seemed little point in focussing on the most rural communities as these are likely to change most. Also, there seemed little to be gained from a study of the most urbanised communities as they have changed most and are likely to have least dependence on river systems. We therefore sought a community that was transitional between rural and urban. Such communities were seen to reflect a state that presently rural communities would be in some years on, as they become increasingly urbanised. Study of such communities would provide insight into how persistent the relationships are between people and river systems whether these are in patterns of resource use or in regulation of use.

Consideration was also given to the physical location of the community that would be studied as the intention was to focus on a situation where there was currently emphasis on promoting integrated catchment management. The Vulindlela area was considered because it is located on the upper reaches of the Msunduzi River, a tributary of the Mgeni River that is the main source of water for the Pietermaritzburg-Durban axis. This area has a history of political conflict and after due consideration, it was felt that since the study was to address issues that might be considered politically sensitive, it would be better to seek another site.

The Water Research Commission had been funding a project in the Mlazi River basin that sought to promote community involvement in river management and it appeared that there might be advantage in building on this foundation. As this study required that residents of the chosen community were interviewed, it would help if the researchers could be introduced and accredited by people who had already built up relationships and who were trusted by the community. We therefore sought a community situated near the Mlazi River, who were transitional between rural and urban and to whom the researchers could be introduced.

The Salem community is located between Durban and Pietermaritzburg (Figure 1). The social history of Salem dates back to the 1950's when a farmer who owned the land ceded it to the local chief. Most of the people presently living in the area used to be resident in Cliffdale, which was predominantly an Indian area. After introduction of the Group Areas Act, the black families in Cliffdale were compelled to move to Salem. Most people prefer that the area be referred to as Edamini because of its proximity to Shongweni Dam, or Emangangeni that is the clan name of the chief *Inkosi* Shozi. This indicates that the community still has traditional ties. These are further reflected in that *Inkosi* Shozi presides over *Izinduna* to whom he delegates powers for allocation of sites for homesteads and activities such as agriculture and control over access to resources. The *Inkosi* and his *Izinduna* still have a duty to settle disputes. The land belongs to the Ingonyama Trust.

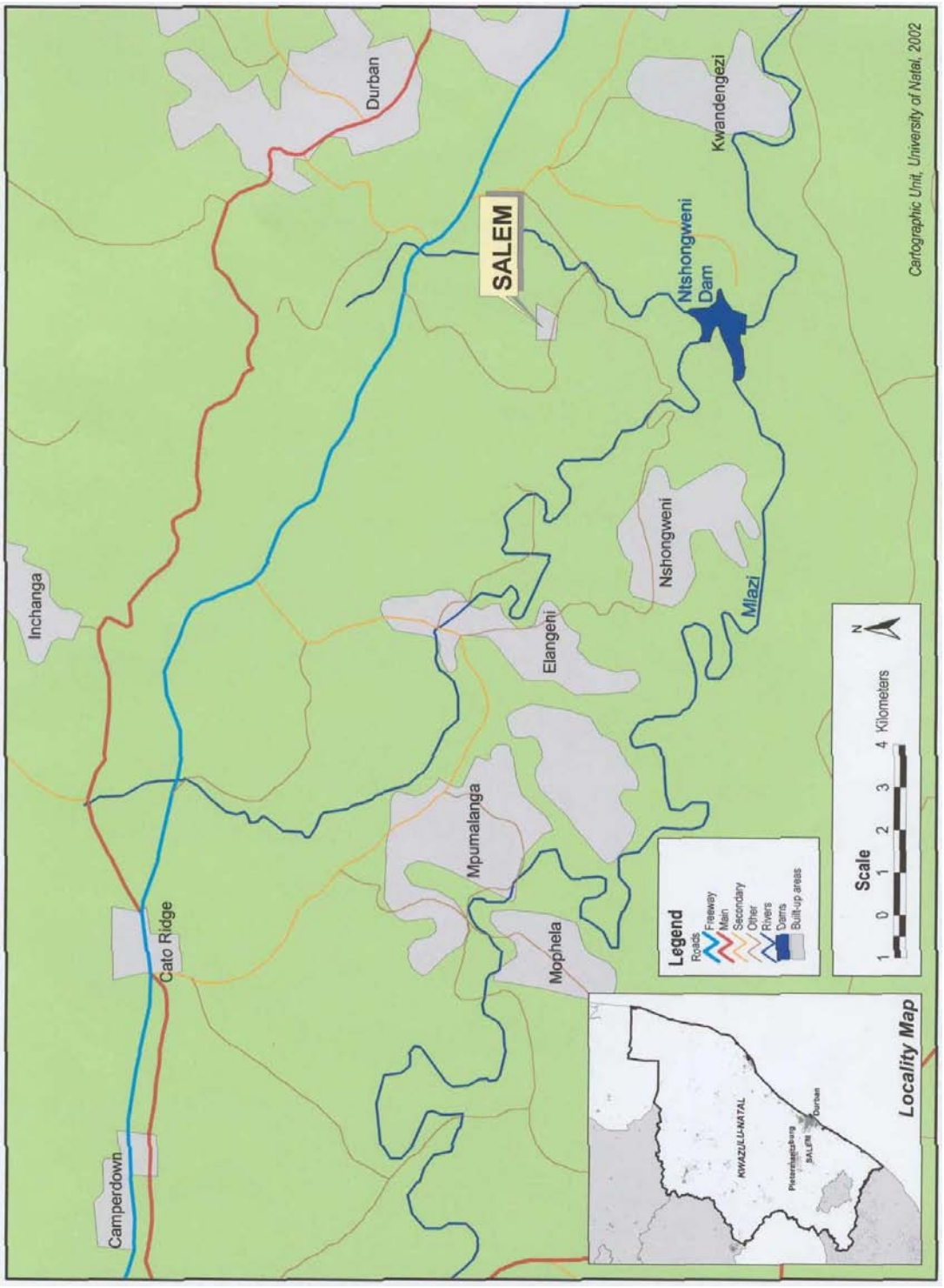


**Figure 1: Map of the Study Area (insert shows locality in KwaZulu –Natal).**

The Salem community has drawn and continues to draw its inhabitants from surrounding areas and further afield as migration to urban centres proceeds. Not all of these settlers are accustomed to showing allegiance to Tribal Authorities and others may still pay allegiance to their leaders in their places of origin. As such, one can anticipate that Salem is a community of varied allegiances and values. Some residents might exhibit strong communication with traditions and particularly allegiance to the tribal system of authority and governance. Others, perhaps more particularly the educated youth, might display a less strong connection with tradition and allegiance to traditional authority.

