

DEFINING INSTITUTIONS FOR COLLABORATIVE MANGROVE MANAGEMENT: A Case study from Tanga, Tanzania¹

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1 ABSTRACT

A case study of collaborative management is described from two of the coastal villages in Tanga Region, Kipumbwi and Sange. The villages (altogether some 318 households) are adjacent to a mangrove forest of 416 hectares, which provides forest products and environmental services that are a vital component of the subsistence livelihood systems of the villagers.

The context for the collaborative management of mangroves at Kipumbwi and Sange was investigated by a multi-disciplinary team of government staff. The work is part of an ongoing programme of technical assistance by IUCN, the World Conservation Union. Using a variety of participatory extension techniques, the indigenous systems of management and use of the mangrove forest were analysed. Institutions were identified for the primary role of protection and wise use of the forest. These now have an organisational basis as the Lands and Environment Committees of Sange and Kipumbwi. Equity in decision making and in representation within the new institutions, was in particular examined. The potential for such new, essentially sponsored, institutions to manage the mangrove resources is discussed.

The initiative has resulted in a draft collaborative Management Plan for the management of the mangroves. The Management Plan includes an Action Plan which details the activities that the villagers will carry out to achieve their management objectives. The Action Plan also contains indicators for monitoring the effectiveness of the Lands and Environment Committees.

The study found the new institutions equitable and representative of the two communities concerned. The nature of organisations and decision making at the village was found to be evolving very rapidly in response to the initiatives of the Programme, and to the national move towards more democratic processes in government. The conclusion is that social capital in the form of institutions and organisations for collaborative management can be heavily externally sponsored, but a great deal more effort is required to develop and check socio-economic indicators of institutional robustness. Much effort is required in monitoring by external agents (in this case, government extension staff) and by the resource users themselves, once an institution has been identified. It is much easier to build on a successful indigenous institution, as functioning organisational and resource management systems may already be in place. The organisations at Kipumbwi and Sange though, appear at this stage to offer promise for circumstances where indigenous institutions are weak or dysfunctional.

2 A CONCEPTUAL INTRODUCTION TO INSTITUTIONS AND ORGANISATIONS FOR NATURAL RESOURCE MANAGEMENT

It is helpful at the outset to introduce several concepts which are used to describe the way in which natural resources are viewed and treated by villagers in situations such as those which prevail in coastal Tanzania.

Rural villagers in many parts of the world share access and use of forest resources on what legally may be public land. These common pool resources (also sometimes called common property, though this tends to confound the tenure issue) are those for which use and management is shared by a community of forest resource users.

There has been a popular belief that rural people are unwilling or unable to look after such forest resources properly, and that in a situation where human population is increasing and the forests are owned by nobody, then everyone will take what they need. This would lead to the inevitable destruction of the resource. This theory of the *tragedy of the commons* was proposed by the biologist Hardin (1968, quoted in Ostrom 1990), though has subsequently been hotly disputed (Gilmour and Fisher 1991).

In fact, in much of the developing world, common property provides a complex system of norms and conventions for regulating individual rights to use forest resources. Use can be defined anywhere on a scale from open access (no rules of access or use, as in the Hardin theory) to sophisticated (silviculturally) and robust (institutionally) community based management systems.

The situation is also dynamic. Management systems for common pool resources can break down and become open access or can become more sophisticated – as a result of internal and external influences. It is also important to note that often what appears to the outside observer to be open access may involve tacit cooperation by individual users according to a complex set of rules specifying rights of access and use (Nurse *in press*).

These management systems, if generated entirely within a community are called indigenous management systems. If such systems are assisted by outside agencies (for example, by government or project advisers), they are called externally sponsored systems (Fisher 1991).

Collaborative management refers to the partnership of local communities of forest users (almost always an identifiable group) with government in the management of a public resource. This partnership ideally takes the form of control and management of forest resources by rural people, who use government staff as advisers, rather than as protection and enforcement agents. In practice, there is a continuum of examples of various forms of participation from total manipulation to total citizenship control (Bass *et al* 1995, quoted in Hobley 1996). The usual result of these partnership arrangements is some form of sponsored forest management system.

