



Implementing Co-management of Lake Victoria's Fisheries: Achievements and Challenges

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Abstract

For a long time governments made decisions on the management of fisheries resources in Lake Victoria with little or no input from the resource users and other stakeholders. This approach has been ineffective and these resources have continued to decline over the years. Legislation has therefore been enacted to facilitate the involvement of the resource users in fisheries management through the creation of a local co-management unit the Beach Management Units (BMU). Harmonised BMU guidelines were developed for the establishment and operations of these institutions with a total of 1069 having been formed along the entire shoreline. In addition, BMU networks have been formed for the development of management plans, to prevent and address conflicts, and to represent BMUs at higher levels of governance. The communities now take an active role in the elimination of illegal fishing methods, are involved in revenue collection on behalf of the governments, and in the decision making processes on fisheries related issues. There are still many challenges facing the sustainable management of Lake Victoria fisheries, including; lack of compliance with regulations and rapid increase in fishing effort, environmental degradation, inadequate service provision and the high prevalence of HIV/AIDS amongst the fishing communities.

Key words: Lake Victoria, co-management, beach management units, management plans, illegal fishing, regulations.

Introduction

Lake Victoria, the largest fresh water lake in Africa with an area of 68,800 km², is shared between the three East African states of Kenya, Uganda and Tanzania. It supports one of the world's largest inland fisheries, based primarily on three species, the Nile perch *Lates niloticus* (L.) and Nile tilapia *Oreochromis niloticus* (L.) both of which were introduced, and the endemic cyprinid *Rastrineobola argentea* (Pellegrin) known locally as dagaa, omena or mukene. Some native species, such as the haplochromines, which were thought to be close to extinction are beginning to recover and becoming increasingly important in the fisheries.

Nile perch is by far the most valuable species since it supports an export industry that provides the three countries with about US\$350 million in export earnings per year. Evidence that the Nile perch stocks are declining is causing concern and has forced the three countries sharing the lake to rethink their management strategies. In each country the fisheries departments are entrusted with the management fish stocks and traditionally made management decisions with little or no input from resource users and other stakeholders. It is now accepted

that without the involvement of the stakeholders, especially those whose livelihoods depend on the resource, in management it may not be possible to reverse this trend. Consequently, in order to involve stakeholders, legislation has been enacted in each country to lay down structures make possible a shift from the command and control approach previously adopted by the Governments to a co-management approach that involves stakeholders at all levels. Consequently, all members of the fishing community, including boat owners, boat crew, managers, fish processors, fishmongers, local gear makers, and dealers in fishing equipment, are being brought into the co-management through membership of local institutions called Beach Management Units (BMUs). The Lake Victoria Fisheries Organization, which was set up to coordinate fishery management across the lake, developed harmonized BMU guidelines to help govern the operations of these newly created institutions.

The creation of these community-based beach administrative units required actions to raise awareness amongst the different categories of stakeholders, after which they were registered, BMU committees were elected, and registration certificates issued by the respective departments of fisheries. A total of 1,069 BMUs have now been formed around the entire lake and have become involved in the co-management of the fisheries. While successes have been recorded in all the

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three countries there are also challenges that must be addressed as the new institutions grow and appreciate each other. Lake Victoria now has the world's largest co-management system and its progress is of significance within and beyond the African continent.

For BMUs to be effective in fisheries co-management, they must collaborate with other BMUs, as well as with government agencies and other stakeholder groups. This can be achieved through the formation of BMU Networks and Fisheries Co-management Committees at local, national and regional levels. The co-management guidelines that have been drawn up (LVFO, 2007) give the procedures for the formation of BMU Networks and Fisheries Co-management Committees at each level as well as a clear outline of the functions of these structures and of each stakeholder group. The guidelines also explain what co-management means for Lake Victoria fisheries and how the meetings and activities of the BMU Networks and Fisheries Co-management Committees will be funded. They will therefore strengthen the understanding and implementation of co-management, including the further development of institutions, and contribute significantly to sustainable fisheries management.