Salem with a population of some 20,000, is situated within the eThekwini Municipality and therefore experiences the influence of Municipal Authority that exists side by side with the Traditional Authority. The urban setting promotes non-traditional systems of political thought and analysis that undermine traditional practices and rules (Densham 2002) and one can anticipate that the peri-urban nature of Salem is potentially of great significance in determining the hegemony and strength of the Traditional Authority. Benefits derived from the eThekwini Municipality such as supply of potable water and electricity potentially diminish local peoples dependence on the river system and its resources and thus also the influence of the Traditional Authority.

The Salem community is in transition. This is reflected in its location along axes reflecting a shift from rural to urban and from traditional to modern. It appears as a locus in which there would be a ‘melting pot’ of changing values and belief systems that are played out in attitudes to authority and patterns of resource use. As such, it provides the opportunity to study trends in the relationships people have with rivers and the opportunities this may offer for promoting the intentions of the National Water Act.

## 3. RESEARCH METHODS

In Africa, belief systems and values play an important role in the way people (especially rural communities) respond to their environment (Daneel 1998). Belief systems are people’s convictions or opinions that have been internalised and that over time produce values that become accepted as norms influencing behaviour (Johnson 1995, Figure 2). They comprise religious, social-cultural and traditional beliefs and constitute a mechanism of social control (Borgatta and Montgomery 2000). Beliefs are founded on perceptions and they do not necessarily correspond with ‘truth’ or ‘fact’ (Johnson 1995). As this research

sought to understand the role of belief systems and their expression in authority structures that regulate use of river resources, the principal research method involved interviews with members of the Salem community.

Formal, structured interviews were conducted. In such interviews an appreciable degree of control is exercised over both the presentation of the questions (stimuli) and the recording of answers (responses). Combinations of closed-ended and open-ended questions were used (Mann 1995 1985?) and the questionnaires are included in the theses of Tham (2002) and Zeka (2003), copies of which are lodged in the library of the University of Natal.

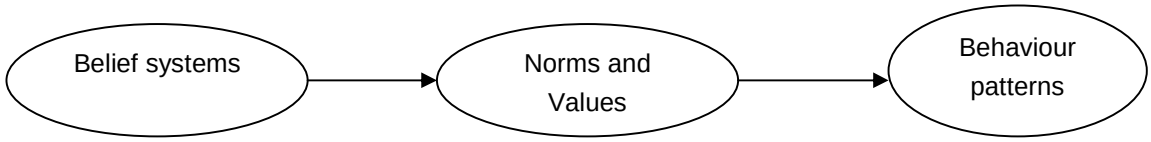


***Figure. 2: Illustrating the relationship between belief systems, norms, values and behaviour patterns.***

Because the Salem community is changing from traditional to modern it was speculated that beliefs, values and allegiances would likely vary. Traditionally African men and women have specific roles within the community (James 1995). It was speculated that men and women might hold different views as might the youth who may be progressive, and older folk who may be more conservative and have stronger allegiances to traditional systems. To ensure that a cross-section of views would be obtained, a stratified random sampling approach was adopted. Age and gender groups were defined and a random sample was taken from each group. Forty-three people were interviewed drawn from five age classes (Table 1). There were more females (63%) than males (37%) because a greater proportion of males work in the urban centres and spend less time at home. The occupation of respondents is shown in Table 2, from which it is evident that the largest group was housewives and the sample included Teachers, Traditional Healers, Pastors, Spirit Mediums, Scholars, unemployed people and the *Inkosi* and one *Induna*.

**Table 1: Age Class and Gender of respondents. The oldest respondent was aged 65 years**

| Age Class | **Number of respondents** | **Percentage** | **Male** | **Female** |
|---|---|---|---|---|
| 15-25 | 10 | 23% | 5 | 5 |
| 26-35 | 10 | 23% | 2 | 8 |
| 36-45 | 6 | 14% | 1 | 5 |
| 46-55 | 7 | 17% | 2 | 5 |
| 56-65 | 10 | 23% | 6 | 4 |
| Total | 43 | 100% | 16 (37%) | 27 (63%) |

**Table 2: Occupation of respondents**

| Occupation | Number of respondents |
|---|---|
| Teacher | 2 |
| `Izangoma' (Traditional healer) | 3 |
| Pastor | 3 |
| Inkosi (Chief) & Induna (Chief's Elder) | 2 |
| Spirit Medium | 2 |
| Housewife | 15 |
| Scholar | 8 |
| Unemployed | 8 |

## 4. EVIDENCE THAT THE COMMUNITY USES THE RIVER

In Africa, belief systems and values play an important role in the way people (especially rural communities) respond to their environment (Daneel 1998). Since the focus of this research was on river resources it was necessary to establish whether people used the river. More than 80% of the respondents claimed to use the river and of eight respondents who said they did not use the river, seven were males. When asked about frequency of use, 71% responded that they used it very frequently, 23% frequently and 6% not often or seldom.