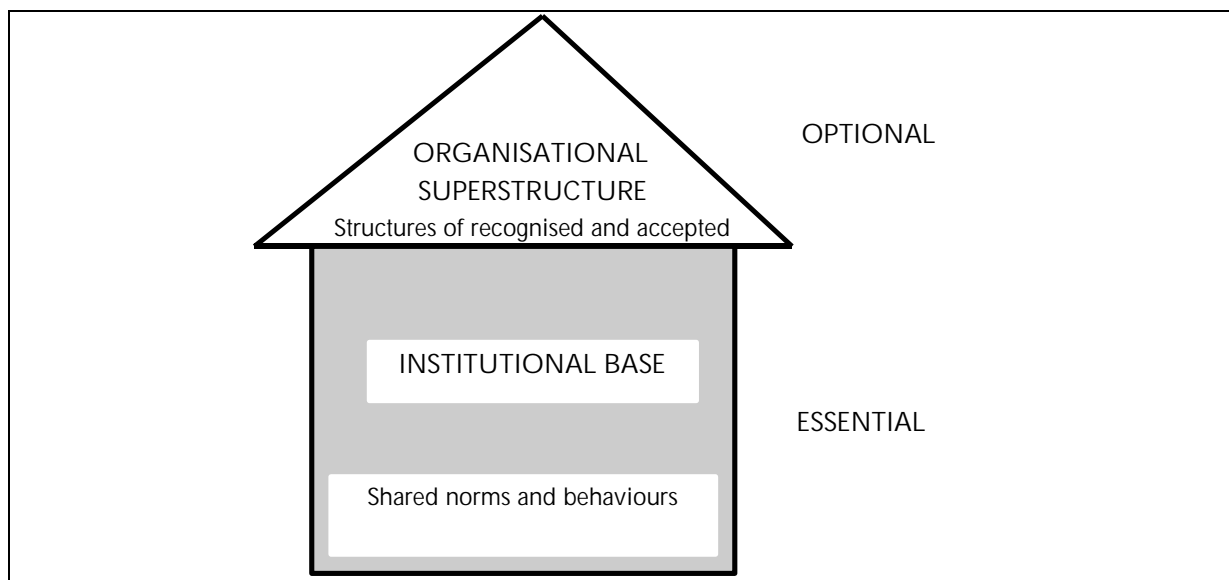
Collaborative management has evolved as response to the realisation that government services are not able to effectively ensure the ecological and productive integrity of a widely fragmented forest estate through protection and enforcement alone. There is also increasing recognition that villagers using a particular forest on a day to day basis do have the commitment and ability to work in partnership with government in the management of that resource. In the future, by managing resources in this way, local forest users can also ensure that extractive use considers the social and environmental costs locally, in a more effective way than perhaps the establishment of royalties or stumpage fees (Bates 1995).

Most collaborative management initiatives work through a local forest user group, as an organisation that represents the institutional arrangements for management of particular forest resource. This organisation often has a committee structure. Within the bounds of common property management and use of resources, however, there are organisations *and/or* institutions that take responsibility and authority for management.

In his discussion of local organisations for community forestry, Fisher (1991) explains that “...the existence of effective local organisation is essential to the success of collaborative forest management programmes” [1991: 48].

Fisher further distinguishes between organisations and institutions. He uses Uphoff's definition of organisations as 'structures of recognised and accepted roles' and institutions (also from Uphoff) as 'complexes of norms and behaviours that persist over time by serving collectively valued purposes'. According to Uphoff, it is possible to have 'organisations that are not institutions' (an example is a firm of lawyers), 'institutions that are not organisations' (the law), and 'organisations that are also institutions' (the courts) [1991: 50]. From his experiences in Nepal with community forestry, Fisher then postulates a two tiered model of a functioning forest management system (Figure 1).

Figure 1. Organisational Model of a Forest Management System (Fisher, 1991)



The institutional base is considered to be an essential component of the system, but the organisational superstructure not essential. The basis for this argument is that, in south Asia (particularly Nepal) there exist a plethora of indigenous forest management systems, many of them recently established as a result of decline in one or a number of key forest resources (*cf.* Gilmour, 1990). These indigenous forest management systems are commonly institutions with no organisational superstructure. Forest users may understand and have collectively embedded norms (for example, that no user may cut green products from the forest) but not meet regularly to discuss management issues or have formed a recognisable group for decision making.

Fisher further outlines the danger in external organisations sponsoring an organisational superstructure (such as a committee) that may have no institutional basis. A further hazard is in creating an additional organisation that competes or conflicts with an existing one, because of an inaccurate or incomplete investigation of the existing local arrangements.

We will argue, based on the presentation of case study material, that this model is equally applicable in the Tanzanian context.

3 THE PRACTICE OF COLLABORATIVE FOREST MANAGEMENT IN AN TANZANIAN CONTEXT

Collaborative forest management finds its origin in the Asian (particularly south Asian) realm. The approach (action research⁴) and the tools (PRA and other tools for participatory assessment) are appropriate to Tanzania, but there are also a number of important differences between the Tanzanian and south Asian context. The differences which have particular relevance to the institutional aspects of resource management are:

- Resource scarcity is not an issue which is leading to the creation of indigenous management systems. Gilmour (1990) proposed a resource availability model for Nepal, postulating that forest users will not invest time in meetings with other users to regulate use (i.e. establish indigenous management systems) unless one or more products become scarce. Scarcity in the Nepal context means that villagers must travel more than one full day to gather one head load of forest products. In Tanzania resources are becoming seriously depleted but indigenous management systems are only weakly developed and often heavily reliant on traditional (tribally or clan based) systems. The Kipumbwi – Sange (KiSa) users in this Tanzanian case study reported that they felt “powerless to intervene” when traders were cutting their mangroves as no systems were in place to protect the resources outside the sanctuary sites.
- There is often a more recent pattern of settlement. The villagisation process in Tanzania (*Ujaama*) resulted in the translocation of many villagers, in a deliberate attempt to integrate the population and break up tribal groups. Whilst this generally succeeded, systems of indigenous management have broken down with the movement and communities do not always feel cohesive. One of the villages in coastal Tanzania used in this case study, Sange village, is a recent settlement. Many new villages were formed on the coast in the 1960s in response to the villagisation process because of the need for labour for sisal plantation work. Sange has experienced periodic conflict over administrative boundaries with its immediate neighbour Kipumbwi, a much older and more established settlement. The two villages have recently joined in partnership for natural resource management largely as a result of the external Programme initiatives.
- Forest resources are often more extensive, resulting in larger, more extensive groups of forest users. The concept of a forest user group as used in the south Asian context (particularly Nepal) does not have such obvious meaning when defining large, widely scattered groups of forest users, that do not normally meet together in a decision making forum. The response, for example, in Cameroon (Nurse *et al* 1994), Uganda (Scott, in preparation) and Tanzania, has been to establish an organisation to represent the forest users, a committee. Committees are also common in forest management systems in south Asia, but the African examples cited tend to represent larger groups and have been given more authority. This makes them particularly susceptible to political manipulation and/or potential inequities in decision making.