Fishing communities as partners in co-management

An essential first step in the formation of BMUs around the lake was the development of regionally agreed harmonized BMU Guidelines, which were approved by the LVFO Fisheries Management Committee in May 2005 and used to guide the development of national guidelines. Legislation to provide legal status for BMUs was passed in Uganda in 2003, in Tanzania in 2005 and in Kenya in 2008. The key innovations in BMUs formed during the implementation of a Fisheries Management Plan (IFMP) project were the inclusion of everyone working in fisheries, reforms to the composition of committees and the election process, and legal empowerment. In the earlier BMUs in Tanzania, for example, there were only around 20 members with women and boat crew being poorly represented, with the result that not everyone knew what the BMU was doing or could influence decision-making. Now, everyone working in fisheries at a beach must belong to a BMU and the BMU committee is required to include women and crew members. With the new structures in place, everyone gets a chance to speak, either through their representatives on the committee or during BMU assembly meetings. Monitoring surveys carried out in 2007 and 2008 indicated that 49% of women believe that they have a greater say in the BMU affairs, a significant improvement over the previous situation.

The international experience of fisheries co-management clearly demonstrates that it should be concerned with *developing* the fisheries communities, as well as about managing the fisheries. Co-management takes time to evolve, as it requires policies, institutions and systems to be developed first and a general agreement on the nature and direction of co-management. Roles, functions and relationships will change over time, as the capacity of stakeholders is improved, trust between

stakeholder groups is gained, relationships are strengthened and lessons are learnt from experience.

Pre-BMU management approaches

Until the late 1990s, the fisheries of Lake Victoria were managed in each country by regulations developed and enforced by central government, with out-posted fisheries staff. There was very little, or no, participation by fisheries communities in resource planning, management and development but the need to involve fishing communities in management grew from the recognition that:

- (a) The top-down government-only approach to management was not succeeding in managing the fisheries;
- (b) Fishing capacity in the lake, particularly for Nile perch, driven by high catch rates difficult for the fisheries departments to manage the fisheries alone;
- (c) Illegal fishing had increased and could not be controlled by the fisheries departments because of the size of the lake;
- (d) International trends in natural resource management which involved cooperation between governments and communities, and
- (e) Involving stakeholder groups in management would promote a sense of ownership and a greater willingness to comply with regulations.

In the late 1990s Tanzania began the process of implementing co-management with the formation of community-based Beach Management Units (BMUs), with generally positive results. More BMUs were formed in Tanzania and Kenya in the late 1990s and early 2000s with a few in Uganda. Because there were no harmonized guidelines at the time, they differed in the way that they were formed, and their membership and operations. In 2004, the IFMP project brought the Partner States together to agree on regional guidelines for BMUs which were then used to produce national guidelines in Tanzania and Kenya; Uganda already had compatible guidelines.

Current challenges

The sustainable management of the fisheries on Lake Victoria faces a number of challenges. These include a lack of compliance with regulations and the rapid increase in fishing effort, which is threatening fish stocks, as well as environmental degradation, inadequate service provision to the fishing communities and the high prevalence of HIV/AIDS in these communities.

Regulations to protect young and breeding fish and to ensure that the fisheries are sustainably managed have been promulgated but their enforcement remains a key challenge. Many fishing illegalities still exist on the lake, including the use of small meshed nets, small hooks and active fishing methods. Undersized fish are regularly caught and sold, thus damaging the fish stocks and the future livelihoods of the fishing communities. Improving compliance with fisheries regulations is therefore a key goal of fisheries co-management. It is envisaged that the participation of fishing communities in the management of the fisheries at all levels, from policy to data collection, will lead to greater awareness and compliance.

The numbers of fishers and gears have been steadily increasing thereby increasing the fishing effort. For this reason, Regional Plans of Action have been drawn up for the Management of Fishing Capacity (RPOA-Capacity) and for dealing with Illegal, Unregulated and Unreported Fisheries activities (RPOA-IUU) and are in the process of implementation.