Six categories of river related activity were evident from responses (Table 3). These spanned all age groups and both genders. More than half of the respondents (74%) observed that they use the river for traditional ceremonies. This suggests that even if provision were made to accommodate other activities such as bathing, washing clothes, recreation and watering livestock distant from the river, a majority of the people would still use the river. That fact that users who go to the river for traditional activities are drawn from all age classes and genders implies that traditional practices are still important, notwithstanding the changes that have been and are still being experienced by the community. It was concluded that further investigation of the roles of belief systems and traditional authorities in regulating the use of river resources was justified and that such analysis might elucidate what role these may play in promoting the intentions of national water policy.

**Table 3: Activities at the river.**

| **Age class** | 15-25 | | 26-35 | | 36-45 | | 46-55 | | 56-65 | | **Total** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Gender** | M | F | M | F | M | F | M | F | M | F | M | F | |
| Bathing | 5 | 6 | 4 | 4 | 3 | 4 | 2 | 3 | 2 | 2 | 16 | 19 | 35 |
| Washing clothes | 1 | 5 | 1 | 5 | - | 6 | - | 7 | - | - | 2 | 23 | 25 |
| Recreation | 4 | 2 | 4 | 4 | 2 | 3 | 2 | 2 | 2 | 1 | 14 | 12 | 26 |
| Watering livestock | 3 | 3 | 2 | 3 | 1 | 3 | 1 | 2 | 1 | 1 | 8 | 12 | 20 |
| Traditional Ceremonies | 4 | 5 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 15 | 17 | 32 |
| Building materials | 3 | 5 | 3 | 5 | 2 | 2 | 2 | 3 | 2 | 2 | 12 | 17 | 29 |

## 5. BELIEF SYSTEMS AND RIVER MANAGEMENT

Traditional practices in the form of ceremonies and rituals in rural areas are sustained by particular belief systems (Berglund 1976; Thorpe 1991). Seventy three percent of respondents acknowledged belief systems related to rivers. They described these as the presence of water spirits that manifest as crabs, mysterious snakes and at times, creatures with half-human, half-fish physical features. Two respondents claimed there was belief in the presence of a *tokolosh* (evil spirit) in the river, two said there was a belief in ghosts and two were not sure of the kinds of beliefs that influenced access to and use of the river.

Thirty seven respondents (86%) including 11 males and 26 females who were aged 26 years and above said that ceremonies were held at the river. The six respondents (14%) who said that there were no ceremonies were aged between 26 and 35 years including four males and two females. When asked about rituals, 28 respondents (65%) aged between 26 and 65 years, including 11 male and 17 female, acknowledged rituals associated with the river; 21% responded saying that there were no rituals; and 14% claimed no knowledge of the matter. These findings indicate that there is a strong connection between the people and the river that finds expression in ceremonies and rituals. It appears that younger members of the community may show less interest in these than do older members.

The ceremonies that take place at the Mlazi River are mainly religious and traditional such as *Umemulo, Umsenga, Unomkhubulwane,* wedding, death and baptism. Some of the 37 respondents in Table 3 gave a detailed description of the ceremonies and underlying belief systems. These are as follows:

- *Umemulo*: a traditional ceremony to celebrate the good behaviour of young Zulu girls who have maintained their virginity to the 'marrying age'. This involves bathing in the river and the initiates return from the river wearing reeds or traditional attire. The belief is that once a young girl has undergone this ceremony she will achieve a successful marriage.
- *Umsenga:* a reed dance, whereby young girls go to the river, cut reeds and take them to the *Inkosi's* (Chief's) palace as a gesture to honour the chief. These reeds would be used to thatch houses or make crafts, mats etc. after the ceremony. The *Umsenga ceremony* also provides an opportunity for the Chief to see the young girls in the community and to choose another wife. The underlying belief for this ceremony is that the chief is the most important person in the community and deserves to marry the prettiest woman in the community.
- *Unomkhubulwane* (Goddess of water): a ceremony that involves women in the community going to the river to ask the goddess of the river to give a blessing for a good harvest. They do this by throwing seeds into the river. There is a belief that that goddess will respond to a request from women for a bumper harvest in the community.
- Weddings: the bride and her entourage go to the river first thing in the morning to bath before the main ceremony. This signifies a belief that bathing in a flowing river removes evil spirits and is a blessing to the ceremony, and brings luck to the marriage.
- Death: bereaved members of the family assemble at the river as a sign of cleansing so that another death does not happen in the family.

Only 28 respondents (65% of the sample) identified rituals related to the river. Of these, the majority (71%) identified Zionist baptism rituals; 14% mentioned *Umemulo,* a ritual for young girls; 7% referred to *Isangoma* rituals; and 4% each to death and wedding rituals and *Msenga* (induced vomiting) rituals. These findings indicate that about half of the total sample of respondents identified Zionist baptism rituals. If this is a reflection of the wider community, then belief systems associated with this church may hold

opportunity for promoting community participation in river management. This is particularly so because 70% of respondents indicated that these rituals occur frequently to very frequently.

From a river resource management perspective, it is helpful to know whether the state of the river affects the performance of the ceremony or ritual. Responses were varied with 58% (25) respondents indicating that ceremonies and rituals at riverside would be adversely affected if the condition of the river deteriorated. Some (14%) did not believe this to be the case and an equal number were not sure whether this would or would not be the case.

Certain belief systems are reflected in places in forests or river systems that are regarded as sacred (Mbiti 1969; Aschwanden 1989). Most respondents (63%) said there were no sacred places along the Mlazi River and only 27% responded saying that there were sacred places. Interestingly, these respondents were aged 35 years and above and stated that these places were used by *Isangoma* and Zionists for rituals. Of those who acknowledged sacred places, 43% indicated that the spirits of ancestors (*Amadlozi)* lived in such sacred places. Responding to inquiry as to who designated these places, 58% of those who knew of such places indicated that *Abathandazeli,* the Spirit Mediums of the Zionist Church, designated such places. Some (17%) referred to *Isangoma* and 25% were not sure.

