FOOD SECURITY AND POVERTY ALLEVIATION THROUGH IMPROVED VALUATION AND GOVERNANCE OF RIVER FISHERIES IN AFRICA

THE GOVERNANCE OF SMALL SCALE FISHERIES IN ZAMBIA

ZAMBIA

Paper Submitted to the Research Project on Food Security and Poverty Alleviation through Improved Valuation and Governance of River Fisheries

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Summary

The governance of small scale fisheries in developing countries is increasingly receiving attention from academicians, policy-makers and development agencies among others. This is because of emerging evidence of the importance of small scale fisheries to the livelihoods of thousands of households in developing countries. Consequently, there is interest in understanding how governance reforms for such fisheries can better contribute towards poverty prevention and alleviation. The purpose of this paper is to highlight some of the reforms that have been attempted in the Zambian fisheries sector. The paper shows that while Community-Based Management Natural Resources initiatives have been initiated the results have been mixed. The major hindrance is that since the early 1990’s when amendments were made to the Fisheries Act to make fisheries management more participatory, to date, this legislation is yet to be ratified. These problems notwithstanding most fisheries have initiated local fisheries co-management reforms. In ninety-percent of the cases presented in this paper these reforms have been done through the support of donor-funds. The paper further shows that the introduction of a National Decentralisation Policy in 2001 might offer a window of opportunity through which the governance of small scale fisheries in Zambia can be further improved. This policy when combined with the National Environment Policy can create a conducive framework for the devolution of environmental management to district levels.
### Acronyms

<table>
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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADMADE</td>
<td>Administrative Management Design for Game Management Areas</td>
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<td>CAMAP</td>
<td>Conservation and Management Action Plan</td>
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<td>CRB’s</td>
<td>Community Resource Boards</td>
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<td>DoF</td>
<td>Department of Fisheries</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GMA’s</td>
<td>Game Management Areas</td>
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<td>IVMC</td>
<td>Integrated Village Management Committee</td>
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<td>JFTC</td>
<td>Joint Fisheries Technical Committee</td>
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<tr>
<td>MACO</td>
<td>Ministry of Agriculture and Cooperatives</td>
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<tr>
<td>NDP</td>
<td>National Decentralisation Policy</td>
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<td>NEAP</td>
<td>National Environmental Action Plan</td>
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<td>TA</td>
<td>Traditional Authority</td>
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<td>VNRC</td>
<td>Village Natural Resources Committee</td>
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<td>ZAWA</td>
<td>Zambia Wildlife Authority</td>
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<td>ZESCO</td>
<td>Zambia Electricity Supply Corporation</td>
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<td>ZMC</td>
<td>Zonal Management Committee</td>
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<td>ZRA</td>
<td>Zambezi River Authority</td>
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Introduction

According to Béné and Neiland (2006) governance is about how people share decision-making and how this affects their abilities to empower themselves and others. In the Zambian fisheries sector the issue of governance began to receive prominence in the early 1990’s following the need to involve users in management as one way of ensuring sustainability of the resource. Hence, the term Community-Based Natural Resources Management (CBNRM) was introduced through which institutions at the local level were created to allow users to participate in management. The results of these efforts form the basis of this paper.

The paper will initially give a wider perspective of the management of natural resources in Zambia in terms of efforts that have been made to improve governance. It will be shown that such improvement have not been wholesale but have been done on a sectoral basis. Consequently, some natural resources such as wildlife have had a longer experience of involving users in management compared to others such as fisheries. The second part of the paper locates the Zambian fishing industry within the broad Zambian economy. This is intended to highlight the importance of the sector in terms of food production and creation employment. The third part of the paper presents case studies of the various efforts that have been made in each of the fisheries where data is available towards instituting new governance structures. It is shown that while the broad objective is to involve users in management various local factors be they environmental, social and economic have also influenced the manner in which these efforts were employed. The final part is an assessment of the National Decentralisation Policy and how it can offer an opportunity in improving the governance of Zambian small scale fisheries.

The Management of Natural Resources in Zambia

Natural resources in Zambia were centrally-managed until the 1980’s when some governance reforms began to be implemented. The legal provisions for the management of the natural resources were contained in diverse acts such as the Wildlife Act, the Fisheries Act, the Forestry Act and the Lands Act. These acts are enforced by different government departments located in diverse ministries. They specify that the ownership of natural resources is vested in the president. They do not define the rights of local users in terms of access to the resources; how to derive benefits from them or how to get involved in management.

The introduction of governance reforms through Community-Based Natural Resource Management (CBNRM) initiatives was pioneered in the wildlife sector in the 1980’s. The increasing poaching of wildlife due to the inadequacies of a poorly-funded centralised system contributed to the high poaching levels. The Administrative Management Design for Game Management Areas (ADMADE) was premised on the transferring of responsibilities and benefits of managing wildlife to rural communities. In 1999 the
Wildlife Act was amended making local communities have legal rights over wildlife resources (Mwenya, et al. 1990). The communities benefit from revenues that are generated from wildlife. Communities are given 50% of the revenue which is further subdivided as 5% for the Traditional Authorities, 25% to the Community Resource Boards (CBR’s) and 30% is allocated to community development.

While ADMADE is presented as one of the best initiatives that involves communities in management and contributes towards the improvement of their livelihoods a critical analysis paints a different picture. The ADMADE institutional framework is a top-down decision making structure with some powers decentralized to district level structures but not at the community level (Bwalya, 2002: 1-29). The ADMADE directorate, which is the highest authority, is chaired by senior officers from the Zambia Wildlife Authority (ZAWA) and is responsible for formulation of all management policies in the country. At the community level the Traditional Authority is empowered to decide how revenue from wildlife should be shared. Local participation in crucial decision-making processes is lacking but communities are expected to play an important role in anti-poaching activities (Bwalya, 2002).

