

# **The future of change: roles, dynamics and functions for fishing communities in the management of Lake Victoria's fisheries**

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## **Introduction**

'Co-management' has, of late, become a much-vaunted option in the management of natural resources (cf. Sen and Nielsen, 1996; Normann *et al.* 1998). It may be defined as a natural resource management (NRM) regime that includes within its structure two or more groups with an interest in the resource base. Typically (but not always) the 'stakeholders' involved are the state and resource using communities. At this broad level of discussion, the concept of co-management is extremely ambiguous. This imprecision in its definition can be problematic. Like many novel terms, it faces the possibility of being relegated to jargon, because it implies radical change without really specifying what it is that needs to be changed, or requiring any specific action (Adams, 1990).

Broad-level definitions of co-management are, in part, ambiguous because of the need to develop NRM systems that are site and society-specific. Typically, at these levels of managerial intervention, management seeks institutions as their building blocks. Institutions are "...the rules of the game in a society or, more formally...the humanly devised constraints that shape human interaction" (North, 1993: 3). In this sense, institutions form the limits within which daily lives are conducted. Care should be taken to understand that institutions are not static end products, but dynamic processes that alter to respond to external pressures, internal changes and conflict and other pressures. A society's institutions may play an important role in shaping how it develops its economies and, indeed, how it responds to

external economies. Care should be taken not to equate institutions with *organisations*, the success and operation of which will often depend on institutions.

In much of the literature on common property resource management, it is traditional institutions that are recommended as the basis for co-managerial development (see examples in Berkes, 1989 and MacKay and Acheson, 1983). Typically, these are heralded as evidence that communities are capable of managing their resources. However, institutions are contextual and temporal, and are developed in response to particular social and economic needs set within particular times and places (North, 1993; Ostrom, 1990; Crean and Geheb, 2001). Hence, traditional institutions designed to limit effort levels in a fishery may have worked well under conditions where user rights were in place, markets were restricted and populations low. Under opposite conditions, these institutions may have little managerial value. Nevertheless, they retain attractions because they may be socially and culturally more attractive than novel external institutions.

A second batch of institutions of potential managerial value are government implemented structures and organisations that have been in place for a sufficiently long time that communities view them as 'normal' within the remit of their daily lives. In this sense, such structures have become institutionalised to a host society.

The call for the development of co-management has not by-passed Lake Victoria. It remains, however, a jargon term intended to appease potential funders of the desire to promote community participation, transparency and 'good governance'. In these levels of ambiguity, it is difficult to perceive upon which basis a co-managerial regime might be based and the management problems it is expected to address. In this paper, we draw upon the experience of the Socio-Economic Data Working Group (SEDAWOG) under the Lake Victoria Fisheries Research Project (LVFRP), obtained between 1997 and 2001. Based on this, we seek to meet three objectives: (a) to identify the major problems that face the management of Lake Victoria. For the sake of brevity, these are presented as a series of statements derived from the evidence presented in Geheb *et al.* (2002). (b) to identify the institutional basis upon which a co-management plan for the lake might rest and (c) to propose a possible structure that would serve to deal with the problems in the lake's management and incorporate useful management institutions into its structure.

## **Methods**

The paper is based on research work carried out under the EDF-funded Lake Victoria Fisheries Research Project (LVFRP). Research specifically sought

to identify an adequate basis upon which to include communities in the management of the fishery in collaboration with the state and, possibly, industrial fish processors. Research employed two primary methodologies. The first was a questionnaire-based survey that interviewed fishermen at 47 landing sites distributed more or less evenly along the lake's shores. Landings were initially selected randomly, although selections sometimes had to be replaced because access to landings was occasionally impeded by poor weather conditions. Respondents at landing sites were fishermen and randomly selected from lists held by landing site administration. A total 1,082 fishermen were interviewed (see Geheb and Crean, 2000).

The second methodology employed was Participatory Rural Appraisal (PRAs). This consists of a series of open-ended questions posed to mutually exclusive groups of respondents (eg men/women, children/adults), who respond to these via a series of exercises designed to delve deep into collective knowledge and which provide respondents with a novel and, ultimately, fun way of delivering research-useful information. Four landing sites were selected for long-term monitoring from October 2000 through to September 2002. Landings were typically visited every two months, while landing sites visited research institutes with equal frequency. Two batches of pre-defined variables were defined in collaboration with the communities involved, with research teams and communities responsible for monitoring one batch apiece. (see Geheb, 2002). The landing sites involved were Ihale and Mwasonge in Tanzania, Obenge in Kenya and Nkombe in Uganda. Lwalalo, a second Ugandan landing site considered for the site and which was visited by the research team, is also included in this analysis, although it was not subjected to long-term monitoring (see Figure 1).

### **A background top Lake Victoria's fisheries**

Lake Victoria is a massive inland water covering 68,800 km<sup>2</sup>, and spans the Kenyan, Tanzanian and Ugandan borders (Figure 1). The remarkable ecological changes wrought to the lake by the introduction of the predatory Nile perch (*Lates niloticus*) are well documented (cf. Witte *et al.* 1992; Goldschmidt, 1996; Goldschmidt *et al.* 1993; Kaufman, 1992). The latter fish is the basis for a multi-million dollar export industry supporting approximately 30 fish filleting factories on the lake's shores. Besides the perch, the fishery also targets the introduced Nile tilapia (*Oreochromis niloticus*), and the endemic 'daga', a small, pelagic species (*Rastrineobola argentea*). A total of 117,757 m.t. of fish were landed from the lake in 1968. In 1990, catches peaked at 787,899 m.t.