Environmental pollution and degradation within the catchments are further challenges, and include deforestation, siltation, low standards of hygiene and sanitation at the landing sites, effluent from factories and urban areas, and chemical run-off from agriculture. Action is needed at all levels to address these challenges and to improve the health of the lake and of the communities living on the lake shores. Similarly, the inadequate provision of services to fishing communities has a detrimental impact on livelihoods. Inadequate drinking water, sanitation, access roads, health care, education and access to savings and credit facilities are all common features of life at fish landing sites. Despite the fact that there is regular income within these communities, the quality of life in the fishing communities is not at the level it should be.

Furthermore, the prevalence of HIV/AIDS in fishing communities is substantially higher than the national averages in the Partner States and a concerted effort is needed to address this major challenge around the lake. Co-management should significantly improve livelihoods by empowering and organising the communities, strengthening linkages with government, including in development planning, and by enabling agencies to work with, and through, the BMUs and BMU Networks.

The concept of co-management

Governments have worked in partnership arrangements with fishing communities for many years but co-management is seen as taking this further by giving communities (and other stakeholders) the rights and responsibilities that will give them a real say in management decision-making. Co-management must be well designed and implemented, with sufficient resources to support the development of the process, otherwise it will not succeed in its objectives. It is defined as “a fisheries management approach where responsibility is shared between the government, fishing communities and other stakeholders”. It must be emphasised that it is a *learning process*, as almost all situations differ and require different arrangements, systems and processes. Co-management is based on the principles of:

- (a) Democracy, transparency, accountability and sustainability in systems, processes and objectives;
- (b) Power sharing between government, communities and other stakeholders;
- (c) partnership between government, fisheries communities and other stakeholder groups, and
- (d) Subsidiarity, with management authority being delegated to the lowest possible organisation.

International experience in co-management has led to an understanding that there is a ‘spectrum’ of co-management, ranging from government management to management completely given over to user groups. This implies that with government management, there is

minimal exchange between users and government, whereas with community-based management, interactions are based on communities informing government, not working with government. True co-management lies somewhere between these two extremes.

The importance and objectives of co-management

Fisheries co-management was borne from the realisation that central governments working alone were unable to manage fisheries and enforce regulations and was therefore a response to the desire to empower fishing communities. The objectives of fisheries co-management are to enable all stakeholders to work together in a collaborative and cooperative partnership for sustainable fisheries management and improved livelihoods of fishing communities. Effective fisheries co-management should lead to increased fisheries productivity and therefore make a significant contribution to the development of low-income countries as well as to sustaining the natural resource base.

Expected benefits of co-management

The primary advantage of co-management is that with the right institutional and legislative framework, it allows the knowledge and understanding of all stakeholders to be reflected in making and implementing decisions. Those who use resources directly tend to have a greater knowledge of their local environment and the fishing practices employed in it than do the distant administrators of a top-down system. Once suitably organised and motivated by a sense of ownership, and funded through revenue-sharing they are then in a position to respond to signs of local overexploitation or to damaging fishing activities and to lobby for appropriate changes in policy.

Seeking and incorporating the views of fishing communities on the design and implementation of management interventions also boosts the legitimacy of any actions that are subsequently taken. This increases the community’s willingness to adhere to them and to assist in ensuring that others do likewise. This increases both the level of resources devoted to this activity and the efficiency of the government’s own activities. Increasing the exchange of information between resource users and government agencies also reduces costs and further improves the decision making process.

Co-management can enhance the position of disadvantaged groups by giving them direct representation in decision making and allow them to benefit from collective action. They can also benefit from increased security by reducing thefts, piracy and inter-group conflicts, improved sustainability of fishing, while adding to the value of the catch through the provision of better handling facilities and collective bargaining with traders. Furthermore, by acting as a focal point, community organisations also enable service providers to build awareness and capacity across a wide variety of issues, such as HIV/AIDS, alternative income-generating activities and savings mobilisation.

Adoption of co-management on Lake Victoria

Fisheries co-management on Lake Victoria is moving strongly from *consultation* between fishing communities and the government, with limited exchange, to *collaboration* or *cooperation* between resource users and government. Collaboration implies power sharing and the delegation of certain management functions to user-organisations, supported by existing policy and guidelines. This means that (1) fishing communities are equal partners with government and other stakeholders and (2) BMUs are community-based fisheries management organisations, registered with the Fisheries Departments of each Partner State. The relationship between government, BMUs and other stakeholders must be one of *mutual* cooperation and responsibility for the achievement of agreed objectives and goals. In the case of sustainably managed fisheries, this means that all parties should work together and trust each other to deliver on agreed tasks.