These differences provide special challenges, in identifying the institutional basis for collaborative management and in ensuring that any organisational basis is representative of the forest users. The result tends to be heavily sponsored institutions and organisations that have representation through committees, partly because of the size of the group of resource users (meetings of all users to discuss fine points of management are uneconomic and unwieldy).

We will now present a case study from coastal Tanzania, where a project is in place to encourage the sustainable use of coastal resources through collaborative management.

⁴ For an explanation of the concept and methodology of action research as applied in collaborative management see Jackson, 1993.

4 A CASE STUDY FROM TANGA, TANZANIA

Tanga is one of the northern Regions of Tanzania. Its coastline covers approximately 130 km from the Kenyan border in the north, to Sadani Game reserve in the south. Tanga's coast has one municipality, one small town and about 87 villages. About 150, 000 people live in coastal villages and rely on a number of activities to maintain the household economy. Artisanal fishing and farming are the most important of these activities (Gorman, 1995).

The Tanga Coastal Zone Conservation and Development Programme is run by the Tanga Regional Authority and the District Councils of Muheza, Pangani and Tanga Municipality, with technical assistance from IUCN and funding from Irish Aid. The programme is targeting a number of integrated activities aimed at building capacity in local communities and in government, so that the coastal resources can be protected, utilised and managed for the benefit of present and future generations of residents. IUCN technical assistance began in mid 1994⁵.

This paper presents an institutional analysis of the activities of the programme in support of two coastal villages to improve their access to and control of an adjacent mangrove reserve forest, through collaborative management.

Tanzania offers an interesting opportunity to analyse the institutional aspects of community based natural resource management, because of its cultural context and recent political history. Following a period of enforced migration and one party rule under a socialist model, indigenous management systems for common pool resources broke down with the formalisation of power in village government. Only vestiges of these traditional institutions remain. A recent move towards multi party democracy now offers an opportunity to build partnerships for conservation and development with institutions other than government at the village level. The identification of appropriate institutions is an interesting and challenging exercise, given the inherent weaknesses of indigenous structures for communal decision making.

4.1 Problem Analysis: Justification For A Collaborative Management Approach

The focus of conservation programmes globally has generally been concentrated on approaches that, whilst technically feasible, have rarely involved the full participation of key stakeholders in the resource, most notably the rural communities that usually rely on the natural resources in question for the fulfilment of subsistence needs (see, for example, Fisher, 1995).

In Tanga Region, the larger fragments of coastal forest⁶ are usually under some form of Reserve status⁷, though many of these are being utilised by local communities for subsistence and by local and non local commercial users, particularly the mangroves.

A strategic planning workshop with senior regional government staff identified three key issues related to coastal forest management in Tanga Region. Firstly, the ineffectiveness of a protection and policing role for forestry field staff, who are not in sufficient numbers to control numerous, often large, scattered and remote resources. Secondly, the complete lack of resources for habitat restoration or development and; finally, recognition that the forest estate is under increasing pressure from various commercial.

The regional government staff decided that solutions needed to be explored based on an understanding of the status of the coastal forests, and the capacity of villagers to form a partnership with government to jointly manage the forest estate through collaborative management.

⁵Mike Nurse provided periodic technical inputs to the forestry component of the programme from June 1996 to January 1998, under contract to IUCN. These periodic inputs are part of wider technical assistance support under the Tanga Coastal Zone Conservation and Development Programme.

⁶ Coastal forests are those on the Tanga coastal plain between the montane forests and the ocean. They include sub-montane forest, coastal thicket and mangroves below an altitude of 700m (adapted from Burgess and Muir, 1994).

⁷ All mangroves are gazetted and under the authority of central government as Reserves. Utilisation for small scale use can take place under permits issued by the District Mangroves Officer. An agreement for collaborative management has no precedent and requires the approval Village, District and Regional Authorities and the Director of Forestry.

Kipumbwi was proposed by the Programme as an appropriate place to explore the process of creating collaborative forest management arrangements, as the villagers had expressed interest in working with the Programme in mangrove management and as it was already within the Programme as a pilot village for reef and fisheries management.