These findings reinforce the perception that the most prevalent spiritual connection between local people and the river is founded in the contemporary Zionist church. As this church has grown in recent times, it would not be surprising if local people considered that attitudes and belief system related to the river were strengthening. Almost half (20 of 43) the respondents observed that belief systems were changing and that these are reflected in attitudes to and use of the river. Expanding on these changes some claimed that:

- The practice of traditional activities is declining
- People no longer appreciate the river
- The river was accorded higher value in the past
- Christianity and modernisation/westernisation has contributed to a weakening of certain belief systems (e.g. ancestors residing in rivers)
- People no longer hold superstitions (e.g. *tokolosh*) related to the river.

Despite these changes, 70% of respondents stated that it was very important to uphold belief systems and values pertaining to the river. When asked for a view on what should be done, 46% responded by saying that there was a need for better co-operation and participation in management, and 28% felt that there was a need to educate people, particularly the youth, on the importance of belief systems in river management.

In the past, the belief systems of certain rural communities in Africa have facilitated the safeguarding of rivers systems (Bernard 2000). In southern Africa in particular, pools, rivers and expanses of water have been regarded with a mixture of awe, fear and reverence by indigenous communities (Berglund 1976). These belief systems have not escaped the influences of a dynamic western civilisation (Nurnberger 1999) and as a result, some rural communities no longer appreciate some of their traditional beliefs, especially those that are far removed from reality (Thorpe 1991).

The findings of this research suggest that traditional belief systems are weakening under the influence of modernisation. They are however, being replaced in some sectors, by new belief systems founded in for example, the Zion Christian Church. River resources play a central role in the spirituality of the Zionist (Berglund 1976). This is found in baptism and adherents to such faiths believe that without baptism one cannot become a member of the church and therefore ultimately, a Christian. Hence, in the absence of a river, and more particularly a river that exists in a condition that is acceptable, certain aspects of worship will be greatly affected. Thus, whilst there may be a declining prospect for using traditional belief systems to strengthen the commitment of civil society to river system management, there may be growing opportunities to seek connection between emerging religious belief systems and river management.

## 6. TRADITIONAL AUTHORITIES AND RIVER MANAGEMENT

South Africa is presently confronted by a problem surrounding the *Ubukosi* (the chieftaincy) and it's continued hegemony in rural areas. This is partly caused by existing ambiguity surrounding the concepts of 'traditional' communalism and reciprocity (Levin 1996) that has been heightened by the intertwining of the *Amakosi* (chiefs) with the Bantustan administrative system. The rise of the United Democratic Front and the development of civil structures enabled a challenge to the legitimacy and hegemony of *Amakosi* in rural areas. Whilst the leadership of the *Amakosi* was challenged, they

retained their role in allocation of land and hence their influence. It is against this background that *Amakosi* are considered by some authors (Densham 2002) to still exercise the core power dynamics in rural areas, despite the challenge to their leadership and growing resentment of *Amakosi* and their tribal structures. Levin (1996) observes that the distortion of customary law together with corrupt practices in land allocation and resource management have fuelled this growing resentment.

Whereas government today recognises the roles of both traditional and elected leaders, the proportional representation voting system whereby elected members are accountable to their respective political parties rather than a constituency, has distanced local councillors from the people in rural areas. Adding to the dilemma, these councillors have not been provided with transport, equipment and offices from which to operate. This makes it difficult for them to execute their duties and has thus tended to alienate the elected councillors from the rural communities and has by contrast, enhanced the role of Traditional Authorities such as *Amakosi* and *Izinduna* who are easily accessible to the people (Ntsebeza 2000).

In addition to the various Acts that impact on the hegemony of Traditional Authorities in rural areas, the National Water Act 36 of 1998 seeks to provide for fundamental reform of the law relating to water resources. Subsection 12-20 of Chapter Three states that the protection of water resources is fundamentally related to their use, development, conservation, management and control. In addition, Subsection 77-90 of Chapter Seven provides for establishment by the Minister, of Catchment Management Agencies who are mandated to involve civil society in water resource management. Since Traditional Authorities have opposed their exclusion from local government and their loss of authority, they also argue that they should play a central role in rural development. In essence, they wish to retain the powers they held under the apartheid regime (Ntsebeza 2000).

Seetal (2000) has observed that there is a problem in getting all stakeholders to actively participate in the catchment management process and give substance to allied legislation through co-ordinated action. He identifies two problem areas: political and operational, both of which find expression in Traditional Authorities as has been shown above.

Access to and use of goods and services deriving from river systems in traditional rural situations have been controlled and managed by Traditional Authorities and associated

institutions such as *Izinyanga* and *Izangoma*. It is these institutions that have been the hallmark of the promotion and sustenance of cohesion, control and of the mainstream indigenous knowledge. It is speculated that notwithstanding the ambiguity surrounding Traditional Authorities, their inclusion in structures and processes directed at involving civil society in river management may contribute at least in the short to medium term, to mobilising support in rural areas. This postulate was tested in the Salem community.

Given the role Traditional Authorities have played, particularly as custodians of indigenous knowledge and culture, one might easily posit that inhabitants of Salem would still feel their influence as they seek opportunities to use the river system. The study on beliefs systems indicated that whilst traditional belief systems were being eroded, they were to some degree being replaced by contemporary belief systems founded in Christian religions. In some ways one might anticipate the replacement of an all-embracing traditional authority system at community level with one based on a combination of systems, some of which are based in voluntary associations and others in statutory organisations. As authority fractures and new allegiances emerge, control weakens, unless some new system is constructed that provides for common purpose among the new groups.

When respondents were asked about their perceptions of control over access to the use of river goods and services, 79% claimed that there was no control and the remainder said they did not know. It was shown earlier that more than 80% or respondents claimed to use the river. Considering the apparent lack of control over access to and use of river resources, one might anticipate that there could be a sense of discontent. This was probed by asking how respondents felt about the lack of control. Not surprisingly more than half of the respondents considered that the absence of control had a negative effect on activities such as bathing and washing clothes that affected them directly. By contrast activities such as watering livestock were considered by fewer respondents (42%) to be adversely affected by the lack of control. Mixed responses were given on the impact of absence of control on traditional ceremonies. About one third (30%) felt there would be no impact, 32% felt there are negative impacts and the reminder had no opinion on the matter.

