

# **Financing Fisheries Management and Administration:**

## **Concepts and Practices**

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## List of Acronyms

BMUs	Beach Management Units
ITQs	Individual Transferable Quotas
LCs	Local Councils
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MTEF	Medium Term Expenditure Framework
OECD	Organization of European Community and Development
PEAP	Poverty Eradication Action Plan
PRSP	Poverty reduction Strategy Paper
TAC	Total Allowable Catch

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## 1. Introduction

This report examines, from an economic perspective, the arguments for financing fisheries management and administration using cost recovery instead of using funds from transfers from treasury departments of government which are mainly public taxes.

In response to the issue of how fisheries management and administration can be financed, the paper attempts to answer a number of fundamental questions. The initial question has to do with the key elements that constitute fisheries management and administration. Based on the available literature, fisheries management is defined from the theoretical perspective as well as practical concepts. There is also an attempt to answer a fundamental question of why fisheries management is important. The answer to this question builds from how market forces, in any economy, are not able to maximize social welfare from common property and open access fisheries resources and justifies for non-market interventions – fisheries management.

Based on the definition and the rationale for fisheries management, some options for financing fisheries management are proposed. The paper describes the problems associated with management of common property resources like fisheries which are presumably publicly owned but are privately exploited. As a result of the arguments advanced, recovering costs of fisheries management from those who exploit the resource is proposed rather than relying on public taxes which are considered distortive.

The paper later provides some examples where costs of fisheries management have been recovered from industry and the extent to which these costs relate to the total value of landings. The paper concludes by highlighting the successes and failures in Uganda's attempt to recover costs of management. The paper does not make reference to aquaculture as a fisheries management practice to be financed by the options provided. It rather considers aquaculture as a private activity which should be private financed.

## 2. What does fisheries management and administration involve?

Fisheries management and administration is the process that involves provision of fisheries management services. Arnason (2002) classifies fisheries management to include three broad main categories which include; *fisheries research*, the *design and implementation of fisheries management rules* and *enforcement*. Research generates the information necessary for the design and implementation of the appropriate fisheries management system. Research also generates information for fisheries managers to set, for example, an appropriate Total Allowable Catch (TAC), impose appropriate gear restrictions and determine the number of fishing vessel permits to be allocated. Making appropriate decisions for the management of the fishery therefore requires both biological and economic research.

The designing and implementation of fisheries management rules is a process that involves; the designing of a fisheries management system; translating the elements in the

system into a set of rules and regulations; and implementing the system. In many countries of the world, an Act of Parliament is usually developed to enforce the rules and regulations by the Department or an Agency responsible for fisheries. A fisheries management system consists of a set of fisheries control variables such as TAC and fishing gear mesh size restrictions. Imposition of fisheries management measures such as setting appropriate TAC or effort limitation, and associated administrative functions, is an example of implementing some control variables.

Enforcement is a function which comprises of control and surveillance of the fisheries activities, the enforcement of fisheries regulations and the prosecution of those who do not comply with the fisheries management regulations. The activity includes both on-lake and on-land surveillance and monitoring. The on-lake enforcement activities may involve the use of patrol vessels or airplanes. The on-land enforcement activities involve among others the assessment of the volume of catch at landing places. The function also involves the administrative and judicial procedures, which are necessary for the processing of violations.

Most studies including Wallis and Flateen (2000), Arnason (1999), Hatcher and Pascoe (1998), Kaufmann and Geen (1997) and Cox (2002) conclude that, enforcement activities usually take a biggest proportion of the fisheries management costs as compared to fisheries research and designing and implementation of fisheries rules. In some countries however, enforcement activities are considered, and undertaken, as part of implementing fisheries management regulations.

### **3. Why is fisheries management important?**

Before exploring why fisheries management is crucial, it is important to look at the key characteristics of fisheries as a resource. Fisheries is a common property resource and is also characterized by its renewable nature. Fisheries is an interactive resource and the size of fish population in any given setting depends on biological factors (which include the quality and size of the habitat as well as food supply) and actions of society which involves harvesting of the fish for economic and welfare gains. In many fishing water of the world, fisheries is open access and this nature exacerbates the problems of optimizing gains by society.

