



THE UNITED REPUBLIC OF TANZANIA

NATIONAL AUDIT OFFICE



PERFORMANCE AUDIT OF THE MANAGEMENT OF FISHERIES  
ACTIVITIES IN THE LAKE VICTORIA

THE MINISTRY OF LIVESTOCK AND FISHERIES DEVELOPMENT



*This report is on the Tanzania's part of the parallel performance audit work on Lake Victoria; other member countries are Kenya and Uganda*

A REPORT OF THE CONTROLLER AND AUDITOR GENERAL OF THE UNITED  
REPUBLIC OF TANZANIA

January 2013



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# **THE UNITED REPUBLIC OF TANZANIA**

National Audit Office

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## TABLE OF CONTENTS

PREFACE.....	vii
Acronyms and Abbreviations.....	ix
Executive Summary.....	x

### CHAPTER ONE INTRODUCTION

1.1	Background.....	1
1.2	Audit Design.....	2
1.3	Assessment criteria.....	4
1.4	Data Validation Process.....	6
1.5	Disclaimer note.....	6
1.6	Structure of the Report.....	7

### CHAPTER TWO

#### SYSTEM FOR MANAGEMENT OF FISHING ACTIVITIES IN LAKE VICTORIA

2.1	Key Players in the fisheries management in Tanzania.....	8
2.2.	Control, Monitoring and Surveillance.....	13

### CHAPTER THREE AUDIT FINDINGS

3.1	Controls on fishing activities.....	20
3.2	Monitoring of fishing activities.....	26
3.3	Action against Illegal, unreported and unregulated fishing...	35

### CHAPTER FOUR CONCLUSIONS

4.1	Controls on fishing activities.....	44
4.2	Monitoring of fishing activities.....	47
4.3	Action against Illegal, unreported and unregulated fishing...	49

### CHAPTER FIVE RECOMMENDATIONS

5.1	Control of fishing activities.....	52
5.2	Monitoring the fishing activities in the Lake Victoria.....	53
5.3	Actions against illegal, unreported and unregulated fishing..	53

## REFERENCES

REFERENCES.....	54
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## APPENDICES

Appendix 1: Audit Questions and Sub Questions.....	56
Appendix 2: Organization Structure of an Organization.....	58
Appendix 3: Assessment of BMU Performance through Monitoring and Evaluation Report.....	59
Appendix 4: Law Enforcement and Application of Punishment.....	60
Appendix 5: Effectiveness of the Funds Allocated for MCS Activities....	61
Appendix 6: The Disparity between Number of Fisheries and Fishing Crafts Year 2010.....	62
Appendix 7: List of Officials Participated in the Stakeholders Conference.....	63
Appendix 8: System for Management of Fishing Activities in the Lake Victoria.....	64

## List of Tables

Table 1	Status of the Nile perch stock.....	21
Table 2	Number of registered and unregistered vessels.....	22
Table 3	Nile Perch market slot size decrease in fish factories in Mara .....	24
Table 4	Trend of illegal gears targeting Nile Perch on Lake Victoria according to frame survey of 2008 and 2010 .....	25
Table 5	Number of landing sites operated without BMU.....	29
Table 6	Revenue collection from fisheries resources against funding activities .....	32
Table 7	Catch Assessment Survey conducted between 2008-2011..	33
Table 8	Usage of illegal gears 2008/09 - 2011/12.....	36
Table 9	Trend of using Beach Seine (Kokoro) in Lake Victoria Fisheries.....	36
Table 10	Law enforcement and application of punishment.....	37
Table 11	Effectiveness of the Funds allocated for MCS activities....	39
Table 12	Performance of Awareness campaigns done by the Ministry.....	42
Table 13	Fisheries advisors in the Lake Zone regions.....	43

## List of Figures

Figure 1	System graph of Fisheries management in Tanzania .....	13
Figure 2	Registration process of Fishers and Fishing Vessels .....	15
Figure 3	Rate of immature/under slot size seized.....	23
Figure 4	Weight of Nile perch Caught in the Lake Victoria for 2009 - 2011.....	26

## PREFACE

The Public Audit Act No. 11 of 2008, Section 28 authorizes the Controller and Auditor General to carry out Performance Audit (Value-for-Money Audit) for the purposes of establishing the economy, efficiency and effectiveness of any expenditure or use of resources in the Ministries, Departments and Agencies (MDAs), Local Government Authorities (LGAs) and Public Authorities, and other bodies, a process which involves enquiring, examining, investigating and reporting, as deemed necessary under the circumstances.