In addition to elucidating individual perceptions about control, the views of institutions were sought. People of influence in each of the chosen institutions were asked whether their institutions exerted control over access to and use of the river. All responded by

saying there are no control measures in place (Table 4), this despite attempts as *Inkosi* Shozi claimed, to hold meetings to address what Traditional Authorities regarded as a problem. The three *Izangoma* indicated that the lack of control affected their activities at the river as they rely on the river to communicate with *Amadlozi* (ancestors) to heal their patients. Two nurses also indicated that the lack of control could have adverse implications for community health.

**Table 4: Perceptions of institutions on control measures on accessing the river**

| Types of institutions | No. of respondents | Response provided |
|---|---|---|
| *Inkosi* | 1 | No control |
| *Induna* | 1 | No control |
| *Izangoma* | 3 | No control |
| *Umthandazeli* | 1 | No control |
| Religion | 3 | No control |
| Health sector | 2 | No control |
| Education sector | 2 | No control |

It is striking that more than half of the respondents felt that ineffective control was problematic. This level of awareness suggests that there is a foundation of concern among local people on which to build a new co-management structure.

## 7. DEVELOPING CO-MANAGEMENT

The Farmer Support Group has been promoting catchment management in the Salem area through the Ntshongweni Catchment Management Programme (NCMP, Auerbach 1999) with the intention of building an alliance between stakeholders. The goal of the programme was to develop a framework for participatory catchment management in South Africa.

Auerbach conceptualised his strategies for participatory catchment management in a framework comprising four compartments (Figure 3). The strategies that have particular relevance for this study are the ‘structure for local participation’ and ‘local participation’. The former is not explicit about the role of Traditional Authorities in promoting participatory catchment management. The latter consists of ‘environmental education’

and ‘school enviroclubs’ that essentially places contemporary education as the custodian of norms and values that will, in due course, be the foundation for belief systems directing behaviour towards sustainable use (See also Figure 2).

Auerbach (1999) contends that there has to be trust and agreed upon procedures if social dilemmas inherent in managing natural resources are to be overcome. He argues that environmental education and communication at a social level establishes the basis for trust. He posits that managing for sustainable use of natural resources entails decision making and that intervention capacity must be created at a level of aggregation appropriate for the ecosystem under consideration. One level of social aggregation that may have relevance is that as defined by Traditional Authorities. Another is that defined by religious entities. Both of these institutions are defining norms and values that have relevance to sustainable use of resources and are promoting awareness of these. Auerbach did not explicitly acknowledge either of these social actors within the complex association of stakeholders that should participate in catchment management. In contrast, Auerbach cites tradition and selfless leadership as some of the issues inhibiting progress. Evidence presented earlier in this report suggests this view may be justified in a general consideration of Tribal Authorities whose influence is weakening. However, it seems much less likely in the case of the Zionist Christian Church at Salem because it appears to have a growing following with direct relationships with the river and with concerns about its quality.

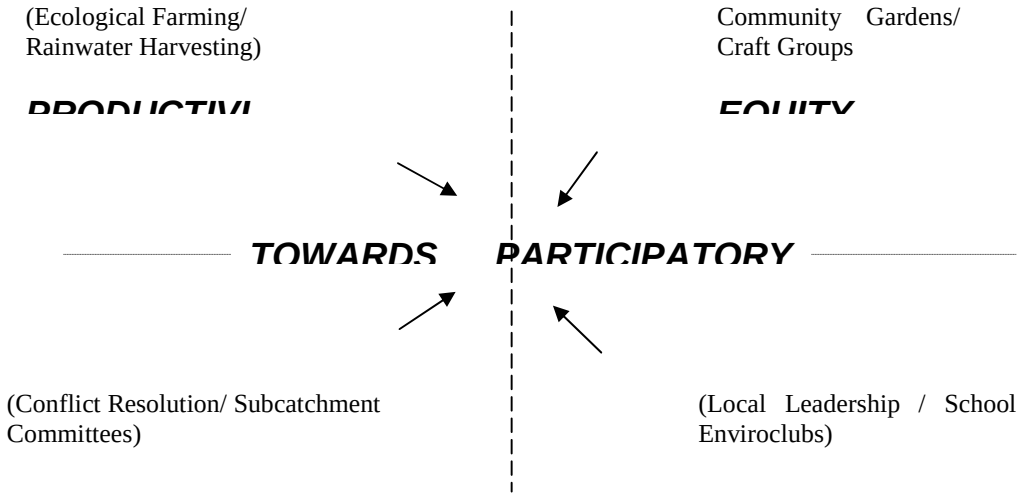


***Figure3: Summary of main strategies employed to contribute to sustainable development in the Mlazi catchment. (Auerbach 1999)***

Auerbach (1999) contends that the success of Integrated Catchment Management rests on leadership and service ethic emanating from the National Landcare Programme, the National Department of Agriculture, the Directorate of Agricultural Conservation, the Department of Environmental Affairs and Tourism and the Department of Water Affairs and Forestry. Whilst acknowledging that a collaborative effort by these structures is vital for realisation of good catchment management, one must appreciate that the everyday activities of people using river resources can have a profound effect on sustainability and that leadership and service are required at this scale. Thus the success of co-management rests on collaboration within and between structures at the various scales.

This research indicates that neither the Traditional Authority nor the Zionist Church have been a significant force in regulating the use of river resources in recent times. However, it also shows that unlike elected councillors, the Traditional Authority and the Church have a presence that could be capitalised upon in Salem and probably in other areas as well. This is particularly so because both traditional and religious institutions have always had a strong focus on norms and values directing behaviour. These institutions seem well positioned to promote contemporary approaches to managing the use of resources. Since Auerbach's framework is not explicit about the role of these institutions, it is constructive to develop a management framework that is more explicit.