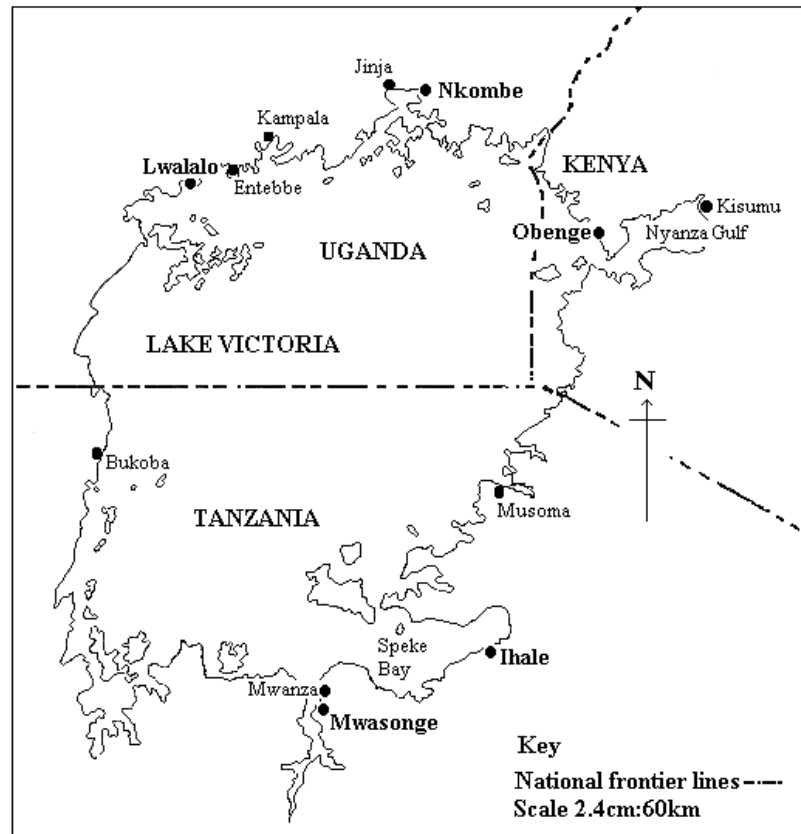


Figure 1: Lake Victoria spans the Kenyan, Tanzanian and Uganda borders.

It is difficult to describe Lake Victoria's fishery as 'small-scale' fishery any longer. Whereas prior to the Nile perch 'boom' of the 1980s, fishing concerns were fairly small, with fishermen often owning their gear and, for that matter, their labour, fishing operations can now be extremely large, with hundreds of boats and nets under the command of a single individual. Many of the fishermen employed in this way are tithed to these overlords by way of loans that can only be repaid in fish (see Gibbon 1997 and Asowe-Okwe 1996 for a detailed analysis of these changes). These 'tajiri' in turn have deals with fish processing factories from whom they may obtain credit, subsidised gear, ice and outboard engines on favourable terms. In return, the factories expect certain amounts of fish and loyalty.

These changes have served to ensure that Lake Victoria supports Africa's largest fishery. In 1983, an estimated 12,041 boats exploited it, rising exponentially to 22,700 in 1990 and 42,548 in 2000 (FSTC, 2001; Greboval and Fryd, 1993; Hoekstra *et al.*, 1991; Mkumbo and Cowx, 1999). The impact of this pressure on the fishery has been pronounced. Catch tonnages have declined by 48 per cent since 1990, and in 1995 they stood at 406,799 m.t. The LVFRP trawl survey programme yielded similarly depressing results. During an intensive programme of bottom trawl surveys conducted between November 1997 and September 2000, the average catch rate for all species was 195 kg hr<sup>-1</sup> (UNECIA, 2002). This is substantially less than the 800 kg hr<sup>-1</sup> recorded during a similar type of survey done around 1970 (Kudhongania and Cordone 1974). In the LVFRP survey, Nile perch

dominated the trawl catches, and contributed, on average, 85% of catch weight, but around 70% by weight of the perch landed were immature. Nile perch catch per unit effort (kg/boat-day<sup>-1</sup>) has declined from 145.2 kg. in 1989 to 47.3 kg in 1998 (UNECIA, 2002).

### **Management problems**

The latter symptoms of excessive fishing pressure suggest serious managerial failure of Lake Victoria. Geheb *et al.* (2002) argue that the fishery's management problems may be classified as follows:

#### *Regulatory ambiguity*

In Africa, fisheries regulations, if at all enforced, are not usually ubiquitously applied. In many African fisheries, wealthy fishermen can pay to be overlooked by fisheries departments, while those who cannot afford such graft are punished (cf. Aarninck, 1999). Along Kenya's Lake Victoria shores, fishermen often do not know what the regulations are, so that Fisheries scouts can simply invent a regulation in order to obtain graft (Geheb, 1997). In the maintenance of this ambiguity, knowledge of the true regulations may even disappear. In one survey (Geheb *et al.*, 2000a), out of five Kenyan fisheries officers interviewed, three did not know what the legal minimum mesh-size for gill-nets was. The same survey also revealed that 52% of fishermen questioned did not know what the minimum mesh-size for gill-nets was (Geheb *et al.*, 2000b).