The popularity of the ADMADE approach to natural resources management, especially among the government and donors, gave impetus for the development of a policy framework that would lead to governance reforms in other natural resources such as forests and water and fisheries. It was also realised that tackling poverty and meeting the Millennium Development Goals would entail ensuring that adequate policies for the management of natural resources were put in place. By March 2005 a draft National Environmental Policy (NEP) was presented to cabinet for approval. The overall objectives of NEP was to bridge the piecemeal approaches to natural resources management across sectors and include local communities especially women in decision-making processes. The reforms that were instituted in the water sector were aimed at involving stakeholders in water management. This led to the devolution of decision-making responsibilities to the communities through the district authorities. In reality, however, the district authorities failed to further devolve these decision-making responsibilities to the communities as was the requirement under the water sector reform process. Instead, the district authorities were more concerned with cost-recovery and the commercialisation of water. They used the legal avenue provided by the reforms to set-up private and commercial water enterprises which would operate in liaison with the local authorities in the provision of water.

A process to reform governance in the forestry sector had been put in process in 1999. Following the NEP the Forestry Act was revised on the basis of including participatory approaches in the management and utilisation of forestry resources. The aim was not only to make the sector contribute to the country’s development but it was also aimed at including previously marginalised groups such as women and the youth in accessing and obtaining benefits from the forest resources. The revised forestry act has, to date, not yet been ratified by parliament.

It is noted from the account above that while there is commitment from government to introduce governance reforms in the management of natural resources through NEP very little has actually happened on the ground. As will be shown below, legislation for
involving fishers in management has not been forthcoming since the early 1990’s when draft fisheries legislation was presented to parliament.

Situating the fishing sector within the broad Zambian economy

About 7% or 53,700 km² of Zambia’s surface area is covered by water in the form of lakes, rivers, swamps and wetlands. These water-bodies provide a thriving fishing industry that has supported livelihoods for generations. The country has two major river basins. The Luapula Basin consists of the Chambeshi River, the Bangweulu Lakes and surrounding swamps and the Lake Mweru-Luapula fishery. The Zambezi catchment consists of the Luangwa River, Lukanga Swamps, Kafue River, Upper, Middle and Lower Zambezi. The middle Zambezi is now dominated by Lake Kariba. Other fisheries are Lake Tanganyika and the Mweru-wa-Ntipa fishery. These fisheries produce an estimated 70,000 – 80,000 metric tonnes of fish per annum (Walter, 1988 and MACO, 2002). About 20,000 people are directly employed in the industry. Another 250,000 are involved in fish processing, trading and subsistence fishing. The sector’s contribution to the overall Zambian economy in terms of the Gross Domestic Product (GDP) is estimated at 3.8% and it is the third largest employer after crop production and mining (MACO, 2002).

Most of the fishing in Zambia is conducted by individual fishers using simple unpropelled crafts such as dug-out canoes with gill nets and other traditional fishing methods such as the use of baskets and traps. Canoes comprise about 80% of the fishing fleet in the country (Mbulo and Mulikelela, 1999). Semi-commercial fishing is now found on Lake Kariba and Tanganyika where purse seines are utilised to catch sardines. These commercial fishing enterprises do not number more than 70 throughout the country (MACO, 2002).

In 1984 per capita fish consumption was estimated to be 10.23 kg’s but this has since declined to about 6.5 kg’s (Walter, 1988; Béné and Heck, 2005). Fish, however, still contributes about 20% of animal protein intake in most of the households. Surveys have further shown that with increasing levels of poverty in the country the proportion of fish to household food expenditure has increased from a low of 5.5% in 1993 to a high of 12% in 1996 (Central Statistical Organisation, 1997). This is due to the fact that fish offers one of the cheapest animal proteins in the country and is therefore a crucial entry point in terms of securing household food security.

I. Management and legislation of the fisheries sector in Zambia

Fisheries legislation in Zambia has not changed much from the time it was first enacted in the mid-1940’s. Until 1962 fisheries was administered under the Conservation Ordinance which centralised all management within the then Department of Game and Fisheries. In 1974 Department of Fisheries (DoF) was created and located in the Ministry of Agriculture and Cooperatives. This however, did not lead to any major changes. The Conservation Ordinance was renamed the Fisheries Act of 1974 which was merely a
removal of racial and discriminatory phrases that were in the previous ordinance. The new Fisheries Act, like the one before it, provides for the development of fishing, control of fishing, and registration of fishers and boats. The act places fishery management responsibilities in the national government with no provisions for community involvement.

Following the examples set in the wildlife sector through ADMADE, in 1994 the government approached the Food and Agricultural Organisation of the United Nations seeking technical assistance for revising the Fisheries Act. The draft bill sought to decentralize and devolve fishery management responsibilities from the Department of Fisheries to local communities. It was envisaged that this would facilitate the participation of local communities and fishers in the formulation and enforcement of fishery management regulations. Within the draft bill there was a provision to include Traditional Authorities on Fishery Management Boards. In 1998 a draft was presented to parliament for ratification. To date the revised act has not yet been passed into law.

II. Wildlife sector.

Small scale fishing by its nature is bound to affect and be affected by other actors who share the water resources from wherever fishing is conducted. These effects can either be positive or negative. The section below analyses the relationships between small scale fishing and other sectors that have a direct impact on fishing activities such as wildlife management; tourism and the generation of electricity.