The performance audit on management of fisheries on Lake Victoria was carried out in order to assess whether or not the Ministry of Livestock and Fisheries Development has effectively implemented the monitoring, control and surveillance system for combating over-fishing on Nile perch stock in Lake Victoria.

I have the honor to submit to His Excellency, the President of the United Republic of Tanzania, Dr. Jakaya Mrisho Kikwete, and through him to the Parliament, the performance audit report on the Ministry of Livestock Development and Fisheries' programmes for the Monitoring, Control and surveillances of fishing on Lake Victoria. The report provides findings, conclusions and recommendations on the effectiveness of monitoring, control and surveillance on fishing activities on Lake Victoria. Besides, it highlights the major challenges facing the Ministry in controlling and monitoring the fishing of the Nile perch so as to avoid stock depletion.

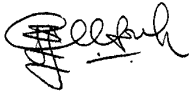
The management of the Ministry of Livestock and Fisheries Development was given the opportunity to scrutinize the factual contents of the report, and thereafter provide comments on the draft report. After receiving the comments, face to face discussions was held between the auditors and audited entity. I wish to admit that the discussions were useful and constructive. As a consequence, my office intends to carry out a follow-up audit at an appropriate time regarding the actions taken by the audited in relation to the recommendations suggested in this report.

In completion of the audit, the office subjected the report to the critical review of the following experts namely; Prof. Yunus D. Mgaya and Dr. Chacha J. Mwita of University of Dar es Salaam, and Dr. Florence A. Mamboya of Consult Bureau Dar es Salaam who came up with useful inputs for improving the report.

This report was prepared by Michael Malabeja, Elizabeth Augustino and Robert Cheyo under the supervision of the Acting Assistant Auditor



General - Specialized Audit, Eng. James Pilly. Quality assurance was done by Acting Assistant Auditor General - Performance Audit Eng. George Haule and the Acting Deputy Auditor General - Performance and Specialized Audit - Wendy Massoy. I would like to thank my staff for their assistance in the fruition of this report. My thanks are also extended to the auditees for their fruitful comments on the draft report.



Ludovick S. L. Utouh,  
Controller and Auditor General,  
Dar es Salaam,  
January, 2013.

## Acronyms and Abbreviations

BMU	Beach Management Unit
CAS	Catch Assessment Survey
DFO	District Fisheries Officer
FSU	Fisheries Surveillances Unit
GDP	Gross Domestic Product
IUU	Illegal Unreported and Unregulated fishing
LGA	Local Government Authority
LVFO	Lake Victoria Fisheries Organization
LVBC	Lake Victoria Basin Commission
MCS	Monitoring, Control and Surveillance
MLFD	Ministry of Livestock and Fisheries Development
NAOT	National Audit Office of Tanzania
NEMC	National Environmental Management Council
NGO	Non-Government Organization
PMO-RALG	Prime Minister’s Office - Regional Administration and Local Government
RFA	Regional Fisheries Advisor
RPOA	Regional Plan of Action
SOP	Standard Operating Procedures
TAFIRI	Tanzania Fisheries Research Institute
USD	United States Dollars

## **Executive Summary**

Fishing in Lake Victoria is a major economic activity and a vital resource of revenue and livelihood for local communities and commercial enterprises. Due to the fact that local communities living along the Lake Victoria depends on fishing as major economic activities, the lake's fish stocks have been overexploited for decades. The stock assessment survey reports conducted by Lake Victoria Fisheries Organization (LVFO) point out a declining trend of the Nile perch biomass since 2000, while at the same period catch assessment survey reports show increased total catches of the Nile perch. An average minimum stock on the Tanzanian side is estimated to be 391 tonnes in the 35,088 km<sup>2</sup> of the Tanzania side while the Nile perch stock has decreased beyond the minimum stock required to sustain regeneration, the Nile perch stock is estimated to be around 200 tonnes in the same area.

The purpose of the audit was to examine whether the Ministry of Livestock Fisheries and Development (MLFD) has economically, efficiently and effectively monitored, controlled and carried out surveillance in order to combat decline of the Nile perch stock in Lake Victoria. The audit covered a period of three years from June 2008 to December 2011. Data was collected from Mwanza, Kagera and Mara regions in 15 selected districts with fisheries activities.