The actions of individuals and society as a whole are usually aimed at maximizing total welfare and therefore in any given circumstances, society and individuals are usually faced with an economic problem<sup>2</sup>. In the three basic types of economic organizations which deal with the economic problem, vis-à-vis the traditional, command and control and market economies, only the market system<sup>3</sup> solves the economic problem. However in the case of common property resource like fisheries, the market does not solve the economic problem of social welfare maximization. If the market system was to apply in a

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<sup>2</sup> The economic (and social) problem is how to arrange production and consumption so as to maximize national economic welfare.

<sup>3</sup> The market system works under the condition that there is full information on all goods traded in markets and there is perfect competition.

communally owned fisheries resources, especially under the open access, all fisheries would be over-fished in the short run and they would collapse. In the context of market system where prices (of fish and other associated products) dictate demand and supply of fish, individuals would fish beyond Maximum Sustainable Yield until the profits from a fishery are eroded and harvestable stocks depleted. This is why the fisheries resource cannot maximize economic contribution to society or individuals under the market system. This is a fundamental reason why it is necessary to resort to special fisheries management. Fisheries management (whether through biological or economic systems<sup>4</sup>), therefore, involves manipulation of fishing effort targeting maximization of profits and rents from a fishery for social and economic gains.

Fisheries management, therefore, is a tool that aims at maximizing total welfare from the open access and common property resource. Fisheries management is also important for generating economic rents<sup>5</sup>. Empirical studies suggest that well-managed fisheries usually yield economic rents and this makes it important to manage fisheries so as to maximize rents from fisheries.

Moreover, fisheries is an important resources in many countries' economies. Fish exports contribute greatly to foreign exchange earnings of many countries. In sub-Saharan Africa and south East Asia, the fisheries sector is the main source of livelihood for many fishing communities and at the same time, a quite substantial number of people are employed in the fishing industry either as owners of fishing vessels, crew members, or as owners and workers of industrial fish processing establishments. A majority of people are also involved in the in transport and marketing of fish. It is also important to note that fisheries contribute to food security in many developing countries. It is therefore important that fisheries are managed to avoid collapse and eventual loss of these contributions. Fisheries management is however costly. It requires sufficient and sustainable financing sources to maintain and sustain these benefits.

#### **4. What are the options for financing fisheries management?**

Most fisheries management programs in world are entirely financed by taxpayers (Andersen and Sutinen, 2002). Costs of fisheries management is financed through transfers from government treasuries, under the Ministries responsible for Finance. However, in the recent past, a number of countries have changed the way fisheries

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<sup>4</sup> Arnason (2001) classifies fisheries management systems into two basic types, biological fisheries management and economic fisheries management. Either of the two would require financing to be able to maximise social and economic welfare as well as rents from the fishery itself.

Biological fisheries management involves interventions such as mesh size regulations, setting TAC, area closures, etc while economic fisheries management is divided into direct and indirect methods. Direct economic restrictions include limitation of fishing days and the number of boats or type of engines to be used. Indirect economic fisheries management systems are divided into taxation and various types of property rights.

<sup>5</sup> An economic rent is the maximum economic surplus that can be extracted from the fishery while the fishing industry continues to operate efficiently. One rationale for extracting some or all of the potential rent from the fishery is based on the premise that the fish stocks represent a national resource and that society as a whole should receive a share of the benefits from their exploitation.

management is financed. Fish, as a common property resource, is a public resource but many countries have regulated that the state holds the resource in trust on behalf of the people. As a result, the state undertakes to manage the resource for the benefit of its people. This, therefore, means that the state should provide resources, either from public taxes or otherwise, to finance costs of fisheries management.