The relationship between the fisheries and wildlife sectors in Zambia is much closer than is normally apparent. Before 1974 both sectors were managed under the Game and Tsetse Department which later came to be known as the Department of Wildlife, Fisheries and National Parks under the Ministry of Lands and Natural Resources. In 1974 the Department of Fisheries was created and placed under the Ministry of Agriculture. The wildlife sector was placed under the National Park and Wildlife Authority which was later renamed the Zambia Wildlife Authority (ZAWA). ZAWA’s mission statement is the preservation of the country’s natural heritage, ecosystem and biological diversity. In order to achieve these objectives National Parks through which to conserve the natural resources have been created. Most of these National Parks and adjacent Game Management Areas (GMA’s) encompass some of the country’s major fishing areas. There are National Parks on the Kafue River and Lower Zambezi. The entire Mweru-wa-Ntipa fishery is designated as a National Park. Strict regulations for the protection of resources in the national parks are enforced by a paramilitary wing of ZAWA. While no human habitation is allowed in National Parks, this is not the case with GMA’s. In the latter people can build structures and some livelihood activities such as farming and fishing are conducted although closely monitored by ZAWA officials.

In the GMA’s, small scale fishers are accountable to ZAWA. They have to pay ZAWA levies whenever they conduct any fishing from waters located in GMA’s. Similarly, fish traders have to pay a levy whenever they are passing through the GMA’s on their way to or from the fisheries. The levies obtained from small scale fishing and trading is used by ZAWA to support the activities of Community Resource Boards (CRB’s). These CRB’s
are ZAWA’s anti-poaching organs and in some fisheries such as the Kafue Flats, the CBR’s have been used by ZAWA to apprehend fishers who do not observe the annual fish closure. Similar cases have also occurred on Lake Kariba where small scale fishers are routinely apprehended for encroaching on ZAWA land which is located on the lake’s islands on the grounds that they facilitate the poaching of wildlife. There is no small scale fisheries representation on the ZAWA board. Consequently, small scale fishers have no avenue through which to present their grievances when fishing from GMA’s. Although in principle the DoF officials are supposed to work in liaison with ZAWA their influence is very limited. They are not as well-funded and equipped as ZAWA and are hence perceived to be junior partners in the arrangement.

III. Water rights

The use of all water in Zambia falls under the Water Act of 1948 which places all ownership of the resource in the country in the President. Private water is defined by the riparian principle. Public water refers to all water found in streams, lakes, swamps or marshes which form part of the natural drainage system (Chileshe et al., 2005: 1-12). It is in this type of water bodies that small scale fishing takes place. While the Water Act is the main legislation governing the use of water it does not make any mention of small scale fishing. Consequently, access to fishing grounds is generally through ‘open-access’ and customary rights as this is not enshrined in the Water Act. Water rights are only issued by the Water Development Board under the Ministry of Energy and Water Development (MEWD) to users with volumes of water above 500 cubic meters. This generally affects large scale water users such as water supply firms, industrial users and power generation and irrigation firms. The extraction of water especially for irrigation and power generation such as that found on the Kafue River has an impact on small scale fishing. Small scale fishers have to move their settlements and also look for new fishing grounds whenever water is released for power generation or extracted for irrigation purposes. However, there is no provision for small scale fishers’ presentation on the Water Development Board.

IV. Power generation

Most of Zambia’s electricity is hydro-generated. Major river systems such as the Kafue and Zambezi have hydro-electricity schemes. Lake Kariba came into being primarily to store water for the generation of electricity. Other power stations have been built on smaller rivers such as the Lunzua, Lusiwasi, Mulungushi and Lunsemfwa. Compared to other sources of energy hydroelectricity is "green," and tends to be much more preferable than other sources of energy such as coal. However, hydro-electricity has far-reaching consequences on the livelihoods of people who are displaced by the resulting floods. The creation of Lake Kariba led to the displacement of about 57,000 people and disrupted a subsistence economy based on shifting agriculture and fishing (Scudder, 2005). The flooding has also led to environmental degradation in the over-populated resettlement areas. The creation of the Itezhi-tezhi dam on the Kafue River has reduced the seasonal
flooding of the river affecting fish spawning cycles and disturbing human settlements (Handlos, 1982).

The Zambia Electricity Supply Company (ZESCO) is a government-owned company responsible for power generation. ZESCO views power generation as being the mainstay of all economic activities in the country and should thus receive priority compared to small-scale fishing and agriculture which are considered to be secondary (Business Post, Tuesday April 10th 2007). This perception allows ZESCO to conduct its activities on rivers where it generates power without due regard to small-scale fishing. On the Kafue River the livelihoods of small-scale fishers are annually disrupted whenever ZESCO opens flood-gates to control the flow of water. This is usually done at short-notice and fishers have to abandon their dwellings and seek shelter on higher grounds.

Similarly, the Zambezi River Authority (ZRA), which is responsible for Lake Kariba, does not consider fishing activities as one of its functions neither does it have representation from the relevant ministries. Its main function is to maintain the reservoir for the benefit of the power generating companies in Zambia and Zimbabwe.

V. The tourism sector

In an effort to increase foreign currency earnings, Zambia has put emphasis on attracting tourists. One of the country’s main attractions in the tourist sector is sport angling. The Tiger Fish (*Hydrocynus vittatus*) is particularly prized by tour operators and sport anglers because of its fighting capabilities. On the Zimbabwean side of Lake Kariba there is an annual Kariba International Tiger Fishing Tournament which is regarded as the African qualifying round for the annual International Game Fish Association Tournament and attracts participants and fish-gear manufacturing companies from all over the world. In Zambia a similar tournament is held on the Kafue River in September. There has been concern by organisers of these tournaments that the average weight of the Tiger Fish caught during these events has been going down (Machena, 1993). The blame is placed on small scale fishers who fish in river mouths that are considered to be the breeding areas for this fish thereby reducing the quality of sport-fishing species. This is considered to be a major threat to tourism. There is also a prohibition of gill net fishing in some sections of Lake Kariba to prevent the nets of small scale fishers from interfering with the propellers of sport fishing boats (Zambia/Zimbabwe, 1996). Small scale fishers have no representation on the various tourism boards.