## **The main findings**

### **Control of fishing activities in the Lake Victoria**

It was noted that, fish stock is below the recommended amount. In 2011, the total available stock of Nile perch in the lake Tanzanian's part is estimated at 165,439 tonnes while the annual quantity of removal of Nile perch is estimated to be 101,298 tonnes. Fishers operate without being registered as it was observed that 50% of fishers and vessels working in Lake Victoria were not registered.

The audit found inadequate measures were taken to regulate the amount of Nile Perch caught since there was no limit set for the amount of fish/Nile perch to be caught per year due to the small scale nature of fishing (artisanal) which contribute to ministry failure to set the limit. Also, there was no recorded strong monitoring and close inspection by DFOs and MCS units to control the fishing pressure of Nile perch. Likewise, there is no effective system in LGAs and MCS units to ensure that fishers use legally acceptable gears apart from what is reported during registration. The number of fishers who use smaller-meshed nets

increased rapidly in 2011.

### **Monitoring of fishing activities**

It was noted that there was inadequate close monitoring and inspection of fishing activities. BMUs had little capacity to detect IUU due to lack of development and operations plans, lack of support from LGAs, inadequate evaluation carried out by the ministry. Presence of informal landing sites. Fisheries data not adequately managed because revenue and data collection outsourced to private companies whose interest were in revenue collection alone, poor cooperation between village executive officers and BMU leaders and also, lack of basic training in data collection. During the audit it was noted that the ministry has set the slot size of Nile Perch to be caught to be between 50cm and 85cm. However, the Ministry has not set the maximum limit of amount of Nile Perch to be caught annually due to the nature of fishing.

### **Action against Illegal, Unreported and Unregulated fishing**

Law enforcement and punishment. The audit found that, there was an increase of use of illegal gears in Lake Victoria. In financial year 2010/2011 and 2011/2012 the increase of different types of gears was from 6,415 to 146, 657 respectively in all three regions of lake zone. This increment was contributed to the acute increase in the use of Beach seines by 368% from 394 to 145,302 because of high demand of local factory and communities and an increase of market forces for small size Nile perch in the neighboring countries of Congo, Rwanda, South Sudan and Burundi. Not all illegal fish dealers caught were subjected to court; the percentage of cases opened is inadequate. Most cases are not taken to court because the MCS officials lack some basic knowledge of filling cases and processions. Also for those cases sent to court took longtime and were costly. This is attributed by prolonged time for investigations and examination by prosecutors.

### **Coordination of information sharing on IUU**

The audit found that the MLFD had set a target to establish a reliable database for provision of timely and accurate information operational by June 2010<sup>1</sup>. However, the ministry has yet to establish a data sharing system. As a result there was poor collection and sharing of information on the amount of fish catch, fish stock, intelligence information to deter illegal fishing. Also, the flow of information and reporting system between BMUs and district councils and central MCS centre is neither well structured nor performing well.

<sup>1</sup> MLFD - Medium Term Strategic Plan 2009 - 2011

## **Awareness campaigns to IUU**

Awareness campaigns in Lake Victoria were not adequately conducted. Although awareness activities were planned in each MCS centres visited but those plans were not fully performed. Plans for conducting awareness did not show the frequency and areas where awareness campaigns should cover and key issues on controlling illegal fishing in their awareness.

## **Conclusions**

**Control measures are not adequately implemented to fight illegal fishing.**

The MLFD has not taken remedial actions to rescue the decline in the Nile perch stock in Lake Victoria. The Division of Fisheries has not established enforceable plans of switching from open access to limited entry fishing to control the stock. Also, licensing procedures in the districts are not effectively followed, as many fishers and vessels are not registered with the BMUs.

**Monitoring role is not adequately implemented to reduce declining of Nile Perch stock**

The MLFD has to the lesser extent monitored the existing controls which are supposed to be implemented in order to reduce the problem of overfishing. The current fund allocation from MLFD to various MCS ranges from 1.3% to 10.3%. LGAs lack clear funding model for the BMUs activities. Fish catch data are not regularly collected because of lack of fish catch information collected by BMUs. The MLFD has not taken adequate measures to regulate the Nile perch stock by ensuring that the amount of Nile perch caught per annum are clearly controlled.

**Minimal action taken against Illegal, Unreported and Unregulated Fishing**

It was noted that, there is weak fisheries law enforcement in all LGAs visited and MCS units, illegal fishers were not adequately arrested compared to the illegalities done. MCS units and Districts put little effort and low priority in fighting illegal fishing. In the likely event that a vessel was caught engaging in IUU activities the penalties imposed on the crew and vessel owners were often too small to act as a deterrent effect to other defaulters and therefore, most of the defaulters were not scared of committing the offence again and again.