In Uganda, the Department for Fisheries Resources (DFR) has been restructured. Under the new scheme, primary responsibility for fisheries regulation falls under Fish Guards, who report to district officers, on whose behalf they are also supposed to collect various fisheries related fees. The evidence suggests that, as a result, income generating activities are concentrated upon, and not fisheries regulation. The law enforcement role of the Fish Guards, indeed remains ambiguous, and for practical purposes, so long as there are fisheries personnel with ambiguously defined roles visiting landing sites, the impetus for fishing communities to fulfil regulatory roles must be seen as limited.

The Tanzanian Fisheries Department has approached co-management by imposing Beach Management Units (BMUs) upon fishing communities around the lake. Under this scheme, fishing communities see themselves as enforcing state regulations, and hence, as doing the state's work. As a result, they demand remuneration. In this way, BMUs are likely to become

‘socialised’ into community structures, rendering regulations ambiguous, and ensuring that managerial objectives may not be met.

*The dichotomy between the levels of the state and community*

Co-management implies power sharing, and a shift in power away from the state to the community. The nature of this shift is both in terms of power magnitude and quality, which directly impinges on the discretionary powers retained by the state. Under such circumstances, the exercise of management and the development of new managerial initiatives may have nothing to do with resource management *per se*, but the struggle to maintain and augment the state’s discretionary powers. Where regulations are ambiguous, then room exists for the powers associated with these regulations to be abused, and utilised for ends for which they were not designed (Chapman, 1989). As a result, the kinds of ambiguity described above become accentuated, and management objectives are undermined.

The reluctance of the state to see a qualitative transfer of its powers to local level managerial institutions has repercussions for the extent to which local-level institutions are endorsed by the state. Semi-formal institutions exist and carry out relevant management activities at most of Lake Victoria’s landing sites (as will be described below). All of these institutions have tremendous managerial potential within the fishery. It is in their limited powers that the dilemma exists. The nature of this deficiency, however, varies from country to country.

*Competition between the need to survive and the need to conserve the resource*

The notion of *access* to resources is the most important factor in determining whether or not the pursuit of a livelihood is successful (cf. Ellis, 2000). It follows, then, that where a resource on which a community relies becomes scarce, then access to it is curtailed. As resources become ever more scarce, then the measures that people will adopt to try and procure resources may become increasingly more desperate, and more difficult for the resource concerned to sustain. This trend may then reach a point where the pursuit of livelihoods actually starts to undermine the ability of a resource to regenerate itself.

*An overemphasis on managing the biological basis of the resource*

Traditionally, fisheries management has fallen within the sphere of the biological and limnological sciences. Most of the management models derived from these disciplines require a substantial data input (such as stock assessment or frame survey data) so as to inform management how best to allocate fish stocks between users and the supplies needed for stock regeneration. The data demands of these models, however, are expensive and require highly trained personnel. There is no guarantee, therefore, that such data collection activities will occur as management demands them in the adverse economic, social, political and cultural environments of Africa. In any case, there is considerable doubt that management based on these strategies actually works (cf. Crean and Symes, 1996; Ludwig *et al.* 1993). The dogged pursuit of 'measurable' data on fish stock dynamics is both a distraction and an excuse for management systems unable to deliver regulatory outputs. The fact that several hundred fishermen spread around a fishery tell management that catches have declined both in terms of individual fish size and volume, may be imprecise, but is little different from a stock assessment survey delivering the same message. One important difference is that collecting the data from fishermen requires a lesser commitment of human and possibly financial resources.

It is not the intention of this paper to argue that biological studies in fisheries management are unimportant. What it is concerned with, however, are management systems *driven* by biological information inputs. In a region with limited expertise and funds, the development of management systems that rely on stock assessment data is problematic. In any case, the cost of such exercises must be evaluated against the fact that such data reveal only trends in indices of stock size and composition, and not the reasons for stock size and composition change. Nor does such information equip managers with the tools necessary to tackle the problems that cause them.

#### *Underestimation of community capabilities with respect to their role in the management process*

In many respects, fishermen and their communities are seen as ignorant, slovenly and untruthful. This results in two managerial difficulties. On the one hand, fishermen and their communities become criminalised, both in the minds of administrators as well as in their own. Fishing communities come to perceive that there is little that they can do that is right, and understand fully that this is what the state understands of them. In such circumstances, relationships between fishing communities and the state are not as good as they could be.

#### *The capacity to deliver an effective regulatory service*

‘Capacity’, here, is considered in terms of the ability of a fisheries department to deliver a service, in this case, fisheries regulation. In some cases, this ability is limited by funding difficulties. In Kenya, for example, recurrent operating expenses within the Kenyan Fisheries Department represent just 9% of its total budget, while the remaining 91% is used exclusively to pay wages (Government of the Republic of Kenya *et al.* 1995). Despite these proportions, the salaries drawn by many fisheries department staff on Lake Victoria are very low, and the temptation to supplement these with graft very high.