However, in his theory of tragedy of commons, Hardin (1968) argues that in many cases few individuals or groups benefit from a commonly managed property resource. Hardin (1985) further indicates that although fisheries is a common property resource, a few individuals benefit from the resource while the public is tasked to provide pool resources to finance costs of fisheries management. His theory explains the contradiction in the distribution of costs and benefits in managing a common property resource. The theory explains how managers, amongst the groups that own the common property, distribute benefits and costs differently. The benefits are privatised, through granting sole ownership of individual enterprises that exploit the common property, while costs are commonised through financing them from public taxes. Hardin (1985) called this the "wedding of commonised costs to private profits" hence the P<sup>2</sup>C<sup>2</sup> game [privatise profits and commonise costs].

Moreover, economic theory reveals that taxes are generally distortive. In support of this theory, it means that financing fisheries from public taxes may be distortionary. This is based on the premise that financing fisheries management from public revenues increases the financial burden of the tax payers and strains tax payers who may not be benefiting from the fishing industry (see Arnason *et al.* 2002 and Keizire, 2002).

Financing fisheries management through cost recovery has of late generated a lot of attention in many fishing nations in the world. Cost recovery (following Hatcher and Pascoe 1998) means charging the fishing industry for the public costs of fisheries management. Although fishermen or fishing firms incur private costs such as purchase of fishing gear, the depreciation of capital, the crew's wages etc, there are also public costs, which are associated with managing or regulating the fishery. These include research costs, monitoring and surveillance costs and costs of designing and implementing fisheries management rules.

Keizire (2002) explores a number of options for financing fisheries management through cost recovery. He considers three main reasons why cost recovery in fisheries is considered important. *Firstly*, well-managed fisheries usually yield economic rents<sup>6</sup>. Financing such fisheries is like subsidising an industry that would otherwise finance itself. His argument is that it is not economically justifiable to collect money by distortive taxation to subsidise a profitable industry.

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<sup>6</sup> An economic rent is the maximum economic surplus that can be extracted from the fishery while the fishing industry continues to operate efficiently. One rationale for extracting some or all of the potential rent from the fishery is based on the premise that the fish stocks represent a national resource and that society as a whole should receive a share of the benefits from their exploitation.

With theoretical demonstrations Keizire (2002) further argues that cost recovery can generate a stronger incentive (for those paying the costs) to demand better services and this may contribute to more efficiency in the provision of these services and fisheries management in general. If the fishermen or fishing firms pay for the costs of fisheries management, the management service providers will come under more pressure to deliver these services at the time and of the quality required. This reduces or eliminates wasteful financial allocation to services that may not be of major importance to the fishery but rather benefits the fisheries managers. Fisheries managers may therefore be induced to adopt cost effective methodologies to deliver fisheries management services.

*Thirdly*, cost recovery reduces the need to finance fisheries management from public tax revenues. Economic theory reveals that taxes are generally distortive. In principle, cost recovery means that non-distortive taxation is substituted for distortive taxation.

Keizire (2002) further explores a number of options for recovering costs of fisheries management and administration using charges. He categorises them as charges on access to fish, charges on the use of fishing inputs and charges on the fish output. Charges on fishing permits, boat (vessel) licences are examples of *access* charges. Charges on fishing gear, tenders of managing fish landing centres, fish landing tolls etc, can be categorised as charges on the *use of inputs* to the fisheries. Charges on the value of landings, such as levies or charges on the value of fish exports are the examples of *product* charges. All of these can be used as cost recovery options although a closer look at each option may reveal different economic implications on both creating efficiency in management and as a fisheries management tool<sup>7</sup>. The following discusses the nature and type of each charge category.

**Access** or entry charges are charges imposed on licences of fishermen or to the fishing vessel permits in an exchange of a right to fish. They represent an attempt to solve problems of open access fishery although they do not solve the common property problem. Access charges do not take account of whether the rights are used or not. Obtaining the right to fish, in form of licence or permit, is not dependent on whether the right is going to be used or not.