## Recommendations

### The MLFD should ensure that:

- Access to the fishery is controlled through registration and licensing of fishing crafts, fishing vessels and fishers in Lake Victoria.
- The total amount of the *Nile perch* caught, and the distribution of fishing efforts in the lake is properly ascertained,
- A closed season to protect breeding and nursery grounds is implemented;
- Fish farming (aquaculture) is promoted to meet heavy demand of fish
- Allocation of resources is adequately done and should be based on the performance indicators on the area of fishing control.
- There is an improved collaboration between PMO-RALG and MLFD
- Collaboration with partner states is strengthened in addressing the problem of decline of Nile Perch.
- Sector performance is properly monitored and evaluated
- The performance of MCS activities is properly monitored and evaluated
- Control instruments are regularly monitored and evaluated
- A clearly defined funding mechanism for BMUs activities is instituted.
- The Regional Plan of Action for eradicating IUU fishing through improved monitoring, control and surveillance is implemented.
- A database for sharing information with all LVFO, Regional MCS units, LGAs and other stakeholders is established and regularly reviewed.
- Awareness campaigns to all stakeholders of Lake Victoria is properly conducted
- Necessary legal actions are taken against all defaulters

### The PMO-RALG should ensure that:

- LGAs control access to the fishery through registration and licensing of fishing crafts, fishing vessels and fishers in Lake Victoria.
- LGAs properly monitor and fund BMUs activities
- LGAs regularly monitor and evaluate control instruments

- LGAs take necessary legal actions against all defaulters
- The fisheries sector is given priority and well coordinated at regional level.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

Lake Victoria is the world's largest tropical lake with a total surface area of 68,800 km<sup>2</sup>, shared by three countries; Tanzania (51%), Kenya (6%) and Uganda (43%). The lake has a shoreline of nearly 3,450 kilometers long, whereby 33% is in Tanzania, 16% in Kenya and 51% in Uganda (LVFO). The National Development Objectives of the three Partner States around Lake Victoria (Kenya, Tanzania and Uganda) includes resource sustainability and environmental health among others.

Lake Victoria is a shared resource whose management and control of the resources on the Tanzanian side falls under the responsibility of various Ministries including, the Ministry of Livestock and Fisheries Development (MLFD), Prime Ministers' Office Regional Administration and Local Government (PMO-RALG), Local Government Authorities (LGAs), Ministry of Water (MoW) and other users of water and fisheries resources to mention a few.

In recent years, Lake Victoria has been faced with over-fishing of Nile perch and other species. Overfishing is evidenced by among others declining trends in catches and a decline in the Nile perch average total length. The stock assessment survey reports conducted by Lake Victoria Fisheries Organization (LVFO) point out a declining trend of the Nile perch biomass since 2000, while at the same period catch assessment survey reports increased total catches of the Nile perch. An average minimum stock on the Tanzanian side is estimated to be 391 tonnes in the 35,088 km<sup>2</sup> of the Tanzania side while the Nile perch stock has decreased beyond the minimum stock required to sustain regeneration. The Nile perch stock is estimated to be around 200 tonnes in the same area.

Decline of Nile perch stock in the Lake Victoria has been one of the East African countries issues of concern. Fishing in Lake Victoria is a major economic activity and a vital resource of revenue and livelihood for local communities and commercial enterprises<sup>2</sup>. Due to the fact that local communities living along the Lake Victoria depends on fishing as a major economic activity, the lake's fish stocks have been overexploited for decades, and stocks are now declining,

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<sup>2</sup> Fisheries resource in the Lake Victoria accounts for over 25% of the Region's GDP



with devastating socio-economic as well as environmental implications for the entire region.

The Ministry of Livestock and Fisheries Development (MLFD) is responsible for the preparation, implementation, monitoring and reviewing of fisheries policies and regulatory frameworks in Tanzania. Also, the Prime Minister's Office - Regional Administration and Local Government (PMORALG) participates in the implementation of the policies through LGAs.

Because of the above mentioned problems, the Controller and Auditor General decided to carry out a performance audit to assess the performance of the Ministry of Livestock and Fisheries Development in monitoring, controlling and carrying out surveillance on fisheries activities on Lake Victoria.