Staffing constraints are also concerns, although not in Kenya where the Fisheries Department has 611 staff around its portion of Lake Victoria (Government of the Republic of Kenya *et al.* 1995). In Uganda, however, the Fisheries Regulations and Control Unit (FRCU) have to police 43,941 km<sup>2</sup> of water with 35 staff (Kiiza, 1998).

Official discussions regarding the problems of regulation on Lake Victoria often focus on the idea of ‘harmonisation’: that if all of the countries sharing Lake Victoria have the same regulations, then somehow the regulatory problems of the lake will be solved. In much the same way, there exists within the region a pervasive belief that the enactment of laws and regulations at the parliamentary level will automatically translate into obedience and compliance on the ground, with no intervening act of enforcement in between.

Partly as a result of these problems, in June 1994, the Lake Victoria Fisheries Organization (LVFO) was created. In December, 1996, the LVFO was brought under the control of the newly (re-) formed East African Community (EAC). The potential for the LVFO to play a vital role in the coordination of research and regulation on Lake Victoria has, however, not been realised. The EAC exists in little more than name at present, and it is from its headquarters in Arusha, Tanzania, that the LVFO draws its powers. The region’s fisheries departments and institutes are under no obligation to answer to the Organisation, let alone answer its calls.

### **Beach-level managerial institutions on Lake Victoria**

The fisheries management problems on Lake Victoria are, therefore, extremely grave. Cleaver (2002) argues that one of the attractions of participatory resource management is the perception that greater managerial efficiency is achieved. There is, she points out, little evidence to show that this is the case however. We propose, however, that the establishment of a co-managerial system for Lake Victoria *cannot be any worse than the*



*present system*. Nor do we suggest that a co-managerial system will yield perfect management outcomes such as a fishery that has rebounded from the edge of collapse or the restoration of the lake's bio-diversity. Any co-managerial system for the lake is likely to yield patchy results that reflect the heterogeneous distribution of local-level institutions and their varying types, objectives, strengths, weaknesses and the conflicts that they may engender and even provoke. Co-management results are rarely, if ever, going to yield the clear cut and incisive results that many contemporary styles of natural resource management appear to expect.

In this section, we identify the lakeside institutions that we feel have a potential managerial role to play in Lake Victoria's fisheries. We restrict our analysis to those institutions which we believe have a direct role to play in the management of the fishery, and not those that have a *potential* role to play (such as NGOs or lakeside welfare groups).

#### *Kenyan fisheries institutions*

In Kenya, these comprise beach leaders and their associated committees. It is not always the case that a beach leader will have a supporting beach committee or vice versa. Typically, beach leaders are selected because of their ethnic background (as members of a local clan, for example), as a respected member of their community or even democratically elected. Their tasks will vary considerably from landing site to landing site, but in virtually every case, these will include the following responsibilities: settlement of conflict, be it between fishermen or between fishermen and Fisheries Department staff. This may include the settlement of a bribe price. Beach leaders write 'letters of introduction' for migrant fishermen. These will introduce a fisherman to his destination beach, declare the ownership of his boat and gear, declare the number and type of gear he carries and that he is not known to be a thief. Given the enormous rates of gear theft on Lake Victoria, this is a locally devised system for attempting to control it. Finally, at landing sites where trucks from the fish processing factories come to collect supplies, beach leaders will negotiate fish prices and other fees with the fish collection agents. This may also be a task carried out by fisheries co-operatives, although not many of these operate in the fishery.

What is clear, therefore, is that the role of the beach leader is typically not associated with the management of the fishery. At our PRA study site at Obenge beach, however, the beach committee's continuous association with the research team from the Kenya Marine and Fisheries Research Institute (KMFRI) ensured that the beach administration developed sufficient confidence to develop systems to patrol around their set nets to prevent theft, and to ban the sale of under-sized fish from their landing site. While perhaps

modest advances, this incremental progress represents considerably greater hope for the fishery than does the centralised and formalised management structure, and cost little more than encouragement and support.

#### *Tanzanian fisheries institutions*

In Tanzania, Beach Management Units (BMUs) are formally recognised as an extension of the Fisheries Department, responsible for the implementation of the state's laws and regulations. Their responsibilities, as identified by the Fisheries Department, includes the enforcement of the 1970 Fisheries Act and its various supplements (see Hoza and Mahatane, 1998). BMUs were imposed on fishing communities, often in direct conflict with other Tanzanian village-based institutions such as village governments. The inception period for these institutions has, from a political perspective, typically been surrounding in tumult. In addition, the laws with which they have been charged typically contradict the livelihood claims and aspirations. If community members perceive that their only access to fish is through the use of an illegal gear type, and the BMU then seizes it, it is likely that they will perceive a livelihood claim to have been infringed upon. This is perhaps not all together surprising if the axis along which this friction occurs is between the community and the Fisheries Department. But BMU staff is drawn from the very villages they are expected to regulate, creating a serious impediment to implementation.