Access charges may be simple to administer in fisheries where entry is on the basis of a licence or a permit (Hatcher and Pascoe 1998). The point that the charge is independent of the actual amount of total effort employed by the fishery renders it a fixed cost. Economic theory classifies access charges as *regressive* (Hartwick and Olewiler 1998). They increase a fisherman's fixed costs and have a proportionally greater financial impact on smaller scale and less efficient fishermen.

**Input** charges are charges, which are imposed on individual units of fishing effort. They, therefore, vary with each unit of effort used and consequently are variable costs. They include taxes on fishing inputs such as gear, fuel or days at sea, use of landing facilities and management of landing facilities. They tend to be *distortionary* as they increase the

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<sup>7</sup> See Keizire (2002) for the different economic implications of charges on both creating efficiency in management and as a fisheries management tool

cost to fishermen of certain inputs. This results in less efficient combination of inputs from a social perspective. Charges on tenders of managing the landing facilities and use of landing facilities may be easier to enforce than charges on individual unit of effort.

There are some problems associated with such charges. Taxes on fishing inputs, such as engines, for example, may be difficult to enforce as the fishermen tend shift to using different engine sizes. There are also problems with charges on the fishing gear. Their complexities in terms of gear size and its configuration may confuse the one who is setting the charge.

It is worth noting here that the common problem of any tax regime is evasion. Nobody wants to pay tax therefore people always seek ways to avoid paying it. This is analogous with non-compliance with regulations and the rest of the judicial processes, which are nonetheless costly.

**Output charges** are charges that are imposed on the outputs of the fishery such as charges on landed catch. Outputs of the fishery include fish catch/landings, and processed fish for exports. Hartwick *et al.* (1998) notes that charges on catch reduces total revenue received for each unit of effort employed in the fishery. Such charges will reduce the net profits of fishermen or fishing.

Charges such as levies on fish exports are often easy to administer especially in a sector that values the importance of well-kept and easily accessed records. They are however distortive as they tend to divert fish from exports to domestic use.

Charges on landings, on the other hand, may not be easy to administer. They can be effective if the enforcement system is strong although this will usually be expensive. In countries where co-management or self-management systems are working well, these enforcement costs are usually less.

## **5. Some world experiences in financing fisheries management and administration?**

A general study done in OECD countries<sup>8</sup> reveals that central governments contribute substantial resources towards fisheries management. Wallis and Flaaten (2000) indicate that during 1997 alone, US\$ 507 million was spent on fisheries research in OECD countries representing 8% of all government financial transfer to fisheries. The same study found out that approximately US\$ 978 million was spent on costs associated with fisheries management (16% of all government financial transfers to fisheries). Approximately US\$ 752 million was spent on fisheries enforcement in OECD countries in 1997 (12% of all government financial transfers). Wallis and Flaaten (2000) report

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<sup>8</sup> OECD countries include Australia, Canada, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, United Kingdom, Iceland, Japan, Korea, Mexico, New Zealand, Norway, Poland, Turkey and United States, Czech Republic, Hungary, Luxembourg, Slovak Republic and Switzerland.

that, for all OECD countries, expenditures on fisheries management are about 6 % of the value of landings.

In many countries of the world, the proportion of fisheries management costs to the value of landings range from as low as 3% to more than 30%. Arnason et al. (2000b) reports that the proportion of cost of fisheries management to the value of landings varies between 15% to 25% in Newfoundland, dropped from 13% to 8% in Norway because of increase in the value of landings and only 3% in Iceland. Cox (2002) reports that from 1993 to 1999, the costs of fisheries management averaged 7.2% of the value of landings across the Commonwealth fisheries of Australia.

Australia provides one of the good examples where cost recovery in fisheries has yielded promising results in terms of raising revenue for financing fisheries management and administration. The extent to which the recovery approaches have led to increased efficiency in Australian fisheries management may, however, be an issue of debate. Australia introduced cost recovery<sup>9</sup> approach in 1984 with the passing of two bills, which allowed collection of a levy from the fishermen to fund fisheries management services (Andersen, Sutinen and Cochran 1998). Andersen *et al.* (1998) also report that, in 1995 after the introduction of the law, levies totalling 38% of management costs were collected from fishermen in the Northern Prawn and Southern Bluefin Tuna fishery. Cox (2002) reports that up to 57% of the costs in the Commercial Commonwealth fisheries of Australia are currently recovered.