4.2 The Case study context

Kipumbwi is a major fishing village in Pangani District. It consists of four sub-villages with a total of about 130 households. Adjacent villages are Kwakibul to the west, Sange to the south and Stahabu to the north. The population of Kipumbwi is 981 (Gorman, 1996). A large mangrove forest lies along the coast and estuary of the Msangazi River. This forest was the focus of our attention for collaborative forest management.

The investigation was conducted by a multi-disciplinary team of government staff. Work had been in progress to establish village action plans for improved reef and fisheries management, for pest animal control and environmental health, for six months prior to the start of the forestry investigation work. This allowed the survey team to take advantage of a build up of rapport and trust within the village, but also meant that some work needed to be undertaken to assess the status of institutional development (both indigenous and sponsored), before further progress could be made in collaborative forest management.

During a focus group⁸ meeting with 12 women, the history of forest resource use and management was outlined. They explained that before the (Tanga) Programme came there was no experience of the management of mangroves. Before villagisation and the creation of village government (in the late 1960s), villagers felt free to cut the mangroves outside the traditional sanctuary sites to satisfy their needs for boat and house building and fuelwood. There was little pressure on the forest in those times. They did not need to seek permission from the village headman (*Jumbe*) or elders. In recent years they have seen the forest under increasing pressure from traders (significantly by boat from Zanzibar, cutting poles for commercial sale), but they have felt powerless to intervene in all except their traditional sanctuary sites. In the last few years the Mangrove Management Project (another development project supporting mangrove management) has imposed a complete protection regime on the mangrove forest⁹, so that they have to seek permission from village, divisional and district government officers in order to cut anything.

4.3 Organisations for natural resource management at Kipumbwi

The villagers reported no organisations for management of natural resources, other than protection systems at traditional sanctuaries. The Programme encouraged other organisations to form in late 1995, following the concern expressed by villagers over the decline in their resource base, particularly of marine resources.

Two international projects are involved in natural resource management at Kipumbwi, The Tanga Coastal Zone Conservation and Development Programme (TCZCDP) and the Mangrove Management Project (MMP)¹⁰. Both Projects have established Kipumbwi as a pilot village in order to develop a strategy for improved natural resource management through local participation. The TCZCDP has been working to support villagers in the alleviation of all their identified natural resource management problems, through a number of committees. The MMP have been supporting the protection and planting of mangroves.

A number of areas of forest are (or used to be) protected under indigenous management systems. Two mangrove areas (Kitoipi and Kwakibibi) are traditional sanctuaries, protected for spiritual worship. Elders in Kipumbwi Mtoni have traditionally been responsible for the protection of these areas. There is a strict

⁸ Focus groups are groups within the community who share common interests or concerns for resource management e.g. women, rich farmers, fuelwood collectors.

⁹ In fact the District Mangroves Officer (who now represents MMP in the village) imposed a protection regime on his arrival in the area in 1986. The forest was severely degraded at this time.

¹⁰ The Mangrove Management Project (MMP) is a component of the larger FINNIDA/Government of Tanzania Catchment Forestry Project. MMP has a remit for all mangrove forests in Tanzania.

rule, that nobody may enter the area without the consent of the three elders responsible. When people come to worship and succeed with their prayers, they leave a small offering at the site.

Following a community led planning process with Programme staff (analysing priority development issues and solutions), the villagers established a number of committees to deal with management of natural resources:

- The Lands and Environment Committee, responsible for mangrove planting and for the development of latrines in the village;
- The Safety and Security Committee, responsible for the enforcement of fisheries and forestry regulations. This committee works closely with the Lands and Environment Committee;
- The Mangrove Committee, responsible for mangrove planting and the control of illegal cutting of mangroves under the Mangrove Management Project;
- The Planning and Finance Committee, responsible for the economic development of the village, through income generating activities like mariculture (prawn and fish farming) and seaweed farming; and
- The Agriculture and Vermin Control Committee, responsible for the eradication of wild pigs that threaten agricultural production.

4.4 Analysis of the effectiveness of current sponsored organisations

Initial work in the village was to examine the nature of the institutional and organisational framework for natural resource management in the village, based around the following key questions:

- do these recently formed committees represent a sound organisational basis for decision making on natural resource issues?
- are they equitable in terms of representation and decisions made?
- is village government an appropriate institution to lead collaborative management?

Two committees in particular were examined: the Safety and Security Committee (at the time primarily active in reef and fisheries management) and the Mangrove Committee (wholly sponsored by the MMP). It was felt that this analysis would provide a sound basis from which to guide the future institutional development for collaborative management of the Kipumbwi Mangrove Reserve.

The interviews in Kipumbwi Mtoni revealed that all people interviewed had heard of the Safety and Security Committee, all knew of the proposed village by-laws that were to limit the type of fishing gears that could be used and the reefs which were to be closed. Respondents also seemed aware of the main issues in fishing, the problems of dynamite fishing and the consequences of the use of small net sizes. Many were not taking an active part in committees, but they felt that they had a chance to be involved in decision making if they wished. The committees seemed to share information and issues freely for discussion, before voting on resolutions.