Establishment of structures to promote integrated management of the use of water resources in South Africa comes at a time when people are still healing from the scars of resource management systems established under colonial and apartheid governments. Hidden under the surface of local resource use issues are memories of powerlessness and deprivation (Cross, Mzimela and Clark 1996; Cross et. al 1995 1996?). This may underlie the responses from community members that indicate an absence of control over access to and the use of river resources. A central issue that emerges therefore is the need for an organisational and operational system that acknowledges and empowers endogenous systems, rather than imposing new ones. Evidence presented here suggests that at least within the Salem community, the Traditional Authority and the Zionist Church are two endogenous institutions that should be a focus for empowerment. Barrow and Murphree (2001) suggest four characteristics as being critical for upholding collaborative partnerships in management of the use of natural resources at local level, namely:

- *Cohesion:* this is a sense of common identity and interest which serves to bring people together for collaborative action and leads them to collectively differentiate themselves from others;

- *Demarcation:* this entails the delineation of a fixed land area and the resources on it. This could be drawn on the basis of socially sanctioned access to given resource categories, for example, pastoralism or fisheries;
- *Legitimacy:* this assumes that collective organisation requires legitimacy for purposes of its processes and leadership, which needs to relate to both power and authority. While external authority (government) can confer legitimacy, that in itself is not a sufficient condition;
- *Resilience:* this is the organisational capacity to adapt in content and structure. It provides durability to organisations and creates scope for them to improve through processes of adaptive management.

Traditional Authorities have historically had authority and responsibility for cohesion among people within a demarcated area. They have however, lost legitimacy and they are struggling to adapt to changed circumstances. The Zionist Christian Church develops cohesion among members in ways that differentiate them from others and by so doing, they define a notional space within which a particular congregation acts. Their collective organisation has legitimacy and as they are a growing religion, it might be reasonable to speculate that they have a capacity to adapt in content and structure. Whilst these are not the only constituencies with these characteristics, they are the two that in Salem would seem to have the strongest connection with the river.

Since neither of these two institutions presently exert any control over the use of river resources, they would have to be empowered to participate within a collaborative structure. Cook (1995) suggests three dimensions of empowerment that have to be addressed simultaneously. The first, objective empowerment, relates to the opportunity to participate. People and their organisations can be empowered by:

- Being exposed to strategies such as those included under the umbrella term of participatory management;
- Being exposed to empowering leadership;
- Organisational re-design that places decision making authority at the level at which the work is done; and
- Belonging to a learning and affirming organisation.

The second dimension is subjective empowerment, that refers to the development of self-confidence, the sense of ‘I can’ within the person relative to the specific task or function. The third dimension is competence gained through a process of developing relevant

skills, knowledge and attitude that are required to perform the tasks or carry out the functions successfully. Crucial in this is interpersonal competence and self-management competence.

In Salem it would seem that the Traditional Authority might not fully understand the context within which they could collaborate. They would need to be empowered objectively, subjectively and there are new skills that they would require to successfully participate in co-management across the scales from local to catchment. Although not a focus of this study, it appears that the Zionist Christian Church in the area has no tradition of engaging resource management. It would also need to be empowered if it were to participate in managing the use of river resources and the wider field of integrated catchment management.

Borrini-Feyerabend (2000) NOT IN BIBLIOGRAPHY considers that the history of co-management is rooted in decades of field-based and theoretical efforts by individuals and groups concerned with equity and social justice, sustainable use of natural resources and community- based and community-run initiatives. It entails:

- A pluralist approach to managing natural resources, incorporating a variety of partners in a variety of roles, generally to the end goals of environmental conservation, sustainable use of natural resources and the equitable sharing of resource related benefits and responsibilities; and
- The expression of a mature society that understands that there is no 'unique and objective' solution to manage use of natural resources. Rather, there are a multiplicity of different options compatible with both indigenous knowledge and scientific evidence, that are capable of meeting the needs of conservation and development.

Incorporating a variety of partners with differing perspectives and expectations of the resource and how it should be used into a co-management system requires a level of formalisation. In essence, as with any team activity, there have to be rules that govern participation, the delegation and acceptance of roles and responsibilities. These promote appropriate behaviour and accountability.

The National Department of Environmental Affairs and Tourism makes provision for Environmental Management Co-operation Agreements (EMCAs in National Environmental Management Act 1998). These are envisaged as co-regulatory instruments whereby an interactive relationship between the regulator and the regulated is established to improve environmental

performance of the regulated beyond or in compliance with legal requirements. The elements of EMCAs are shown in Table 5. Of particular relevance to this study is that the Minister may authorise municipalities to enter into EMCAs. Thus it is clear that they are designed to accord with the interests of local resource users, such as those of a group of people sharing the resources of a stretch of river.

Co-management requires a framework to guide its organisation and operation. It also requires that constituencies that participate should be defined in terms of cohesion, demarcation and legitimacy that are relevant to the nature and location of the resources in which they have an interest. A further requirement is that they participate by way of formal agreements, such as EMCAs, that promote accountability. Since conditions change continuously, especially in South Africa where there such variability in rainfall, river flow and availability of river related goods and services, participating constituencies need to have inherent resilience so that they can adapt their expectations to accord with changing circumstances.

**Table 5: Elements of Environmental Management Co-operative Agreements as defined in the National Environmental Management Act 107 of 1998 (NEMA)**

- Section 35 of NEMA refers to the use of EMCAs in terms of prompting the principles laid down in NEMA.
- It should be noted that although an EMCA may be initiated by any party, only the Minister, any MEC or Municipality may enter into an EMCA with any person or community.
  Here any organ of state that has jurisdiction over an activity must be party to the EMCA.
  - It is essentially used to manage the environment through the adoption of the principles of NEMA that will promote sustainable development.
  - Dispute resolution mechanisms can be built into an EMCA
  - Penalty clauses can be built into the EMCA in the case of non-compliance, when dispute-resolution mechanisms fail.
  - Parties to an EMCA are legally bound to the agreement.
  - Normally the public authority will set the objectives and the person or community will find the means to achieve the objectives.