In Denmark, cost recovery approach has been used on a limited scale. A legal framework for using a partial cost recovery policy exists.<sup>10</sup> Legislation passed in 1998 has created a good platform for financing fisheries management through cost recovery. Andersen *et al.* (1998) report that the only form of efficiency so far created is through the interaction between the fisheries management body and the users of fisheries management services.

Andersen *et al.* (1998) reports that the United States federal and state governmental expenditures on fisheries are approximately US\$1 billion annually. Recovering costs of fisheries management is well documented within law and policy in the United States. Examples in this case include Magnuson-Stevens Fisheries Conservation and Management Act (1996) and the Wallop-Breaux Amendment (1984)<sup>11</sup>.

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<sup>9</sup> The policy on cost recovery in Australia originated in the mid 80's based on the philosophy that the users of Commonwealth services should pay for the services in proportion to the benefits they receive. Along with this policy, there was recognition that beneficiaries of Commonwealth services, such as fishers, were entitled to have a significant input to management decisions, including those, which affect management costs. See also Cox (2002)

<sup>10</sup> See Andersen *et al.* (1998)

<sup>11</sup> Magnuson-Stevens Fisheries Conservation and Management Act of 1996 (*Public Law 95-265 As amended through October 11, 1996*) and the Wallop-Breaux Amendment of 1984 under the Sport Fish Restoration Act of 1950 under the laws of the Federal State Government, among others. The sport fish restoration programme is funded by the revenues collected from levies. An excise tax on some of the items by the US Fish and Wild Life Service is returned to the states for managing fishing activities. The Wallop-Breaux Amendment (1984) led to establishment of the Trust Fund named the "Aquatic Resource Trust Fund" whose resources are generated through fish levies.

In Tanzania, cost recovery as means to finance fisheries management services is one of the success stories in recovering costs of fisheries management in Africa. A 6% (called a fish export retention scheme) on the value of fish exports (f.o.b. price) is financing 100% fisheries management services. The Fisheries Division officials presented a case to their Ministry of Finance to allow the sector to recover costs of management from the fishery. This was granted on a pilot basis and the scheme has since proved practical and encouraging.<sup>12</sup>

In countries where the quota system determines fishing rights, recovering costs of management may be relatively easier. In 1998, for example, New Zealand, imposed a resource rent charge on the holders of Individual Transferable Quotas (ITQs) which are allocated on quantity of fish rather than the share basis (Hatcher and Pascoe 1998).

New Zealand introduced cost recovery in 1994 following an agreement between the Ministry of Fisheries and the fishing industry to shift from collecting resource rentals to using a cost recovery approach. Wyatt (2002) reports that cost recovery has since increased the amount paid to the New Zealand government compared to what was paid through resource rental charges. Resources amounting to more than 70% of fisheries management costs and 5.5% of landed value were collected in 1996. In 1999, the Ministry of Fisheries embarked on a reform process of ensuring that the cost recovery regime improves efficiency of fisheries management services.

Canada started recovering costs of fisheries management in 1991 following the introduction of individual quota system for the halibut (Hatcher *et al.* 1998). The most interesting case here is that the amount of revenue collected in 1991 exceeded the estimated management costs by 33%.<sup>13</sup> In 1995, the Canadian Department of Fisheries and Oceans introduced a charge structure that distinguishes between different types of fisheries, where fishermen operating in non-quota fisheries pay a flat charge, and increments based on the value of their average landed (Kaufmann and Geen 1997).