**Governance within the fisheries sector**

The need to introduce governance reforms through various Community-Based Natural Resources Management initiatives that occurred after the mid-1980’s affected the fisheries sector as well. It is important to note that these reforms have occurred despite the absence of defining legal and policy framework. They appear to have been driven by donor-agencies and the general perceptions that most of the fisheries were being exploited unsustainably hence there was need to come up with new management regimes.
Similarly, the Structural Adjustment Programmes (SAP’s) reforms that took place during this period rendered the role of DoF irrelevant. At national level such departments were not considered to be crucial and they were denied adequate funding and most of the staff was laid off. Additionally, the SAP’s led to the contraction of the formal sector pushing most of the people who had been employed in this sector into small-scale fishing (Jul-Larsen et al., 2003). The resultant conflicts between immigrants and their hosts over fishing and other resources, in the face of declining government funding to DoF, led to the emergence of local management arrangements to contain them.

The above factors may explain why co-management arrangements, as another version of governance reforms in Zambia’s fisheries, have emerged at varying periods in fisheries located in different locations. In 1993 efforts were being made in the Lake Kariba fishery to introduce new management arrangements while in the Kafue Flats these did not emerge until after 2002. This has led to the emergence of local fisheries co-management variants that share little with similar initiatives elsewhere within the country. While some of the reforms emphasise the need to involve Traditional Authorities (TA’s) others try not to include them in the new institutions. The section below explains how the co-management arrangements in five of the fisheries where literature and other sources of information are currently available emerged and the current status.

I. Lake Kariba

The process that led to the introduction of a fisheries co-management arrangement in Lake Kariba was facilitated by a donor-funded project in 1993. The project’s broad objectives in the fishery were aimed at strengthening institutional capacities and carrying out socio-economic studies relevant to the derivation of an integrated lakeshore development plan (Chipungu and Moinnudin, 1994). The TA’s argued that the prevalence of immigrant fishers from other parts of the country had led to an increase in the use of illegal fishing methods and a general rise in criminality. At the time about two-thirds of active fishers in Lake Kariba were immigrants (Malasha, 2002). The TA’s objective of actively participating in the co-management process was to control the activities of immigrant fishers. Similarly, the semi-commercial fishers, who target a sardine locally known as Kapenta, argued that the scattered nature of small-scale fishers along the entire shoreline and on the islands was a contributing to increased theft of their catches. The local authority complained that they were not getting adequate revenue from small scale fishers as they were scattered all over the fishery. All these factors gave direction to the type of governance reforms that took place in Lake Kariba.

Administratively, the reforms led to the creation of four zones in the fishery each to be administered by a Zonal Management Committee (ZMC). The ZMC’s was to comprise of a TA, fishers and business persons and representatives of local authority and DoF. All positions on the ZMC’s were elective save for that of the TA who also happens to chair the ZMC’s. In each fishing camp and below the ZMC’s, Integrated Village Management Committees (IVMC’s) were instituted. These comprise of an elected chairman from among the artisanal fishermen in that camp, three elected ordinary members, a village headman, a Fisheries Assistant and a Village Scout appointed by the DoF. The IVMC's
were given the task of controlling access to the fishery by vetting new entrants. In addition, the committees were also going to be responsible for enforcing and monitoring fishing regulations.

The ZMC’s and IVMC’s were to be financially supported through the establishment of a revolving fund. Initial contribution to this fund would be made by the donor project. The DoF would then lobby for the amendment of the Fisheries Act to legalise the operations of the new management plan so as to legitimise the contribution of 60% of the money it collected from fishing licences to the ZMC’s and IVMC’s. Similarly, the amendments to be made to the Fisheries Act would also compel the local authority to pay 40% of the money it collected from fish levies to these committees. Two years after the launch of the co-management process the Fisheries Act had not been amended to make the ZMC’s and IVMC’s legal entities. Thus the DoF was not only unable to legally surrender the 60% from licence fees but it did not have capacity to collect it in the first place. The local authority also reneged on their promise to surrender 40% of the fish levies they collected to the ZMC and IVMC’s. The local authority argued that in accordance with the Local Government Act it had no basis upon which to surrender the revenue to ‘illegal’ institutions such as the ZMC and DoF (Malasha, 2003). The implementation of the entire co-management process ran into difficulties after 1998 when the donors indicated that they could no longer fund any activities.

In order to obtain some legitimacy the ZMC’s and IVMC’s registered themselves as voluntary organisations under the Registrar of Societies Act. This has given them some form of recognition from the local authorities who have since agreed to remit 25% of the money from fish levies to them. The DoF has also agreed to let the ZMC and IVMC’s keep some of the money they levy fish traders when other fisheries in the country are closed. The payments of levies to the ZMC’s were also made possible partly by the role of the Traditional Authorities in persuading the local authorities to do so.

The institutional framework created by the co-management was limited to a number of actors. These included the DoF, the local authorities, and the TA’s. The fishers, especially immigrants, are participants by virtue of the fact that the whole process was designed to control their operations. As a result, participation in ZMC and IVMC meetings was usually dominated by TA’s, the semi-commercial fishermen and DoF officials. For instance, a meeting called to discuss the modalities of the new co-management arrangements in 1994 attracted 56 participants. These consisted of Tonga chiefs and headmen, staff from DoF, representatives of government and local authorities along the lake shore. Out of a total of more than 2000 fishers who were active in the fishery at the time only 10 were invited (Chipungu and Moinnudin, 1994).

The legal and administrative framework for co-management is limited in as far as interactions with other non-fishing sectors are concerned. It does not provide an avenue for fishers to engage with other actors such as the Zambezi River Authority and ZESCO. The mandate of the ZMC’s and IVMC’s are strictly related to fishing and other related activities. There is no representation on matters relating to small scale fisheries on the Joint Fisheries Technical Committee (JFTC) of Lake Kariba composed of members from DoF in Zambia and the National Parks and Wildlife Authority in Zimbabwe. Although the mandate of the JFTC is to be responsible for all matters related to fishing on Lake
Kariba this has mainly been confined to the allocation of harvesting quotas to the semi-commercial fishers of Kapenta (*Limnothrissa Miodon*).