As a result, the kinds of responsibilities that BMUs perceive have little or nothing to do with the 1974 Fisheries Act, and relate to 'enforcing the regulations' (whatever these are – they were not mentioned as a guiding principal by the BMUs themselves), to maintain cleanliness and peace and order – not dissimilar, in fact, to Kenya's beach leaders.

#### *Ugandan fisheries institutions*

In the late 1990s, following the wide-spread use of poisons to kill fish, Nile perch export markets were closed, a serious impact on a country where fish exports represent the second biggest foreign exchange earner. 'Task Force Committees' were created at landing sites in an effort to curb poisoning, and the results were spectacular, if hot alarming. Poisoning was almost immediately curbed, and offenders either killed or handed over to the authorities.

The export markets have since opened, and the Task Force Committees have been re-named Landing Management Committees (LMCs). At the same time, Uganda has introduced a new constitution, which is possibly the most liberal in East Africa. In it, the government divests large amounts of power

and responsibility to districts, an administrative level referred to as 'Local Council' (LC) 5. A series of intervening levels occur, all the way down to the LC 1, at the village or community level. The two main Ugandan ethnic groups on Lake Victoria are the closely related Basoga and Baganda, and both have exhibited elaborate government and administrative systems that pre-date the colonial era. Karlström (1996) argues that the Ugandan administrative system set in place by the 1995 Constitution and the 1997 Local Government Act (Republic of Uganda, 1995, 1997) closely approximate the traditional Baganda administration, creating a hierarchy with a high degree of acceptance at the most local of levels.

In both the new Constitution and the 1997 Local Government Act, Local Councils assume considerable responsibilities for protecting the environment and licensing its exploitation, including fisheries. Neither of these pieces of legislation is, however, explicit about the kinds of responsibilities and by-laws that are expected. One recent effort at interpretation is to be found in the draft of the National Fisheries Policy (MAAIF, 2000). Here, community participation in the following areas is expected:

- (a) Limiting the number of people who may fish.
- (b) Controlling certain fishing techniques, including mesh-size controls.
- (c) Maintaining fish habitats and enforcing closed seasons and areas for fishing.
- (d) Ensuring that fish is caught and landed '...in a manner that places in the market wholesome and quality products' (p.11).
- (e) Data collection and dissemination.

Our respondents at Nkombe and Lwalalo Beaches showed no real appreciation of these roles, but it remains far too early to judge the impact of the new Ugandan fisheries policy. Instead, the LMC at Lwalalo Beach, amongst others, overseeing all fish landed to ensure that it is of acceptable size and quality, to ensure that all fishermen paid their market dues, and that the 'Market Masters' did not overcharge fishermen (Medard *et al.* 2000). In addition, the LMC could arrest a fisherman 'for using illegal gear' and could deliver him to the police. They claimed, however, that this was a rare occurrence because most fishermen used gill-nets of above the 5 inch minimum mesh-size sought by the Department of Fisheries Resources (DFR). The LMC claimed that it 'ordinarily enforced regulations at the beach', and what these regulations comprised were decided upon between the LMC and the DFR (Medard *et al.* 2000).

At Nkombe beach, no such fisheries regulation tasks were identified, although the LMC professed to have a very large number of byelaws. In the waning days of the LVFRP, however, the beach unexpectedly started enforcing a ban that prohibited the use of two gear types in their waters. The community argued that repeated exposure to discussions (with the Fisheries

Resources Research Institute research team) concerning the lake and bad fishing methods did yield positive results on the ground. A single or irregular visit by a Fisheries Officer, on the other hand, would be unlikely to yield any positive results.

### **A proposed management structure for the fisheries Lake Victoria**

We propose a management plan comprising two broad characteristics: the first is that it should not undermine the efficacy of the livelihood decisions of fishing communities. The second is that it should contain adequate opportunities for managerial concerns to be vented and scrutinised, along with structures to ensure that such scrutiny actually influences managerial decisions.

The plan should be able to provide solutions to the various dilemmas discussed above. With this in mind, we suggest that the management plan must therefore contain the following, critical, components (after Geheb *et al.* 2002):

- (a) At its core, the plan should be founded on beach institutions, which will be at the front line of regulatory enforcement.
- (b) The influence of the state, fish processing factories and other stakeholders should be felt at all levels of the plan's administration in a negotiating – rather than a voting – capacity.
- (c) Laws and regulations under the plan should, as far as is possible, be generated by negotiation and consensus. At its base, the plan should be minimally prescriptive so as to ensure that communities of resource users have the greatest possible opportunity to develop regulations that suit their own locations, culture, conditions and resource dynamics. At meso- and regional levels of fisheries administration, the level of prescription increases to reflect greater levels of government and private sector involvement. These prescriptions might include suggestions for voting and delegate selection.
- (d) The plan must in no way impinge on the rights of other water users.
- (e) Beach institutions should be 'nested' within a wider framework providing, in the main, support and facilitating services. It must also be able to feed into other political and administrative structures not necessarily related to fisheries.
- (f) The plan must be able to survive minimal scientific and financial inputs.
- (g) The plan must be adequately flexible and amenable to change so that it can cope with fluctuating economic, social, political, ecological and limnological conditions.