Iceland does not have a specific legislation on cost recovery but a number of charges exist within the Icelandic fishery. The charges are contained in the Icelandic Fisheries Management Laws and Regulations (2001/2002). According to the Icelandic Fisheries Management Laws and Regulations (2001/2002) and officials from the Directorate of Fisheries, every fishing vessel obtains a fishing licence at a small fee of about US\$1,650. Vessel owners also pay charges for costs of fish inspection and surveillance. This is paid as a fixed price for each tonne of allocated quota. Small vessels that do not have quotas have special rules, which allow them to pay the fee on the basis of catch.

There is also a fee that is paid on registration of quota transfers. This fee ranges from US\$18 to US\$20 for each transfer application form depending on the type of transfer (permanent or rental). The other category of charge is a penalty that is based on quota

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<sup>12</sup> These facts are based on individual discussion with fisheries management officials in Tanzania.

<sup>13</sup> see Hatcher *et al.* (1998)

holders who exceed their quota limits. The penalty is based on the percentage of catch value. These fees are remitted to the Marine Research Institute (MRI) for financing fisheries research. In 2000, US\$219,000 was collected from this penalty compared to US\$537,000 in 1994. Although this is a penalty that is enforced only when the quota limits are exceeded, it generates significant revenues for the MRI.

The mentioned countries so far have not reached the level of efficiency gains described by Andersen and Sutinen (2002). Since the introduction of cost recovery in 1994, New Zealand finances fisheries management based on an approved "fisheries plan". Although the plan is approved by the Minister of Fisheries, Wyatt (2002) reports that it reflects the interests of the users of the resource and the providers of the management services. This is a step forward towards the efficiency. Cox (2002) also reports that Australia formed a management advisory committee, which is comprised of members from the industry and representatives from the central management body - the Australia Fisheries Management Authority. Cox (2002) notes that the committee makes transparent decisions in determining the nature of management services and their associated budgets.

In general, the use of cost recovery is expanding in a number of countries. The options upon which this cost recovery is based vary from country to country. Either access charges, use of input charges or output charges contribute to management costs in different proportions in different countries. In countries like Australia, New Zealand and Canada, cost recovery approach is gaining a lot of public support.

## 6. Uganda's experience in financing fisheries management?

### 6.1. The fisheries sector in Uganda

The fisheries industry in Uganda is largely artisanal, with a largest population of people employed in the fishing industry operating on a small-scale at all stages of production –



catching, processing and marketing. Among the population employed in the sector, a considerable number is also involved in industrial fish processing and export to international premium markets. Fisheries, is one of the most important sectors in the economy contributing to a number of economic areas such as employment, livelihoods, food security and foreign exchange earnings. For instance, the sector employs over

700,000 people directly and up to 1.3 million people depend on the sector out of 25 million people in the country (2004 figures). The sectors earned the country approximately US\$143 million in 2005 in form of foreign exchange, a raise from US\$1.4 million in 1990.

## **6.2. Fisheries management and research in Uganda**

As elsewhere in the world, the Ugandan fisheries management regime is comprised of the three components; the Fisheries Management System (FMS), the Monitoring Control and Surveillance (MCS) and the Fisheries Judicial System (FJS).

The FMS in Uganda is currently open access for all water bodies with certain restrictions on exploitation methods in a few selected lakes. A fishing vessel licence is a requirement for all the water bodies. The access is nevertheless "open" because any Uganda citizen can get a vessel licence. Moreover, the price of a licence is very low. The fishing restrictions are on the type and size of the fishing gear (for gill nets the recommended size is 5 inches – 127 mm). The use of seine nets, cast nets, explosives and poison is prohibited on all the waters of Uganda.

The MCS system is carried out on all the water bodies both on-lake and on-land. Monitoring is carried out on all the landing sites and water bodies by fisheries staff. They record catch and other relevant information, which is later used for management and planning, purposes. The officials of the fisheries department, supported by the police and the revenue protection service, carry out the control and surveillance functions.