The survey of the effectiveness of the Mangrove Committee revealed that the products and services provided by the mangrove forests are a vital component of the livelihood strategies of the Kipumbwi villagers. They rely on the mangroves for coastal protection from erosion, building materials (ribs for boats and poles for house construction) and fuelwood. They are also a potential component of the household income of villagers, through the sale of products. Few respondents, however, had heard of the Mangrove Committee and fewer still understood its purpose. The purpose appeared to be the protection of the resource for the government.

These points were further discussed at a large meeting of villagers at Kipumbwi Mjimpia. The villagers took over the meeting completely about half way through the discussion and made a number of resolutions.

Firstly that the Mangrove Committee should be absorbed into the working responsibility of the Lands and Environment Committee and that this committee should also coordinate all the natural resource management activities of the village. Villagers reported in household interviews that there was good

communication between the committee groups, so this coordination of natural resource management activities under one committee would seem a logical and sensible development.

Secondly, that not enough people were involving themselves actively in the process. The women in particular were trying very hard to involve all users in decision making, but many were simply not aware enough of the importance of the issues - more consistent and full involvement of village resource users would take more time. The recent number of significant organisational changes (changing committee responsibilities and reducing the numbers) may indicate that the villagers are learning rapidly as they proceed with decision making, planning and action on environmental issues.

In terms of authority and accountability within a future mangrove management group (represented by the Lands and Environment Committee), they agreed that the committee would be autonomous in decision making but remain accountable to village government.

A concern not specifically addressed at this meeting, but raised during informal interviews with selected elders, was that the elders appeared to have no involvement in the process and were not involved in any decision making capacity. This is of particular concern regarding the elders with responsibilities for management of sanctuary sites. The structures of power and authority are rapidly changing within the village with the recent democratic movement in Tanzania (there are no longer ruling party representatives alone in village government). There has also been an erosion of the power of traditional elders through the socialist movement, by centralising power and decision making and encouraging the breakdown of tribal identity.

4.5 Establishing the full constituency of use rights. The introduction of Sange village into the management planning process.

Informal meetings were held in the other settlements adjacent to the mangrove reserve (Kwakibuyu to the west and Sange to the south), to establish the full constituency of rights of access and use.

Kwakibuyu residents explained that they obtained their subsistence needs from other forests. They used the mangroves very rarely and had no objection to management authority being given to Kipumbwi village.

Sange village has a population of 914 (188 households) within three sub-villages. Sange villagers use the southern section of Mangrove Reserve for poles, pestles, fuelwood, salt production (in the mud flats south of the Msangazi). They have a strong interest in taking responsibility for management of the mangroves and if given authority would allocate certain areas for use, conservation and replanting.

Following further discussions with Kipumbwi, and Sange forest users, it was agreed that they would manage the mangrove forest jointly. Representatives of forest users from the two villages met again and formalised arrangements for collaborative management with representatives of respective Ward and Village governments, elders, forest users and the Lands and Environment Committee of Kipumbwi.

The group agreed to select representatives for a Lands and Environment Committee at Sange (to complement the Kipumbwi committee of the same name) and for a smaller Coordinating Committee where a small number of representatives from Sange and Kipumbwi would coordinate the management activities between the two villages.

They agreed to share rights equally as primary users for the whole forest, and also agreed to equally divide financial revenues. The division of revenue in this way would seem to avoid the need to define a revenue *boundary* for the forest (which is fortunate as there is a disputed administrative boundary between the two villages). The mangrove forest would now be called KiSa forest (rather than the Kipumbwi Mangrove Reserve) in recognition of this inter-village partnership.

4.6 The Next Stage In The Institutional Development Process: Negotiation Of A Management Plan For The Resource

The Management Plan describes the silvicultural regime and also the institutional arrangements for forest management and is divided into a number of sections that describe the forest, the roles of partner organisations and protection and management arrangements.

The crucial elements in the negotiated roles are that:

- the forest users have exclusive rights to forest products made available through the implementation of the management plan;
- forest users are accountable to village government but retain authority to make management decisions;
- the Lands and Environment Committees represent the forest users;
- the forest users can delegate responsibilities and authority to the Lands and Environment Committee and the Coordinating Committee, but they can change the decisions made by those committees or remove any members based on a majority vote in a meeting of a quorum of members;
- central government provide advice and assistance on demand.

The Management Plan includes a number of action plans that detail the management objectives, actions and individual responsibilities within a three year time frame. The procedure and framework for action planning was deliberately based on the approach use by the Programme for reef and fisheries management.

The action plans form the basis for monitoring and evaluation by the forest users and the programme, of the progress with implementation of the KiSa Management Plan.

5. DISCUSSION: AN ANALYSIS OF THE KISA SITUATION

We introduced the model for organisational management of forest resources postulated by Bob Fisher earlier in this paper. We believe that this model is equally applicable in the Tanzanian context. The difficulty in the study area is that existing institutional and organisational arrangements for resource management are weak or dysfunctional. There were never any systems of management of forest resources at Kipumbwi or Sange, only traditional systems of protection of selected areas as sacred groves. Even here, the role of the clan elders in decision making has weakened with the advent of socialism in Tanzania. Power over resources has effectively transferred to village government, through the influence of a one party state.

In the case of a management system for KiSa forest, both an organisational superstructure and an institutional base are being externally sponsored. Clearly a great deal of *additional* care is required in this process (both in establishing the management system and in monitoring the effectiveness of the system once established), than if there was an extant indigenous management institution with existing norms and behaviours from which to base an organisation for collaborative management.