The framework illustrated in Figure 4 incorporates the concepts of stakeholder constituencies, the characteristics they should display and the agreements that should be used to promote accountability. Also shown is the Forum in which these stakeholder constituencies construct their strategies to address issues of concern to them.

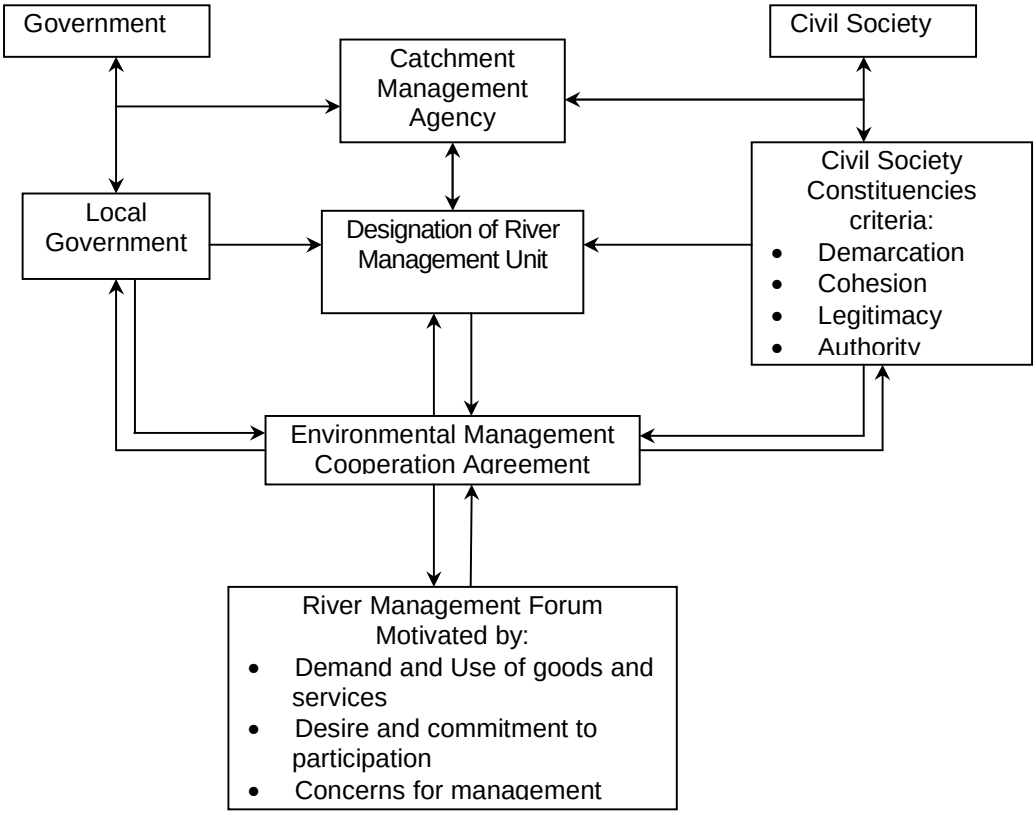


**Figure 4: A framework for co-management**

These Forums reflect the spatial scale of shared but different interests of member constituencies and can for, example, be in the form of a stretch of river, a place on the river that is sacred, or an impoundment. Such Forums could be statutory bodies such as Water User Associations that are provided for in the National Water Act, or as may be more likely, non-statutory bodies established by agreement between government and civil society.

This research suggests that as far as the stretch of river used by members of the Salem community is concerned, two constituencies stand out, namely the Traditional Authority and the Zionist Christian Church. It is striking that despite their concerns about the river they seem not to be empowered to participate in co-management. This certainly reflects the inadequacies of local scale structures and processes, and consequently undefined accountabilities. The voices of other, perhaps even principal users, for example the mostly women who wash at the river, was not articulated. This is likely because there is little cohesion and a constituency is not structured to participate in dialogue, proving compelling support for the view of Cross et al. (1996) that a central issue is an organisational and operational system that acknowledges and empowers indigenous (in this instance endogenous) systems rather than simply imposing new (exogenous) ones.

## 8. PROGRESS TOWARDS MEETING OBJECTIVES

### Aims with respect to rural communities and their needs.

- *Understanding patterns of resource use.* The project has not demonstrated any uses that were not previously known. What it has contributed however, is an understanding of the persistence of some traditional uses under changes associated with urbanisation and modernisation. It has also exposed the relevance of contemporary religions such as the Zionist Christian Church, in respect of their pattern of use and possible role in co-management;
- *Understanding the vulnerability of rural household disruption in respect of access to these resources.* The findings show that notwithstanding the transition of a community from rural to urban, the prevailing social and economic conditions are such that people still make frequent use of the river for a variety of purposes. In this sense they are vulnerable to changes in water quality and quantity that may affect the availability of goods and services. They sense this vulnerability and express it as concern about the condition of the river. Vulnerability is also shown in non-material, spiritual terms, related to traditional and contemporary beliefs, values and practices.

This vulnerability should not be underrated because the research suggests that these norms and values underpin behaviour that can support responsible management of the use of river resources.