**Current Status of co-management**

The co-management arrangements instituted on Lake Kariba are an example of deconcentration. The DoF still maintains the overall management of the fishery through the Fisheries Act albeit with limited success owing to inadequate resources. The ZMC’s and IVMC have been given the responsibilities of controlling access and enforcing fishing regulations. They have not been given the power to make decisions. During meetings the decisions of the unelected chairpersons, who also happen to be the traditional leaders in the area, carries the day. In particular, immigrant fishers are not free to question some of the decisions taken by the committees for fear of jeopardising their stay in the fishery. As a result, the conflicts between the immigrants and the locals have not been abetted by the introduction of co-management. The immigrants are still perceived as purveyors of illegal fishing methods in Lake Kariba.

One of the major impediments is that the ZMC’s and IVMC’s do not have legal recognition. They are unable to wrestle power from the other actors such as the DoF and local authorities because they are classified as voluntary organisations. The existence of the committees relies on the benevolence of DoF, local and traditional authorities. They exist to assist the other actors meet their different objectives of increasing revenue from the fishing community, controlling entry and settlement patterns. The situation is not helped by the fact that amendments to the Fisheries Act that would have made such committees legal, have not been passed since 1997 when revisions were made. The revisions were aimed at recognising the participation of communities in fisheries management. Currently, the 25% revenue that the committees are obtaining from the local authorities has enabled them to open bank accounts and have meetings on a regular basis.

In September 2007 the Zambian parliament made amendments to the Fisheries Act which called for the creation of Fishery Management Areas and Committees. In each fishery these committees would be responsible for the general development of their fisheries and the management of revenues and the reconciliation of the various competing interests. Members to the committees need to get the approval of the minister before they can become appointed and they can also be removed from office by the minister if they infringe certain provisions of the act. It is not clear at the moment how these new amendments will affect the operations of the ZMC’s and IVMC’s in fisheries such as Kariba. It is quite possible that the minister can appoint other actors to the Fishery Management Committee than those currently occupying the ZMC’s and IVMC’s.

**II. Kafue Flats**

While the introduction of co-management in the Lake Kariba fishery was prompted by the presence of a donor-funded project and conflicts among the actors, health and sanitation matters have informed the type of reforms that have emerged in the Kafue Flats on the Kafue River. This may also explain why governance reforms in this fishery...
emerged at a much later period compared to other fisheries in the country. The health issues in this fishery are due to the isolated nature of the fishing camps and the inadequate social and health services which has contributed to unsanitary facilities in the fishing camps. Interactions between fish-traders, the majority of whom are female, and fishers in ‘fish-for-sex’ exchanges has increased the prevalence of HIV/AIDS hence they are high on the agenda of the reforms. The issue of immigrant fishers was also a factor in the new management arrangements although this does not feature prominently in the Kafue Flats as is the case in Lake Kariba. According to Haller and Merten (2005) the sudden entry of ‘economic’ immigrants into the Kafue Flats in the late 1990’s, following the contraction of the country’s formal sector, led to competition over the resource between locals and immigrants and the marginalisation of subsistence fisheries leading to isolated conflicts.

As an entry point, a management committee was initially formed in one chiefdom and later spread to other fishing camps. The committees comprise of Chairpersons, Secretary, Treasurer and Trustees. Other interest groups such as the DoF, fish-traders and TA’s have also got representation. Every adult resident of a fishing camp is automatically a member of the committee even if they do not have any position. Elected members hold office for 3 years. An elected committee member who does not attend 3 consecutive meeting is replaced.

The functions of these committees tend to vary from one fishing camp to another. However, the most common functions of the committees are the implementation of by-laws; monitoring of fishing regulations; fighting the HIV/AIDS pandemic; sanctioning those who break the by-laws and regulating fish-trade so as to ensure that even local subsistence consumers are also catered for (Kafue Fish Project, 2007).

During the formative years of the committees between 2004 and 2005 the TA’s tried to influence the type of people to sit on the committees. However, by emphasising that members to the committees be selected through secret ballots the TA’s lost most of their influence. In order not to completely reduce the role of TA’s in the management of fisheries the committees have made the former as patrons. Consequently, the TA’s are regularly consulted and ordinary fishers and fish-traders who do not agree with decisions taken by the committees have the right to appeal to the TA’s. There has also been a complete end to the paying of ‘entry fees’ to the fishery a practice which was common prior to the reforms.

DoF was initially involved in the formation of the committees through the District Fisheries Officer. But the participation of DoF has generally declined. One explanation could be that the Fisheries Act does not recognise the drawing up of by-laws by the fishing communities. Consequently, there is a general belief that such committees are taking over the role of DoF. Another explanation could be that DoF considers health and sanitation issues that the committees have taken on board as being outside their day to day mandate.

At their inception the elected posts on the committees were male-dominated. This is because there was an initial perception that the committees represented the interests of the fishers (males) only. Observations in meetings held in recent years have shown that
female fish-traders have been elected to the committees although their participation in meetings has been marginal. This is because of their mobility in and out of the fishery.

The constitutions that govern the committees make it clear that elected members are accountable to members of the entire fishing camp. Measures have been put in place to sanction members, both elected and ordinary, who violate the constitution and the by-laws. The major problem of these by-laws in particular and the co-management in general is that they do not have legal recognition. As a result, they are unable to take to task other actors such as DoF and ZAWA officials who infringe upon their rights.

The main impediment to legal recognition is the length it takes to have a by-law ratified by government. Once the committees have agreed on the contents of the by-laws, as they have already done, they are supposed to deposit these with the Local Authority for at least thirty-days for inspection by members of the general public. The public is free to lodge a complaint on the by-laws in writing. These objections and the draft by-laws are then sent to the Minister of Local Government for his confirmation. No by-law made by the council has the force of law until it has been confirmed by the minister. As of now this process has not yet been undertaken in the Kafue Flats.