- (h) The plan should be amenable to gradual implementation, so that dominant political sensibilities are not offended, and communities may become used to their new responsibilities.
- (i) The plan must be backed by a comprehensive legal package guaranteeing communities the right to be involved in fisheries management. The package should also establish and reinforce the independence of the plan's components from other political processes and interests that might seek to undermine the plan's efficacy.
- (j) The plan must contain within it the legal obligation of all actors to be transparent, and that all actors must design ways to assure that this is achieved..
- (k) The plan must contain within it the promise of dissemination, so that all actors are informed.

In order to administer the plan, we propose a three-levelled hierarchy for fisheries administration which contains within it the right to seek horizontal support and influence (Figure 2). We have selected just three levels to the management structure to reduce administrative costs. The levels lie at the community-level, the meso-level (district) and the regional level. While each of the levels has obvious administrative functions, their primary roles are as foci for discussion and negotiation. (see: Figure 2)

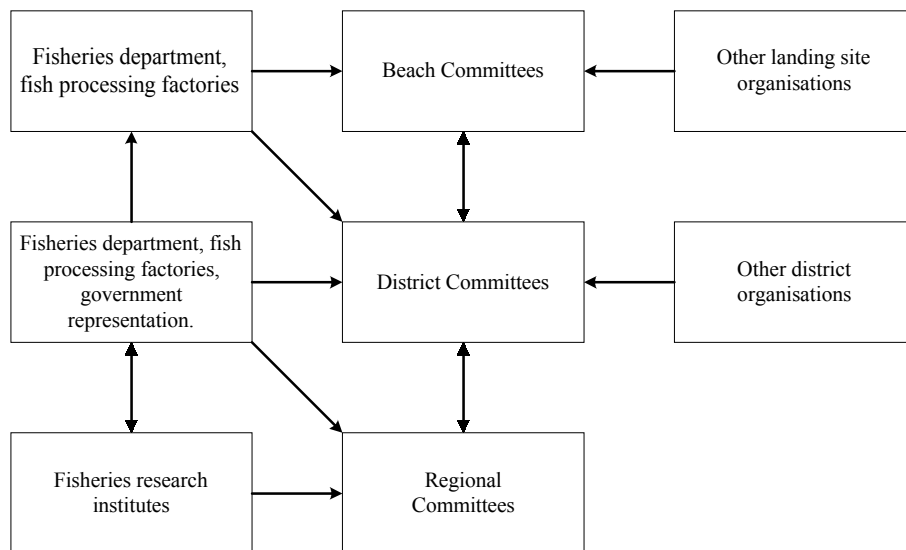


Figure 2: Over-view of suggested fisheries management plan institutions and administration (from Geheb et al. 2002).

Experience gained under the Lake Victoria Fisheries Research Project (LVFRP) suggests that no matter what the level of administration, outputs are the result of (often protracted) negotiation, and it therefore makes sense to propose an administrative structure that maximises the opportunities available for this.

An additional problem that the plan attempts to address is the manner in which decisions are arrived at. At formalised levels of administration, the use of a majority vote may well be acceptable to participants, but at community, informal, levels, only outright consensus may be considered acceptable (Clever, 2000). It is therefore necessary that the management plan enables either method to be useful, and should therefore only stipulate that (a) decisions are necessary; (b) that the manner in which these are agreed upon must be determined by the representative group concerned; and (c) that the decision must be conveyed.

In the sections that follow, we examine each of the three levels of the plan, and argue that to greater and lesser degrees, each level enables the plan to fulfil the background conditions listed above, and consider the ways in which the plan deals with, or ameliorates, the dilemmas discussed in the first part of this paper.

#### *The role of Beach Committees in developing and implementing the management process*

We propose that such Beach Committees (BCs) should form the backbone of Lake Victoria's fisheries management. The use of these pre-existing institutions in the plan is very important because not only does it legitimise them, but it also ensures that already existing institutions are maximally utilised within the management framework. Communities already have experience with these institutions, and while an augmentation of their responsibilities may prove controversial, their presence at landing sites no longer is. It must be reiterated, however, that the BCs must be as representative as possible. Without wishing to suggest how the committees are selected, it is important that all members of a landing community contribute to the selection process. This, in turn, necessitates that a community defines itself. Provided communities can do this, there seems little reason why they cannot agree on the overall structure of the BCs, including the number of members who should sit on it, what their individual roles should be and how the BC itself will arrive at decisions that have the community's blessing.

BCs should meet regularly so that the number of opportunities available for the expression of grievances is maximised. Through such meetings,

communities themselves should decide what regulations they wish to implement, monitor and enforce. Fisheries department extension personnel must contribute to negotiations, making known scientific consensus regarding the fishery, and recommendations regarding the management of the fishery. It is also important that fish processing factories (FPFs) are present to try and influence regulation and/or prices. Other stakeholders can also be present as the BC sees fit. Whether or not these various interest groups should have decision-making powers on the BC is debatable, and is possibly best left to the communities to decide. The point with these meetings is that the outcome of these negotiations should be one that in some measure meets all the desires and demands of all the stakeholders represented on the BC. An additional potential benefit of including a diversity of stakeholder representatives on the BC is that they may monitor each other for contravening BC agreements.