Policy and legislative framework

The implementation of fisheries co-management on Lake Victoria is supported and directed by a number of policy documents, legislation and guidelines. The existing policy and legal framework includes:

- (a) The Convention for the Establishment of the Lake Victoria Fisheries Organisation (1996) supports co-management by providing for the private sector to be represented on the National Committees for Lake Victoria Fisheries.
- (b) National Fisheries Policies in each of the three countries commit them to a co-management strategy by encouraging community participation in resource management and development and working with all stakeholder groups in resource management, and the decentralisation of management functions to local governments.

- (c) Legislation gave BMUs legal status in Uganda (2003), Tanzania (2005) and Kenya (2007). The policy and legal basis of co-management on Lake Victoria is therefore well established, but will be further strengthened as required, particularly in relation to its financial sustainability.

Stakeholders in Lake Victoria fisheries

A wide variety of stakeholder groups are involved in fisheries co-management on Lake Victoria. The BMUs, represented by their BMU Committee and Assembly, are perhaps the most important as they include all members of fishing communities at the beaches. The BMU Network committees formed at the respective administrative levels of governance according to local/central governments, the Fisheries Departmental staff at different these levels. Likewise, local authorities, from the village to district levels, play an important part as do other government departments. Away from the beach, fish traders, fish processors and exporters, and the manufacturers and suppliers of fishing gear and boats all have a significant stake in the fisheries.

The police and judiciary also play a crucial role in effective fisheries management. They should be trained in fisheries laws and regulations and should be made fully aware of the meaning and importance of co-management, and understand the roles of the BMUs.

Institutional arrangements

Whilst each group has its own role and functions within fisheries co-management, they must work together for co-management to be implemented effectively. This can only work well through co-management structures, which should fit into existing systems of governance in the Partner States. The institutional arrangements and linkages for fisheries co-management on Lake Victoria are set out in Figure 1 (see page 57).

Table 1. The composition of BMU networks at different levels.

Level of BMU Network	Representation
Village (Tanzania)	2-4 representatives from each BMU
Parish (Uganda)	Only where there are many BMUs in a sub-county is a parish BMU needed; 2-4 representatives from each BMU.
Ward/location/sub-county	2-4 representatives from each BMU/parish.
Division (Kenya)	2-4 representatives from each ward/location BMU network.
District	1-4 representatives from each ward/division/sub-county
Provincial (Tanzania)	2 elected representatives from each district
National	All district BMU network chairpersons
Regional	2 elected representatives from each Partner State (national chair and one other)

Co-management begins with the establishment of BMUs around the lake, after which members of the elected BMU Committees come together at higher levels to form Sub-County, Ward, Location, District, National and Regional BMU Networks. Nominated members of these Networks will join a Fisheries Co-management Committee at the same levels, as in Table 1. The function of these networks is to harmonise plans and management measures, to prevent and address conflicts, and to

promote equity and justice between BMUs for all members. The formation of networks also facilitates the representation of BMUs at higher levels of governance, as representatives of co-management committees.

The following points should be noted in the formation and operation of BMU Networks:

- (a) The levels at which BMU networks are formed relate to the planning levels of government. These networks were also formed to facilitate the election or

- nomination of representatives at higher level administrative structures such as at parish level in Uganda where there may be many BMUs in one sub-county and at village level in Tanzania, when there may be more than one BMU in a village.
- (b) The two to four representatives of the BMU networks at village, parish, sub-county, ward, or location levels from the BMUs should include the Chair.
- (c) The representatives should come from the four main stakeholder groups; boat owners, boat crew, fishmongers, and ‘others’.
- (d) BMUs are encouraged to ensure gender parity in their nominations for representation at all levels.
- (e) Each BMU Network will elect its own Chair, Secretary and Treasurer.

Table 2. The composition of Fisheries Co-management Committees at different levels. FO = fisheries officer, NGO = non-governmental organisation, CBO = community based organization DoF = Director of Fisheries.