The Ugandan FJS is implemented using the legislative provisions within the Fish Act (1967). Under this Act, the fisheries and fisheries related offences are enforced. Upon conviction, an arrested culprit is either fined, warned or remanded in prison for a period of not exceeding 2 years depending on the offence committed. If found guilty of using an illegal fishing gear or with immature fish, for example, the gear and catch are confiscated and destroyed. The catch, depending on the size, can be auctioned and the proceeds paid to court. A new legislation, the fish Bill (2005) has been developed and is before Cabinet for approval and Parliament for enactment.

Fisheries research is function undertaken by a research-based institution, the National Fisheries Resources Research Institute. Research generates the information necessary for the design and implementation of the appropriate fisheries management system. Research in collaboration with fisheries management generates information and estimates on fish stocks, the biology and characteristics of fishes for use in designing management techniques. Some of the decisions for the management of the fishery therefore are based on biological and economic research. In the absence of research to guide management, the precautionary principal is largely used in guiding management decisions.

### 6.3. Experience of financing fisheries management and administration in Uganda

Currently, fisheries management in Uganda is severely under-funded. This implies that management services are less than optimal. In the last decade or so, the Fisheries Resources Department has experienced irregular and insufficient resource flows from the Ministry of Finance to finance fisheries management functions. Out of the total budgetary requirement of about 7 billion Uganda shillings (US \$3.9 million) annually, the Fisheries Resources Department has been receiving less than 50 million Uganda Shillings annually (approximately US\$ 0.03 million) from the Ministry of Finance, representing 0.8% of the annual total requirement. This gap between the estimated needs and the actual allocation is substantial. The variability of allocations between years illustrates the uncertainty of the funding, and emphasises the difficulty of planning for fisheries management services.

It should be noted that donor development programs have subsidised fisheries management in Uganda. Although this donor intervention is substantial, it leaves the funding gap uncovered and more importantly it is unsustainable. This renders some of the management activities not undertaken and thereby leading to some imperfections in carrying out the management roles.

This under-funding of fisheries management services stands in sharp contrast with the fact that the fisheries sector contributes significantly to the Ugandan economy. Beyond the sector's foreign exchange contribution, it is also clear that the fisheries industry in Uganda is generating substantial rents. Empirical studies (see e.g. Arnason 1990, Bjorndal 1990<sup>14</sup> and others) suggest that potential economic rents in fisheries typically range from 10-60% of the gross value of landings. In Uganda, the gross value of landings may be estimated in the neighbourhood of at least US\$ 2-300 million. Hence, the potential rents should be at least US\$20 million and quite possibly as high or higher than US\$100 million annually. Cost recovery in Uganda's fisheries is therefore, an option that can not only capture some of the resource rents to finance fisheries management but can also reduce reliance of financing fisheries management from the general tax revenue.

For the last 5 years or so, cost recovery in fisheries was proposed through an imposition of charges at different level of government. In the local governments, a series of charges exists within the Uganda fishing industry. Charges, ranging from landing site fees, vessel license, fisherman's permit are being used to collect revenue for financing programs in the local governments<sup>15</sup>. In principal, part of this revenue (25% of the total collected) is expected to be retained by the lowest local council administration, the Local Council One (LC1) sometimes represented by community-based fisheries management organizations, the Beach Management Units (BMUs), where they exist. In practice however, the local government authorities do not leave such funds because they cite limited capacity of LCs

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<sup>14</sup> Arnason, R. 1990. A numerical model of the Icelandic Demersal Fisheries. In G. Rodrigues(ed.) Operations Research and Management in Fishing . Nato ASI vol. 189. Kluwer. Bjorndal. T. 1990. A Bioeconomic Analysis of North sea Herring. In G. Rodrigues(ed.) Operations Research and Management in Fishing . Nato ASI vol. 189. Kluwer.

<sup>15</sup> Fisheries programs in the local governments are not only fisheries related. Revenue from fisheries, for example are used to finance costs of areas such as administration, allowances for councillors, among others.

and BMUs in administering the retained revenue. Some studies done in the country have revealed that less than 1% of the local government budget is provided to finance fisheries management and yet in local governments which boarder lakes, fisheries contribute over 30% of the local government budget.