The rules and regulations agreed upon by the BC should be tailored to suit the ability of the BC to implement and enforce them. Those regulations that fall beyond this threshold should be passed on for administration by District or Regional Committees.

Management of the fisheries requires reliable catch/effort information. An improved relationship between BCs and research institute personnel is important in this area. Ideally, the research institute would negotiate with communities what data they will collect. Communities, through their BCs, should also decide what they wish to know about, and pass these messages on to the fisheries departments, for relay to the fisheries research institutes. The latter should, by law, be obliged to research those issues identified by fisheries departments.

The authors believe that the structure and outlook of BCs should enable the following activities:

- (a) The identification of regulations which they believe are just and fair, and which they believe they are capable of implementing, monitoring and enforcing.
- (b) The sanctioning of these rules by means and punishments which the community agrees upon, and which are graduated in a manner considered appropriate by the community involved.
- (c) The provision of representatives to District Committees, who could be individually selected by the Beach Committee.

How BCs punish offenders should be determined by the communities themselves. It may, however, be the case that communities do not wish to have this role, or that they feel that certain crimes should not be adjudicated by them. In these cases, BCs should determine who should punish offenders, and/or at what point crimes become so serious that they must be referred elsewhere. Drawing the BCs more strongly into the control, monitoring and

surveillance processes is an essential pre-requisite of a realistic management approach. Referred cases can be passed on to the police or, in Tanzania, ‘*sungusungu*’ vigilante groups. Alternatively, they may be passed on to District Committees for consideration. This particular area of administration could well be one in which communities assume gradually augmented responsibilities.

The funding of these committees should be derived from beach contributions in the main. BCs could assume co-operative responsibilities, including the collection of commissions on catches sold at the landings, and the provision of savings accounts to members. As a fee, the BC might levy an account holding fee on interest paid on accounts claiming, say, 50% of interest. Additional funding sources can be levies applied to trucks from the fish processing factories coming to the beach, and similar levies on migrant fishermen. Fines imposed on offenders are an additional source of revenue. The BCs may also decide to seek additional sources of funding such as, for example, donors, fish processing factories or local authorities, but the functioning of the BCs must at no time become contingent on these sources.

A vital component of this process is that it be transparent. With large amounts of money passing through, and being administered, by BCs, it is crucial that they should not make the same mistakes that have afflicted many Kenyan fishermen’s co-operative societies. Geheb (1997) argues that the success of certain Kenyan co-operatives is contingent on transparency between management and members, and that one way of providing this was through the display, on a regular (weekly) basis, the status of accounts and other assets, as well as displaying the details of monies held on behalf of members, by tacking these details on the co-operative office wall for all to see. A similar method could be used (or even prescribed) by the BC. Failure to meet these criteria should be sufficient grounds for the dissolution of the BC. Our reasons for suggesting this is that we believe that it is necessary – through transparency and frequent electoral review – that BCs be continuously assessed by their communities.

How the BC’s funds are spent should be decided on by the community as a whole, which will have a direct input in budgetary matters. For the sake of transparency, communities should revisit budgets frequently – possibly every six months.

The relationship between the BC and the higher levels of governance will be critical to the success of the participatory management strategy. The ‘nesting’ of local level institutions within wider administrative and resource monitoring structures is often perceived as vital for the successful functioning of local level management structures (cf. Ostrom, 1990). Structural features to facilitate this should include:



- (a) Once every six months, the District Committee will meet, and the BC must send its chairperson.
- (b) An additional individual, nominated by the community, should also be sent to ensure that the chairperson properly represents community interests. His/her discussions at the district committee are considered below.
- (c) The BC must be able to fund these delegates.

*The role of District Committees in developing and implementing the management process*

The district is a convenient administrative unit around which to organise a meso-level forum for fisheries management. There are 31 districts along Lake Victoria's shore, and 1,493 landing sites (FSTC, 2001) There are, therefore, an average of 48 landing sites per district, and District Committees would then comprise approximately 96 members (two per BC) each. At this level, other stakeholders should also have representation, and, as a guide, these could include fish processing factory (FPF) representatives and fisheries department personnel. Again, the role of these other stakeholder groups on the Committee would be to attempt to influence it in particular directions. If the district concerned also contains lake-side municipalities, these should also be represented. The District Committee should be empowered to decide whether or not other groups should be represented upon it. At this level, it is not inappropriate that decisions are arrived at by vote, and could be carried out by secret ballot, over seen by the district administration.

The *raison d'être* of the District Committee is to pass regulations concerning fisheries at the district level, in particular over issues such as fish passing between or through districts by road, or regarding migrant fishermen entering the district. The District Committee should also have the power to pass regulations to resolve inter-community and district conflict. The District Committees could consider whether they are capable of taking on the following roles:

- (a) To meet and consider district-wide trends in their fisheries and other related problems.
- (b) To consolidate all scientific data collected.
- (c) Offences which the BCs have felt are too grave for their consideration will be dealt with by the District Committee or referred to the Regional Committee.
- (d) Receive advice from an attendant fisheries department officer, who may also use this opportunity to brief members of district-level changes to the fishery.