Level	Composition	Frequency of meeting
Ward, location, sub-county	1 sub-county, location, ward or division FO; and 1-3 sub-county, location, ward or division BMU network representatives. Optional: sub-county chief, ward executive officer, location chief or division officer; focal environment officer; community development assistant; and 1 district-based (or lower) fisheries NGO/CBO.	At least quarterly
Division (Kenya only)	1 division FO; and 1-3 division BMU network reps Optional: division officer; focal environment officer; community development assistant; and 1 division-based (or lower) fisheries NGO/CBO.	At least quarterly
District	1 district FO; 2 FOs; and 3 district BMU committee representatives. Optional: district planner; district environment officer; community or social development officer; and 1 district-based fisheries NGO (if present).	At least quarterly
Provincial	1 regional FO or fisheries advisor, 2 district FOs, and district BMU committee chairs. Optional: regional planner; regional secretariat (natural resources); regional community development officer; and regional fisheries-based NGO.	At least twice yearly
National	Director/Commissioner of Fisheries (Chairman); 1 DoFs; 3 regional or district fisheries officers; 3 BMU representatives; 1 processor representative; 1 from fisheries NGO working on Lake Victoria; 1 from fish marketing association; 1 local authorities representative; 1 fisheries research representative.	At least once a year
Regional	Expansion of the Fisheries Management and Scientific Committees to include: chair of the Regional BMU Network; 1 regional fish processors representative; 1 regional fish marketing representative; local authority representative; 1 from regional fisheries NGO on Lake Victoria.	At least twice a year

Fisheries co-management committees

Fisheries co-management committees bring together BMUs, government and other stakeholders to plan management measures and to monitor the implementation of these plans mobilising whatever resources may be available to them. The composition of the fisheries co-management committees at the different levels is given in Table 2 (see p. 59). Co-management committees may be formed at village levels at a later date, but the formation

of these structures should begin with the levels set out in the Table 2. Representatives from each stakeholder group should be nominated or elected by the members of that group while BMU representatives should include the Chair and others from different stakeholder groups, with women represented where possible. The fisheries co-management committees will be chaired by the Fisheries Department.

Process of forming BMU networks and fisheries co-management committees

BMU Networks and Fisheries Co-management Committees will be formed according to the following procedure:

- (a) The Fisheries Officer advises the BMU Assemblies on the purpose, structure and functions of the BMU Networks, with guidance on the number of BMU Committee members needed to represent each BMU at a higher level.
- (b) At sub-County, ward/ or location level, each BMU Assembly elects between two and four committee members, including the Chair, to represent it in the BMU Network. In Tanzania, villages with more than one BMU will form a network before the ward level.
- (c) At district level, each sub-district BMU network will send 2-4 representatives to the district BMU network, including the Chair. In Kenya, the district level will be preceded by the division.
- (d) At national level, each district BMU Network will send their chairpersons to form the national BMU network. In Tanzania, the national BMU network will be preceded by a network at provincial level.
- (e) At regional level, two representatives of the national BMU networks are elected from each Partner State as the national representatives.

At the first meeting of the BMU networks, the members will elect a chairperson, secretary and treasurer. The Fisheries Departments will provide technical guidance to BMUs to support the formation of the BMU Networks. The election of representatives at all levels should ensure different stakeholder representation and at least 30% of the places on each BMU Network should be women.

The Fisheries Co-management Committees will include BMU representatives elected by the BMU Networks at the same level of the Fisheries Co-management Committees. Government representatives will be nominated by the Fisheries Departments while

other sectors will nominate their own representatives at the various levels.

Conclusions

The BMU formation process has come along way and the achievements are enormous and noble as have already been expressed. It is however important to find a sustainable source of funding for these organizations. The three partner states should also ensure that the employs of the respective fisheries institutions complement the good work done by the BMUs towards eradication of fisheries illegalities rather than being accomplices of such vices. The trainings and sensitization sessions that were conducted to the BMUs should be done regularly to ensure that new recruits in the fisheries understand and appreciate the importance of sustainable fisheries resource exploitation and management for posterity.