At central level, cost recovery has been proposed to recover costs of fisheries management through a cess or a levy on the value of fish exports. Supported by a Fish Levy Trust Fund Study (2002), a 2% levy on value of fish exports was proposed but has been met with resistance from private industry. The Ministry of Finance had approved the 2% levy in principal but only demanded that the fish processing and export industry endorses the proposal.

During the 2006/07 budget process, the Department of Fisheries Resources had requested Ministry of Finance to allow the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) budget for the non-tax revenue expected to be raised using the 2% levy. The Ministry of Finance was expected to raise the MAAIF Medium Term Expenditure Framework (MTEF)<sup>16</sup> budget ceiling for the 2006/07 financial year to accommodate the non-tax revenue from the 2% levy. This was made on the understanding that the fisheries industry had consented to the payment of the 2% levy. As the budget was being finalized with these proposals however, the representatives of fish export companies, in anticipation of the issue being raised in the budget, met with the Minister of Finance to present proposals against the levy. The Ministry of Finance, then directed that the Department of Fisheries, under MAAIF, should first obtain consent of the fish processing industry to impose a levy.

There have been meetings between representatives of industry and government where an agreement of US\$ 2 cents has been agreed to be charged on every kilogram of fish exported. The US\$ 2 cents is subject to change depending on circumstances. However, like in the rest of the world, a cleared legal authority is a mandatory requirement for any organization to charge for its services. OECD (1998) through its guidelines for user charges for government services, advises that the such “legal authority should be a general framework for the application of user charges and should not set the precise amount of the charges to be applied. This allows the charges to be adjusted without further legislative authorization”.

#### **6.4 Cost recovery implications for Uganda’s fisheries**

In the absence of a cost recovery program, there are a number of problems envisaged for financing fisheries management and administration. The Ugandan government has

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<sup>16</sup> Government uses the MTEF to allocate resources and better aligns the spending priorities articulated in the PEAP (Uganda’s Poverty Reduction Strategy Paper) and in sector and district plans. The MTEF sets sector and district spending ceilings within a rolling three-year framework taking into consideration of the macroeconomic environment and prospects for revenue mobilisation. Under the MTEF, government Ministries and sectors are expected to integrate their planning processes into the MTEF basically for accessing official government allocations from the central Ministry of Finance.

adopted a new approach of guiding sector spending by discouraging direct funding through projects, (especially by donors) to sectors. The new approach involves all donors pulling resources into the “basket” under Ministry of Finance and this time round, expenditure allocations are guided by government priorities, outlined in the PEAP (Uganda’s PRSP), specifically aimed at macroeconomic stability. Effective 2004/05 financial year, project aid has been integrated into total budgetary resources. In the medium term, sectors have been given budget ceilings now commonly known as “MTEF Ceilings”. However, and following the history and trends of limited transfers of resources from treasury to finance costs of fisheries management, there is likelihood that fisheries resources will not receive funds.

It therefore means that recovering costs from industry is a “must be done” activity than relying insufficient and irregular financial transfers from treasury. It is also considered within the Uganda’s fisheries industry that cost recovery will guarantee market through sustainability of supplying raw material fish for domestic and international market. The market will also be guaranteed through official controls along the value chain by eliminating post harvest losses and also complying with Sanitary and Phytosanitary (SPS) market requirements. There is also need to design research that is demand rather than supply driven that can attract funding from cost recovery funds as industry would be reluctant to finance research which would not be used for management and stock enhancement.

## **7. Conclusions**

Fisheries management is an important and therefore financing costs of its management and administration is unavoidable option. Although providing fisheries management is considered a public function, the resources do not benefit the public as whole and therefore, using the user pay principle, costs of fisheries management should be recovered from the fishery itself rather than relying on, often insufficient, and irregular transfers from central government taxes. Taxes are even considered by economists distortive.

In view of the theoretical justifications and empirical cases, cost recovery is considered an option for financing fisheries management and administration including research.

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