We can now return to the two questions posed at the beginning of the study of the institutional arrangements for forest management at Kipumbwi.

Do these recently formed committees represent a sound organisational basis for decision making on natural resource issues?

The results of the household surveys and the subsequent village group meetings indicate that, although a relatively new organisation, the Lands and Environment Committee seems to offer a sound organisational basis for natural resource management. The Mangrove Committee would be absorbed into the working responsibility of the Lands and Environment Committee to complete its mandate for broader natural resource management.

Are the new committees equitable in terms of representation and decisions made?

There were no problems raised during the household survey or the other group meetings about this, other than the problems with the Mangrove Committee (which resulted in a decision to dissolve that committee). As with all new organisational structures, equity in representation, decision making and effectiveness will need to be checked periodically, probably through an external and internal monitoring process. The Sange committee also do not have enough knowledge yet of the concepts and process of collaborative management, they will need consistent support to build their capacity. The new Coordinating Committee will need very careful checking, as a small group of people are being chosen to represent a large group of users over the management of a valuable resource. The risks of elites dominating and/or politicising the process of decision making are high. The role of independent monitoring will be crucial.

The situation was clearly evolving rapidly as the villagers' understanding of the process and its objectives grew and the politico-administrative structure also responded (more slowly) to a newly emerging shift to democratic processes in government in Tanzania. The absorption of the Mangrove Committee into the Lands and Environment Committee is a sensible step in rationalising decision making for mangrove management at Kipumbwi. The household survey revealed that the Mangrove Management Committee was not functioning effectively anyway. The division of responsibilities for mangrove management between three committees is also inefficient and likely to lead to confusion, so to give the Lands and Environment Committee the lead role, supported by an enforcement group (the Safety and Security Committee) would seem quite rational.

The erosion of power in the elites is probably a natural evolution following a process that began with the *Ujaama* movement, though it may have been a reflection of the lack of broad level participation in the management planning process - a point borne out in this study and further investigated by Gorman *et al* (1996). They confirmed that there was wide awareness of what the Lands and Environment Committee were doing, but that still more needed to be done to improve participation, particularly by marginalised groups, including women. The committees are now being encouraged to keep records so that attendance and participation in meetings can be monitored.

Is village government an appropriate institution to lead collaborative forest management?

The present Law and policy framework in Tanzania is quite unclear regarding the appropriate steps needed to empower local committees; and of the nature and security of tenure for local communities of forest under collaborative management. Precedents are being made for collaborative forest management through village government on non-reserve forest land, by gazetting as Local Authority Forest Reserve (e.g. in Babati District, see Wily, 1995 and 1996). The District government appear, however, to retain management control. The relationship between the forest users, village and district government under this scenario remains unclear. Experience from other countries (particularly South Asia, see Hobley, 1996) suggests that the creation of Local Authority Forest Reserves or Village Forest Reserves with power vested in district and village government (respectively), may not lead to sustainable and equitable forest use.

Tanzania does have a unique history however, which will lead to a unique institutional and organisational framework for collaborative forest management. Thirty years of socialism (almost two generations) has brought about the institutionalising of village government as the decision making authority in the village. Some 'indigenous' management systems have been founded on this¹¹. Village government has generally, however, not functioned particularly well. Kipumbwi villagers complained of weak leadership, poor financial management and a lack of records. The political situation in Tanzania has changed from the days before socialism when clan elders and the village head had authority. The socialist government deliberately and successfully undermined this system. Changes are still occurring rapidly with the introduction of democratic processes. It is clear that the old systems relying on either elders or Village Government alone may not be appropriate and sustainable. Some blend of old and new institutions will guide the way forward, and the committees undertaking the process of collaborative management will need a lot of external support as the new institutions emerge and evolve. The balance of authority will probable lie between a collaborative partnership of village government, district government, forest users (represented through a committee). The legal framework does not support this structure, so experiences from pilot sites like Kipumbwi will need to be incorporated in the policy debate so that policy and Law can enable rather than disable collaborative forest management. If policy and Law are supportive, then collaborative management should embrace a wider constituency nationally.

5.1 Sustainability: criteria of institutional robustness

From an understanding of the KiSa forest management arrangements it is possible to analyse their likely sustainability from a comparison with criteria developed from a review of forest management organisations in Nepal and India (Hobley and Shah, 1996), Uganda (Ingles and Inglis, 1995), South Africa (Cousins, 1995) and more widely (Uphoff, 1992, Shepherd 1996 and Ostrom 1990). The analysis is documented in Nurse (in press) and when applied to the context of this study draws out the following key points:

Criteria favouring the KiSa management arrangements are:

- there is a strong desire to maintain the commons as a common pool resource, rather than retain it as state controlled resource or as private land;
- there is a strong sense of community within and between the villages (though there have been conflicts between the two villages of Sange and Kipumbwi which may resurface once substantial revenues accrue);
- there is a substantial need for the resource to satisfy livelihood needs;
- there are well defined boundaries of access and use;
- there is a reasonably large resource (of approximately 1.3 Ha per household), when compared to south Asian examples of community forestry; and

¹¹ A rapid assessment of a selection of forests and villages in Tanga Region revealed a number of indigenous management systems, some of which were developed and controlled by village government (Nurse, 1996).