- *Rural communities will understand their roles and responsibilities in respect of the reserve and resource use.* The concerns expressed by respondents are an indication that they feel a sense of responsibility. Much less clear is an understanding of the role(s) they could play. This reflects the weakening influence of Traditional Authority and the vacuum that exists in organisation around resource use. A framework is required for organising co-management that provides for participation by constituencies that are demarcated in respect of their interests in local resource use, are cohesive, legitimate and resilient. Participation should be founded on formal agreements such as EMCAs that strengthen the existing sense of responsibility and promote accountability.
- *Understand river management class determination and the actions required to maintain or improve the management class.* This research illustrates that the people of Salem are concerned about the condition of the river and that they feel there is no control over access to and patterns of use of the resources. Some feel that this threatens their activities at the river, including spiritual activities. The relationships between water quantity and quality and these types of activities were not established. Clearly however a deeper understanding is required because the spiritual dependencies are strong and growing and should therefore be taken into account in determination of river management class.

## Aims with respect to the reserve.

- *Improved understanding of the implications of the Reserve for rural communities.* This research has highlighted that people residing in rural communities, even those that are becoming urbanised and losing traditional connections, can retain a very meaningful association with rivers. Even though uses founded on traditional belief systems may be waning, new uses are emerging founded in contemporary religious belief systems and these have substantive implications for rural communities because they are founded on belief systems that determine the norms that direct behaviour. These relationships with rivers should be considered in determinations of the Reserve not only because such determinations may hold negative consequences for these people, but also because of the opportunity that exists to mobilise these constituencies in co-management of river systems.

- *Incorporation of the needs of rural communities into the management of the reserve.* This research demonstrates that rural users of river resources, at least within the Salem community, are concerned about the condition of the river. They also feel that there is no control over access to and use of resources. This reflects a sense of powerlessness. These people need to be empowered to participate in management. This requires the development of a framework and processes for participation that will provide opportunity for participation. It will also require that the competencies for participation be developed within the constituencies. It will further require that self-confidence is developed within constituencies so that they can use the opportunities and apply their skills.

## 9. CAPACITY BUILDING

This research was conducted by Chris Tham and Sandile Zeka, two students at the Centre for Environment at the University of Natal. They were supervised by Professor Charles Breen and Dr Joan Jaganyi. Their findings were submitted for the degree of Master of Environment and Development at the University of Natal. Tham was awarded the degree in 2002 and Zeka in 2003. Tham secured a position in the provincial Department of Agriculture and Environmental Affairs and Zeka was awarded a bursary for further study at The University of Aberdeen.

The project also provided an opportunity for a recent PhD graduate, Dr Joan Jaganyi to engage with research students.

REFERENCES


Aschwanden, H. (1989). *Karanga Mythology: An Analysis of the Consciousness of the Karanga in Zimbabwe.* Mambo Press, Gweru.

Auerbach, R. (1999). *Design for Participation in Ecologically sound Management of South Africa's Mlazi River Catchment*. Ecological Agriculture, South Africa.

Barrow, E. and Murphree, M. (2001). *Community Conservation: From Concept to Practice.* In Hulme, D. and Murphree, M. African Wildlife and Livelihoods: The Promise and Performance of Community Conservation. Weaver Press, Harare, Zimbabwe.

Berglund, A. I., (1976). *Zulu Thought Patterns and Symbolism.* London, C.Hurst & Company.

Bernard, P. (2000). Mermaids, Snakes and the Spirits of the Water in Southern Africa: Implications for River Health. Presented at a *Conference on River Management in Southern Africa*. Rhodes University, Grahamstown.

Borgatta, E. F. and Montgomery, R.J.V. (eds). (2000). *Encyclopaedia of Sociology Vol. 4.* New York, Macmillan.

Cook, J. (1995). Empowering people for sustainable development. In Fitzgerald, P., and McLennan, A. *Managing Sustainable Development in South Africa.* Oxford University Press, United Kingdom.

Cross, C., Mzimela, T., & Clark, C. (1996). *Green Rights in the Boundary Lands*. Rural Urban Studies Programme for Land and Agriculture Policy Centre. Centre for Social and Development Studies, University of Natal: Durban.

Cross, C., Mngadi, T., Sibanda, S. and Jama, V. (1996). *The Land is Not Eland Reform Synthesis Report, KwaZulu-Natal District Study.* Rural Urban Studies Unit for Land and Agriculture Policy Centre. Centre for Social and Development Studies, University of Natal: Durban.

Daneel, M. L. (1998). *African Earthkeepers, Vol. 1: Interfaith mission in earth-care*. Pretoria, Unisa.

Densham. D. (2002). *Traditional Authorities-know where to land*. The Association for Rural Advancement: Pietermaritzburg.

James, U. V. (1995). *Women and Sustainable Development in Africa*. Westport, Connecticut, Praeger.

Johnson, A.G. (1995). *The Blackwell Dictionary of Sociology: A Users Guide to Sociological Language.* Oxford, Blackwell Publishers.

***Levin, P. (1999). In Ntsebeza, L. Traditional Authorities, Local Government and Land Rights, the paper prepared for Land and Agrarian Reform Conference, 26-28 July 1999.***

Mann, P. (1985): *Methods of Sociological Enquiry*. Oxford, Basil Blackwell.

Mbiti, J.S., (1969). *African Religion and Philosophy.* New York, Anchor Books.

***Ntsebeza, L. (1999). Traditional Authorities, Local Government and Land Rights, the paper prepared for Land and Agrarian Reform Conference, 26-28 July 1999.***

Nurnberger, K. (1999.). *Prosperity, Poverty and Pollution; Managing the Approaching Crisis.* Pietermaritzburg, Cluster Publications / London, Zed Books.

Seetal, A. (2000). In Water Sewage & Effluent, 2000.

***Tham, C. (2002).*** The Role of Belief Systems and Values in the Management of River Systems in South Africa: A Case Study of the Salem Community in the Mlazi River Catchment. ***Centre for Environment and Development, University of Natal: Pietermaritzburg***

Thorpe, S.A , (1991). *African Traditional Religions.* Pretoria, Unisa.

***Zeka, T. (2003).*** Tribal Authorities and Co-management of river systems: A case study of Salem Community. ***Centre for Environment and Development, University of Natal: Pietermaritzburg.***