- (e) To listen to requests and receive advice from FPF personnel.
- (f) To consider all matters on an inter-district nature – such as, for example, fishers from one landing breaking the rules of another – that lie beyond the jurisdiction of BCs acting alone.
- (g) The District Committee should not have the power to over-rule or overturn BC regulations, but is in a position to counsel and advise communities on the regulations they suggest.
- (h) To seek external funds from government and/or other organisations if the Committee sees fit to do so.
- (i) To select a representative from each of the stakeholder groups represented on the Committee to send to an annual Lake Victoria regional fisheries management meeting convened by the Lake Victoria Fisheries Organization (LVFO).
- (j) Each meeting will generate a report to be forwarded to the LVFO. The report will contain a summary of scientific data collected; a list of all BC regulations passed within the district; a list of all offences that have occurred within the district and how these were sanctioned; and a series of recommendations concerning any or all of the information presented. This report shall be passed by a majority committee vote.

#### *The Regional Committee*

This will meet once annually under the auspices of the LVFO which will rotate the meeting place amongst the three main cities bordering the lake (Kampala, Mwanza and Kisumu) and its headquarters in Jinja. Delegates meeting will be funded by the LVFO, and will be drawn from each of the District Committees, selected as described above. Delegates shall also include representatives from fisheries research institutes, and from other sources (such as ministers or other high-level administration functionaries).

It is these delegates (fishing community representatives, fisheries department personnel, fish processing factory representatives, municipality representatives and fisheries research institute personnel) that shall form the electorate of the Regional Committee. The number of participants shall be limited. In the case of fisheries department and Beach Committee representatives, upper limits should be tagged to the total number of districts on the lakeshore. Municipal representatives should be limited to the total number of municipalities on the lakeshore. Fish processing factories can send no more voting members than their total number, and fisheries research institutes may send only staff of senior researcher rank and above.

The principal task of the Regional Committee is to consider the fisheries matters of Lake Victoria as a whole. Its main legislative powers lie in the realm of pollution at the national and regional levels, upstream consequences

of their actions, such as those concerning the Nile, or the inflowing Kagera River. Within this remit may also be fisheries legislation of a regional nature. This latter caveat, however, must be carefully constructed so that it does not undermine the validity and strength of community-level regulations. The jurisdiction of the Regional Committee should also concern itself with matters of quality assurance, the Nile perch export industry and other areas of marketing. Other roles of the Regional Committee could include reviewing all data collated by the LVFO from the District Committee reports that have been received. The meeting will enable candidates to consider and debate the findings, and to vote on whether or not the final report should be issued. Insofar as fisheries legislation is concerned, the Regional Committee can only make recommendations which the District and Beach Committees will consider whether or not to follow.

## **Conclusions**

This paper has argued that problems in the management of Lake Victoria's fisheries are primarily derived from the absence of co-management between the state, fishing communities and industrial fish processors. We argue that these problems have led to: related difficulties of regulatory ambiguity; state-community dichotomies; the failure to legally endorse local-level institutions; the gap between the fulfilment of livelihood objectives and fisheries management objectives; an over-emphasis of the biological sciences in fisheries; an underestimation of the abilities of fishing communities; and, finally, the under-capacity of state regulatory organisations.

The sections that follow describe a possible management plan that could ameliorate these difficulties. We do not claim that the plan is comprehensive, but suggest that what is presented may form the foundation of such a plan. We propose a three-levelled administrative system which has at its core Beach Committees. These are selected in ways that the communities involved see fit, and should, we believe, have upon them representatives of the fishing communities, fish processing factories, fisheries departments and any other groups that the fishing communities feel should be represented. We believe that the decisions of the BCs should be arrived at through means determined by the communities involved, and that the voting powers of the representatives should also be determined at these levels.

The BCs should be at the forefront of fisheries administration on Lake Victoria, and their decisions will inform those of the next level, the District Committees, whose roles are to make recommendations on fisheries matters of district-level concern, and to provide an over-arching service to the BCs, informing them of district-level fisheries trends, and events of concern to

landing sites. The District Committees also have the task of deciding upon cases that the BCs feel that they cannot themselves handle. Finally, these Committees act as a half-way house between the fishing communities and a Regional Committee, to which they will select and send representatives.

The Regional Committee will meet under the auspices of the Lake Victoria Fisheries Organization, and its responsibilities are similar to those of the District Committees, except that its brief shall extend to national and regional levels.

The logic behind the above design, and our suggestions for membership on the three committees, is derived from our belief that regulatory outcomes on Lake Victoria should be the product of a negotiated process between various stakeholder groups. It is only if such a process occurs that we can expect fishing communities to view fisheries regulations as valid and acceptable, and hence, worth enforcing.

## Summary

This paper is based on five years of research around the shores of Lake Victoria carried out by the lake's fisheries research institutes in collaboration with the under the Lake Victoria Fisheries Research Project. Based on this experience, the authors identify a series of difficulties, which, they say, impedes the effective management of the lake's fisheries. These relate to profound weaknesses in the current state-administered management of the lake along with difficulties transferring regulatory power to fishing communities, and problems establishing an adequate 'co-managerial' framework for the development and implementation of managerial action. The authors propose a management structure based on three levels of administration which have at their core 'beach committees', and which serve as forums for negotiated managerial outcomes.

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