- there is a strong desire to manage the resource sustainably (to benefit future generations).

Crucial areas of concern are:

- the user group is very large and cannot easily meet to make joint decisions. The representation through committees therefore is of concern, as power will be vested in a few individuals;
- there is no legal basis for collaborative management in Tanzania which results in high transaction costs and high risk for the participants in the process (particularly for the rural poor); and
- there are no nested enterprises, or support networks outside government, to provide impartial advice to the forest users (as for example, in India).

Clearly, external support will be required for a number of years, particularly to monitor the effectiveness of sponsored institutions, and to transfer the lessons learnt (successes and failures) to government for the policy reform debate.

5.2 Monitoring The Effectiveness Of These New Organisations And Institutions

There is a crucial need to monitor the effectiveness of the KiSa committees in their decision making, representation and ability to resolve conflict without external support. The monitoring will be undertaken as a part of the management process and by all partners in the management plan.

Jackson (1997) proposes (quoting from Fisher) that monitoring of socio-economic criteria of collaborative management should focus on three categories of concern: well-being (quality of life and economic factors which provide access to material goods); equity (how well being is distributed fairly to different individuals and groups); and risk. A monitoring plan is now being developed by the programme to satisfy their needs. The users are monitoring a number of key factors using records that have been introduced and supported by the Programme. These records will allow the forest users and outsiders to monitor progress and allow the users to be accountable to the other partners as expressed in the Management Plan.

Institutional theory suggests that organisations are created to take advantage of opportunities offered by institutional arrangements (in this case, in the exploitation of a natural resource) (North 1990). The KiSa forest management committees represent a delicate and dynamic balance of cognitive, normative and regulative elements, that are essentially externally sponsored. Whether these elements are in the appropriate mixture to provide the necessary stability and meaning to this new institutional balance based on coercion (through sanctions), incentives (direct project support and potential improved rights of access) and participation (with the State, the project and each other) remains to be seen. A particular challenge is whether the emerging new role of the State (as providing advisers and extension services rather than protection and enforcement agents) can help in the long term overcome the high transaction costs of the KiSa group, of time spent by villagers in meetings and in enforcement patrols. The progress of the new organisations and institutions will be watched with interest.

6. CONCLUSIONS

Tanzania has a unique set of conservation challenges that are a reflection of a unique historical, cultural and political background. The information gathered during the development of a methodology for coastal forest assessment, and subsequently during more detailed investigation at the Kipumbwi pilot site, lead to the conclusion that there is great potential in Tanzania for an approach to resource conservation and management based on collaborative forest management. The current circumstances in Tanzania are in common with many other developing countries: there is a decreasing natural resource base; there are many forest sites of international importance for conservation that are under severe threat from commercial users; rural communities depend heavily on forest resources to fulfil their subsistence needs; and government does not have the capacity to protect and manage all forest resources through an expansion of the Reserve network (even with donor assistance), unless management responsibilities are shared with local communities.

The organisational and institutional structure for forest conservation under this scenario will be uniquely Tanzanian (and unique to each site in Tanzania) and needs to be responsive to a rapidly changing political, economic and cultural environment. This challenge lies ahead, but several lessons can be drawn from experiences in other countries, particularly south Asia, where experience of participatory forestry has been gained over the last twenty years. Scheinman and Mabrook (1996) suggest a mixture of old and new elements - perhaps old traditional, recent socialist and new democratic - will form the appropriate new management institutions. Because of the new nature of these institutions, careful support will be required from external agencies to ensure equity, self-reliance and sustainability in institutions, and sustainability in conservation and management of the resource.