Current Status

If the governance reforms that have been developed in the Kafue Flats receive legal recognition, they will stand out as some of the most progressive in the management of fisheries in Zambia. Firstly, the reforms seek to address fisheries management from a holistic perspective by including issues of health and sanitation. This is an important avenue given the importance of small scale fisheries to livelihoods and the high prevalence of HIV/AIDS in most fishing communities. Secondly, the constitutions make those elected to the committees accountable to members. While in the Lake Kariba fishery TA’s have much more influence on the manner in which such committees run they do not wield as much influence in the Kafue Flats. In the latter, the constitutions allow them to play an advisory role in recognition of the role they play in the day to day lives of local people. Thirdly, through consultations and awareness campaigns the committees have deliberately included the participation of marginal groups such as fish-traders, subsistence fishers and migrant fishers.

Apart from the lack of legal recognition one of the other major short-comings is that the committees lack technical skills in a number of areas that they wish to tackle. They do not have members who have basic skills such as counselling for HIV/AIDS, book-keeping, and effective mobilisation of people (Petersen, 2007). All these efforts will, however, be in vain if the committees do not receive the official recognition to enable them to enforce the by-laws.

III. Mweru-Luapula Fisheries

Some of the initial efforts aimed at introducing co-management in the Mweru-Luapula fishery are attributed to the fishers themselves. In the mid-1980’s fishers began to form Fishing Associations (FA’s) whose objective was to specifically address the issue of net thefts which then rampant in the fishery. By 1998, there were about 75 FA’s (Kapasa,
2005). Realising the potential that the FA’s had in improving the management of the fishery between 1996 and 1997 DoF obtained donor-funding that heralded a consultative process aimed at coming up with a new management arrangement for the fishery. The FA’s became a natural entry point through which to do this. In 1998 a pilot co-management initiative was launched in one of the fishing villages called Mofwe and a year later the entire fishery was covered (Kapasa, 2005).

The institutional set-up is similar to that of Lake Kariba. At the local level there are Village Management Committees (VMC’s). The village headmen in each fishing camp represent the interests of the traditional authorities on the VMC’s. Other members are fishers themselves, farmers, business people and fish traders. Each chiefdom makes up a Zonal Management Committee (ZMC). The membership comprised of a Senior Chief or his representative, a Fisheries Officer, a representative of the Local Authority, FA members and other interest groups such as fish traders. Above the ZMC is the Mweru-Luapula Fishery Management Board which comprised of the most senior chiefs in the area and DoF. This initiative was called the Conservation and Management Action Plan (CAMAP). The main objective of CAMAP was to sustain fisheries production through better management of the resource on the basis of a community-based approach. This was to be done through fish conservation awareness, improving livelihoods and sharing of responsibilities between the government and the communities.

The framework did not, however, address how various actors will be accountable to their constituencies. It merely spelt out the roles that various actors were to play in the new management arrangement. Decision-making was still to remain with institutions above the fishing communities themselves. In particular, the role of traditional authorities was ambiguous and not properly clarified and varied from one part of the fishery to another. While some chiefs and headmen were supportive of the co-management initiative others made deliberate efforts to frustrate the VMC’s in their areas. The main reason for lack of support was that some chiefs derived benefits from the fishery and were against the VMC policy of conserving the resource such as the banning of fishing during the closed season. Some of the TA’s criticised the operations of the VMC’s on the grounds they contributed to fishers to stop paying tribute as they used to in the past (Kapasa, 2004). The role of local authorities was also seen as a hindrance to the smooth running of VMC’s The local authorities were perceived as only being interested in collecting fish levies without providing any services to the fishers.

While the CAMAP had a deliberate policy of including all actors in the VMC’s and ZMC’s the power dynamics among the different groups produced diverse results. In a survey carried out between 2002 and 2003 in the Mweru-Luapula fishery about 60% of the respondents agreed that they were well represented on the VMC’s but those who did not feel well represented cited the interference of traditional authorities in the running of VMC’s as a reason for not fully participating (Kapasa and Muyangali, 2005). Others were of the opinion that they were scared of accusations of witchcraft as a reason for not participating.

The role of women in the co-management arrangement was also spelt out as vital right from the inception of CAMAP. It was reasoned that women were some of principal beneficiaries of the fishery not only in terms of fish trading but in providing subsistence food to households. It was observed that in the Mweru-Luapula fishery women bartered
cassava for fish with which to feed their families. As a result they needed to be involved so that they do not lose their share of the fishery in the new arrangements (SNV, 1998)

What is interesting is that while 90% of respondents welcomed the idea of women participating in the activities of the VMC’s the situation on the ground was quite different. The rate of women’s participation differed from one VMC to another. In the Chipungu Zone about 50% of the respondents indicated that women did not attend any of the VMC’s meeting while in Pembe the respondents said that on average two women attended the VMC meetings. The women who participated in the meetings are said to ‘have stood firm when making decisions and they were not easily drawn into acts of corruption (Kapasa, 2004). As a result, most of those who hold the post of treasurer in the VMC’s are women.

Current Status

The situation on the Mweru-Luapula fishery is similar to that of Lake Kariba. The ZMC’s and IVMC’s have been given responsibilities without decision-making powers. The deconcentration process has improved the participation of fishers and others in management but the decision-making process has remained with DoF. There has been no legislation designed to make the ZMC’s and IVMC’s to pass and make decisions that affect them. They still operate within the umbrella of the Fisheries Act of 1974 which gives ultimate responsibility to DoF. Similarly, the influence of the traditional authorities in management has not waned as a result of co-management. While the traditional authorities are a vital tool in mobilization they also have their interests to protect such as the need to continue fishing for subsistence during the closed season. There is also no legislation designed to make the local authorities accountable to the fishers on the levies that they collect. The initial proposal was for fish levies to be shared between the local authority (70%) and the fishers (30%). This was resisted by the local authority and was never implemented.