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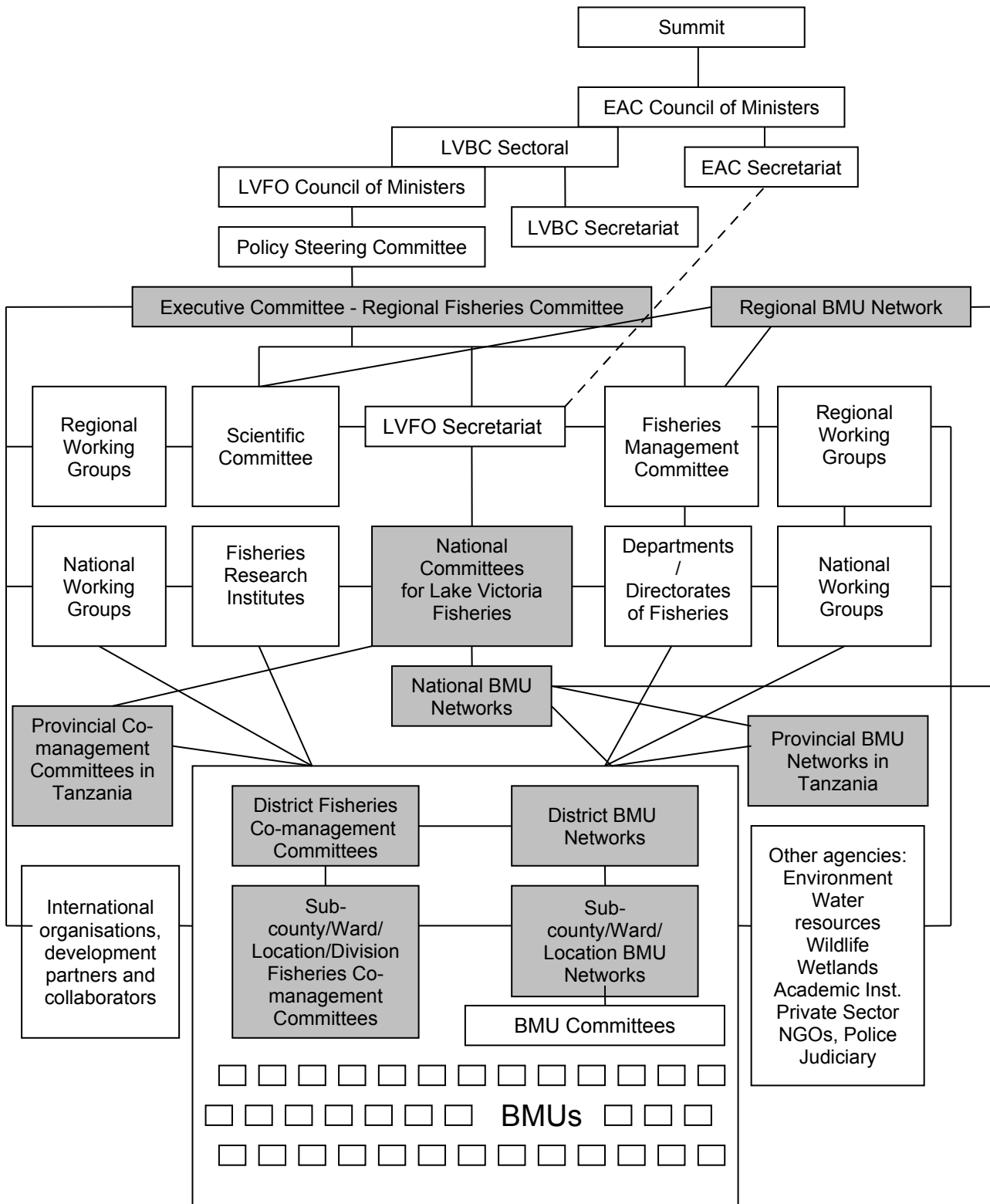


Figure 1. The institutional structure of fisheries co-management on Lake Victoria. Adapted from “An Overview of the Lake Victoria Fisheries Organisation”, LVFO Secretariat, July 2004.