7. BIBLIOGRAPHY

- Bates, R. (1995) 'Social Dilemmas and Rational Individuals. An Assessment of the New Institutionalism'. In Harriss, J.; Hunter, J. and Lewis, C.M. (Eds) (1995). *The New Institutional Economics and Third World Development* (Routledge).
- Burgess, N.D. and Muir, C. (Eds) (1994). 'Coastal Forests of Eastern Africa: Biodiversity and Conservation'. Society for Environmental Exploration/Royal Society for the Protection of Birds, UK.
- Cousins, B. (1995). 'A Role for Common Property Institutions in Land Redistribution Programmes in South Africa'. *Gatekeeper Series* No. 53. IIED, London.
- Fisher, R.J. (1991). Local Organisations in Community Forestry. Paper presented at the *FAO Regional Wood Energy Development Programme Expert Consultation Local Organisations in Forestry Extension*, held in Chiang Mai, Thailand, 7-12 October, 1991.
- Fisher, R.J. (1995). *Collaborative Management of Resources for Conservation and Development*. Issues in Forest Conservation. (IUCN, Gland, Switzerland). 65 pp.
- Gilmour, D.A. (1990). Resource Availability and Indigenous Forest Management Systems. *Society and Natural Resources* 3: 145-158.
- Gilmour, D.A. and Fisher, R.J. (1991). *Villagers, Forests and Foresters: The Philosophy, Process and Practice of Community Forestry in Nepal* (Kathmandu: Sahayogi Press).
- Gorman, M. (1995). *Report on the Socio-Economic Study/Participatory Rural Appraisal, conducted in March/April 1995*. Tanga Coastal Zone Conservation and Development Programme, Tanzania.
- Gorman, M.; Uronu, G.; Semtaga, S.; Mfuko, A.; Kabamba, J.; Mfuko, M.; Challenge, L.; Mosha, R.; Kwalloh, M.; Mahanyu, A. And Seumbe, A. (1996). *Assessment of Participation and Village Support for Pilot Environmental Committees*. Tanga Coastal Zone Conservation and Development Programme. Internal Report. October-November, 1996.
- Hobley, M (1996). *Participatory Forestry: The Process of Change in India and Nepal*. Rural development Study Guide 3. Rural Development Forestry Network. (Overseas Development Institute, London).
- Hobley, M and Shah, K. (1996): What Makes a Local Organisation Robust? Evidence from India and Nepal. *Natural Resource Perspectives Number 11 (July, 1996)*. Overseas Development Institute, London.
- Horrill, J.C. and Kalombo, H. (undated) *Kipumbwi Reef Fisheries Action Plan: Background and Process*. Internal Report. Tanga Coastal Zone Conservation and Development Programme, Tanzania.
- Ingles, A.W. and Inglis, A.S. (1995): *Data Gathering Activities of the Kibale and Semliki Conservation and Development Project, Uganda*. Consultancy Report, IUCN, Switzerland.
- Jackson, W.J. (1993). Action Research for Community Forestry. The Case of the Nepal Australia Community Forestry Project. *Discussion Paper 3/93*. Nepal Australia Community Forestry Project, Kathmandu, Nepal.
- Jackson, W.J. and Bond, D. (1997). *Monitoring and Evaluating Collaborative Management of Natural Resources in Eastern Africa*. April 7-11, 1997. Workshop Report, Tanga Coastal Zone Conservation and Development Programme, Tanga, Tanzania.
- McCracken, J.A.; Pretty, J.N. and Conway, G.R. (1988). *An Introduction to Rapid Rural Appraisal for Agricultural Development*. (International Institute for Environment and Development, London).
- North, D.C. (1990). *Institutions, Institutional Change and Economic Performance* (Cambridge University Press).
- Nurse, M.C.; McKay, C.R.; Young, J.B. and Asanga, C.A. (1994). Biodiversity Conservation through Community Forestry, in the Montane Forests of Cameroon. Presented at the *BirdLife International XXI World Conference: Global Partnership for Bird Conservation*. Rosenheim, Germany. 12-18 August 1994.
- Nurse, M.C. (1996). *Interim Report of the Consultancy to Assess the Coastal Forest Resources in the Tanga Region*. Tanga Coastal Zone Conservation and Development Programme, Tanga, Tanzania.
- Nurse, M.C. (1997). *Coastal Forest Assessment Consultancy. Final Report*. Tanga Coastal Zone Conservation and Development Programme, Tanga, Tanzania.
- Nurse, M.C. (1998). *Coastal Forest Assessment Consultancy. Second Report, Phase II*. Tanga Coastal Zone Conservation and Development Programme, Tanga, Tanzania.

- Nurse, M.C.** (In press). *Forest Management Arrangements*. In Wickramasinghe, A.; Ruiz-Perez, M. and Blockhus, J. *Non-Timber Forest Product Utilisation of the Ritigala Strict Natural Reserve, Sri Lanka: Balancing Livelihood Strategies with Conservation Management*. Issues in Forest Conservation Series (IUCN/The World Conservation Union, Gland, Switzerland).
- Ostrom, E.** (1990). *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press).
- Scheinman, D and Mabrook, A.** (1996). *The Traditional Management of Coastal Resources*. Consultancy Report, Tanga Coastal Zone Conservation and Development Programme, Tanzania.
- Scott, P.** (1994). *Resource Use Assessment Report*. Mount Elgon National Park, Uganda. Consultancy Report, IUCN, Switzerland.
- Scott, P.** (in preparation). *Collaborative Management: a Case Study from the Ruwenzori Mountains National Park, Uganda* (World Wide Fund for Nature, Uganda).
- Shepherd, G.** (1996). Local Systems of Resource Control and Links to Policy. In Kate Harris (Ed) *Making Forest Policy Work*. Conference Proceedings of the Oxford Summer Course Programme (Oxford Forestry Institute, University of Oxford). Pages 43-50.
- TCZC&DP** (undated). *Tanga Coastal Zone Conservation and Development Programme. Fact Sheet*.
- Uphoff, N.** (1992) Local Institutions and Participation for Sustainable Development, *Gatekeeper series* No. 31 (IIED, London).
- Wily, E.** (1995). *The Emergence of Joint Forest Management in Tanzania. Villager and Government. The Case of Mgori Forest, Singida Region*. Unpublished report.
- Wily, E.** (1996). 'Good News from Tanzania! The First Village Forest Reserves in the Making. The Story of Duru-Haitenba Forest'. *Forest, Trees and People Newsletter* No. 29: 29-37.

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