IV. Lake Bangweulu

There are some similarities in the manner that co-management was introduced on Lake Bangweulu with the initiatives done in the Mweru-Luapula fishery. The rationale for co-management on Bangweulu, as on Mweru-Luapula, was conservation of the resource. It was observed that prior to co-management about 90% of the gear used in the fishery was illegal and that no single fisher owned a licence (Til and Banda, n.d). However, it should be noted that the definition of illegal gear in the Bangweulu is a contentious one. The fishery is mostly a swamp and most of the gear authorized under the Fisheries Act is almost unusable here. The lack of resources by DoF to police the fishery was also given as a reason to involve other actors in the management of the resource. This led to the introduction of a co-management approach in Lake Bangweulu in 1996. As was the case elsewhere it was done through a donor project.

Village Management Committees (VMC’s) were organized in about a third of the entire fishery. The other fishing camps were not involved due to inadequate resources. The VMC’s role was to continue with the awareness campaigns and to devise ways in which they would take some of the roles that were currently being performed by DoF. Above
the VMC’s, Zonal Management Committees were created. In Lake Bangweulu, the project made a deliberate effort to reduce the role of TA’s in the affairs of VMC’s. At the same time it was realised that such committees could not be initially formed without the support of the TA’s. Consequently, the TA’s were initially used by the project as a vehicle through which to mobilise the local people to participate in the co-management. As soon as this had been done deliberate efforts were made to marginalise the role of TA’s in the operations of the VMC’s. In turn, the TA’s used their influence and legitimacy to undermine the operations of the VMC’s.

Participation in the formation of the VMC’s by resident fishers was initially very encouraging (Kalonga, 2001). Most of them were in support of the idea of conserving the resource through the ban on the use of illegal fishing methods which were said to be conducted by immigrant fishers. For their part, the immigrant fishermen, who normally enter the fishery after conducting their agricultural activities in the upland areas, did not fully participate in the operations of the VMC’s. The immigrant fishers claimed that the legal fishing methods that the co-management process sought to enforce did not allow for the catching of small species of fish such as *Tilapia sparmannii*, *Barbus paludinosus*, *Petrocephalus catastoma*. They were of the view that participating in the co-management process would not be an economically viable option (Chanda 1998). These got the support of some TA’s who were suspicious of the activities of the VMC’s. Other groups such as subsistence farmers, who were also active in fish-trading, were not adequately represented on the VMC’s. This is because the VMC’s were perceived to be for active fishers only (Bwalya, 2001:1-5)

The role of the local authority in the new management arrangement was also ambiguous. The authority obtains a levy for each kg of fish exported from the fishery. In 2000 only about 10-15% of this revenue was ever collected and the local authority decided to be part of the co-management process so as to improve the collection of the levy from fishers and traders. Initially, the authority agreed to make available to VMC’s some of the funds from the levy for general community development in the fishery. Realising the potential of making the local authority contribute to their operations the VMC’s used the opportunity created by co-management to question the manner in which the local authority utilized the fish levy. The VMC’s insisted that the local authority account for all the monies that it collected as the fishers did not derive any benefits. The local authority reacted by making various efforts to undermine the VMC’s. In 1998 the government dissolved the local authority for ‘corruption and mismanagement’ but the new one did not perform any better either (Til and Banda, n.d). However, the new local authority did not resolve the issue of fish levies to the VMC’s by claiming that there were no legal amendments compelling them to do so.

**Current status of co-management**

As soon as project funds ended the VMC’s became inactive and currently, the co-management arrangements on Lake Bangweulu are not functional and can be considered to be ‘aborted devolution.’ The DoF is still responsible for management but hardly visible on the ground. The lack of participatory governance in this fishery is illustrated by an incident which occurred between 2002 and 2003 when irate fishers ransacked and
destroyed the DoF offices in the fishery. This followed complaints by fishers that the DoF was using high-handed methods to implement the annual fish closure.

The initial idea of co-management was to deconcentrate and decentralize the management of fisheries to the local level. This was reliant on the passing of a new fisheries act that would have legally recognized the operations of the ZMC’s and IVMC’s. But even if this act had been passed it would still have given DoF overall responsibility of decision-making. The fishers would merely have been asked to take over some day to day management such as controlling access and enforcing fishing regulations.

V. Upper Zambezi Fishery

Until the country’s independence in 1964 the western part of Zambia then known as Barotseland where the upper Zambezi fishery is situated, was a separate legal entity under the administration of the Barotse Royal Establishment (BRE). It was only in 1964 that Barotseland merged with the rest of the country to form what is now known as Zambia. For this reason, the role of TA’s in this region is more perverse than anywhere else in the country. As a British Protectorate overall power to manage natural resources in Barotseland was vested in the BRE with its hierarchical and stratified administrative system (Mukela, 2001). The paramount chief was regarded as the owner of the ‘country and animals’ and in turn he appointed people to oversee the various natural resources such as fisheries, forestry, land, livestock and wildlife. The main role of these representatives was to ensure that the resources within Barotseland used sustainably. The person responsible for fisheries ensured that fish was caught at the right time and that the fisheries reserved for the royal family were not encroached upon (Mukela, 2001).

Following the incorporation of Barotseland into what is now known as Zambia this traditional natural resources management system was greatly eroded. Central government departments took over the management of natural resources and the BRE was unable to use its influence to control access and the utilisation of the natural resources. Concomitantly, the new arrangement led to an increase in the use of destructive gear such as the use of fine-meshed nets. Commoners also began to encroach into royal fishing grounds something that had previously been discouraged by local custom.

In 1996 a donor-funded project initiated a participatory approach in the management of natural resources to ensure sustainability. This culminated in the formation of Village Natural Resources Committees (VNRC’s) in selected pilot sites. The stated objective of creating VNRC’s was to allow for the ‘deconcentration of resources to local institutions so as to make them more and more responsive to local development.’ (Sitwala, no date). The VNRC’s did not perform up to expectations due to a number of problems. Membership was drawn across political and traditional boundaries thereby increasing tensions between government officials and traditional representatives. Furthermore, the stratified nature of the community meant that certain ethnic groups, especially those who had traditionally been marginalised in local society and women were not well represented.
on the VNRC’s. The VNRC’s were also not able to function properly due to competition between the BRE and government departments as to who the VNRC’s would report to.

In 2001 the BRE proposed the need to develop local by-laws to empower local communities to manage natural resources. In association with the project the BRE supported the establishment of local administrative units which were to form the locus of community participation in natural resource management and administration. This was to ensure the emergence of ‘firm local management structures to ensure sound ecological and social economic maintenance. They also proposed legal and policy reforms that would re-assert the authority of the BRE over natural resources. The proposed by-laws did not improve the accountability and transparency in the management of natural resources. They merely sought to reduce the role of government agencies and increase that of the traditional authorities. While calling for the rehabilitation of the fishery resources through re-stocking and use of better fishing methods, they also called for stiffer penalties for those who broke the regulations. The penalties were to be imposed by the traditional courts (Mukela, 2001).

**Current Status**

The struggle for control of resources between the BRE and central government has continued. Efforts to improve governance have broken down on the type of institutions through which this should be done. The BRE is in favour of a governance system that recognises its authority. On the other hand the government through the DoF wants to maintain the status quo. This has led to situations where parallel management institutions in the same fishery compete for recognition. Like in the other fisheries in the country the problem is made worse by the absence of a general policy framework for the management of fishery resources.

**Avenues for further Governance Reforms in Zambian Fisheries**

Efforts to revise the Fisheries Act of 1974 began to be made especially after 1995. This was a result of the governance reforms that were taking place in the country’s fisheries in the absence of a legal and policy framework. In 1998 a draft Fisheries Act was presented to parliament for ratification. The draft called for the setting-up of an administrative structure comprising of a Central Fisheries Board at the national level, a Fisheries Management Board (FMB) at the fishery level, and Zonal and Village Management Committees at the fishing camp levels. These were supposed to be legally binding institutions that were supposed to implement fisheries policy at the various levels. Parliament declined to ratify the revisions.

In 2007 amendments were made to the Fisheries Act. The new amendments seek to create Fisheries Management Areas which would be responsible for developing Fisheries Management Plans. These plans would determine fishing quotas, identify any possible adverse effects to the fishery, specify the strategies to be adopted for effective management and development of a fishery and be responsible for trans-boundary
cooperation. These roles would be performed by a Fisheries Management Committee to be appointed by the minister responsible for fisheries. The amendments also give power to the minister to dissolve the committee. These amendments were approved by parliament and are now legal.

The new amendments are a direct reversal to the 1998 revisions and in essence have re-centralised the governance of the fisheries sector in Zambia. Not only have the amendments failed to take into account the existing structures in the various fisheries but the appointments to the new committees will be at the benevolence of the minister responsible for fisheries. This is a potential source of conflict as appointments to the committees may be done according to political expediency.

The other short-coming in the new amendments is that they do not provide the FMC’s with powers to revise the fishing regulations in line with existing local institutional and ecological realities. One major source of conflict in the management of fisheries in Zambia is the uniform applications of the fishing regulations to ecologically diverse fisheries. Management of the fisheries would be greatly enhanced and conflicts reduced if FMC’s were allowed to develop fishing regulations that take into account local realities.

The amendments have also not taken into account the need to have small scale fisheries represented on the boards of other sectors that have a bearing on small scale fishing operations. As pointed out above, other sectors such as wildlife, hydro-electricity generation and irrigation have a major and mostly negative effect on small scale fishing. Without representation on the boards of other sectors small scale fishing will continue to be perceived as a secondary economic activity.

The remaining avenue for improving governance of the fisheries sector is through the National Decentralisation Policy (NDP) of 2002. The NDP seeks to improve participation, increase accountability and improve responsiveness of government to local needs (Republic of Zambia, 2002). Among other central government functions that will be decentralised to district levels are the management and the conservation of natural and wildlife resources. Consequently, it is envisaged that fisheries will come under the management of district authorities. This provides an opportunity for local users to become directly involved in fisheries management.

However, there are still a number of challenges before this can be realized. Firstly, the NDP is silent on the role of Traditional Authorities in a decentralised set-up. As has been noted, the TA’s play a major although sometimes ambiguous role in the management of natural resources. As such they are a major player especially at district level. There is need, therefore, for the NDP to clearly spell out the role that they are going to play. Secondly, line ministries will still retain the core of their functions. For instance, the amended Fisheries Act of 2007 does not mention the decentralisation of DoF functions to district level. Thirdly, the capacity of districts to take over most of the functions that were done by line ministries is still very limited. They lack human resources to manage sectors such as fisheries; have low financial bases and they are still heavily reliant on central organs for most of their operations.
Conclusion

The paper set out to better understand the governance of Zambia’s fisheries. It was shown that while efforts have been made to improve the governance of natural resources in the country these have fallen short of expectations. One of the reasons is that legislation has not been passed by parliament along local people to be involved in decision-making. It was also shown that because of this situation each fishery has tended to implement its own version of fisheries co-management in the face of a legal framework in which to operate. While there have been some successes in others, co-management has completely failed in fisheries such as Lake Kariba.

Avenues to address the shortcomings have been proposed. The amendments of the Fisheries Act have been on the drawing board since 1998. While these amendments may go some way in improving governance they still fall short of expectations. Largely, this is due to the fact that no efforts are made in the new legislation to allow for the fishing sector to interact in the activities of the non-fishing sectors. Secondly, the National Decentralisation Policy does not spell out clearly how the small scale fisheries sector will benefit given the low priority that it receives at national level.
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