## **1.2 Audit Design**

### **1.2.1 Objective of the Audit**

The purpose of the audit was to examine whether the Ministry of Livestock and Fisheries Development (MLFD) has economically, efficiently and effectively monitored, controlled and carried out surveillance in order to combat declining stock of the Nile perch stock in Lake Victoria.

The audit work was designed using three audit questions that are mainly focusing on the controlling, monitoring and action taken by responsible authorities with regards to combat illegal, unreported and unregulated fishing activities in order to improve the situation.

**Audit question 1:** To what extent does the Ministry control fishing of Nile perch so as to maintain the required minimum stock?

**Audit question 2:** Are the fisheries activities in the Lake Victoria adequately monitored by the Ministry of Livestock and Fisheries Development?

**Audit question 3:** Has the Ministry of Livestock and Fisheries Development and implemented effective measures in order to combat illegal, unreported and unregulated fishing (IUU) in Lake Victoria?

## 1.2.2 Audit Scope and limitation

The audit examined the performance of the Ministry of Livestock and Fisheries Development (MLFD) as regards to the management of fisheries activities in the Lake Victoria. The focus was on Nile perch. MCS officials of Mwanza, Mara and Kagera regions were visited. Data were collected from fifteen<sup>3</sup> Local Government Authorities (LGAs) engaged in managing fisheries activities in and around Lake Victoria. Similarly, interviews and site visits were conducted in five selected districts Councils namely; Ukerewe, Nyamagana, Ilemela, Bukoba, and Mara. The audit covered an examination period of fiscal years 2008 to 2011.

## 1.2.3 Methodology

Various methods of gathering data and information such as documentary reviews, interviews, physical observation and focus group discussions (refer Appendix 2 for a list of participants who attended focus group discussion) have been used in the conduct of this audit.

Various documents were reviewed in order to get a comprehensive, relevant and reliable picture of the activities concerning management of fisheries activities in the Lake Victoria. Documents reviewed were such as MLFD strategic plans; Fisheries regulations; national Fisheries Sector Policy and strategy; monitoring reports; Beach Management Unit guidelines, registers, plans, budget, monitoring and evaluation reports; Local Government Authorities laws; registers of all fishing vessels and licenses in LGAs; Monitoring, Control and surveillance (MCS) reports; budgets and division inventory reports; and Tanzania Fisheries Research Institute (TAFIRI) reports.

A number of interviews were also conducted in the visited land sites, councils and ministries mainly to confirm or provide further clarification from the documents reviewed. Structured as well as open - ended Interviews were used by the audit team.

To find out whether all vessels operating in Lake Victoria are registered and licensed, interviews were conducted with fisheries officers and Beach Management Unit (BMU) officials to confirm whether information we found in registers if they depict what is in the beaches and also, to find out the extent to which all fishers and vessels are timely registered. The data collected were analyzed to show the effectiveness of MCS.

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<sup>3</sup> Names of Districts are Geita, Ilemela, Magu, Misungwi, Nyamagana, Sengerema, Ukerewe, Bukoba rural, Bukoba urban, Muleba, Chato, Mara rural, Mara Municipal, Bunda and Rorya

To evaluate, whether the MLFD and the councils surrounding the Lake Victoria have the required capacity to conduct regular patrols, interviews were conducted with the MCS unit staff to confirm how regularly patrols are conducted. Data obtained were analyzed by comparing the size of the lake and the available resources allocated for MCS activities.

In assessing sanctions and enforcement in place to reduce IUU, interviews were conducted with various members of the BMU at fish landing sites; Officers from Surveillance Units and Legal Officers of the MLFD; representatives of Regional Administrative Secretaries (RAS) and Regional Police Commanders (RPC), Council Directors were also interviewed to gather general information on the measures taken against illegal fish activities.

The audit team also visited landing sites in order to observe the way BMUs manage fishing activities in the shoreline of Lake Victoria.

### **1.3 Assessment criteria**

The assessment conducted under this audit was generally based on the following criteria:

#### **1.3.1 Control of fishing activities**

The Ministry of Livestock and Fisheries Development should control the fishing of Nile perch so as to maintain minimum stock in order to avoid stock depletion. In order to control the fishing of the Nile perch so as to maintain its stock from depletion, Fisheries legislation requires the Ministry to ensure that:

- (i) The total amount of the Nile perch caught, and the distribution of fishing efforts in the lake is ascertained, and control the size of the Nile perch harvested by setting a slot size of 50 - 85cm and setting a minimum gillnet mesh size of 127 mm (5")<sup>4</sup> and prohibiting the use of destructive fishing gears and methods such as monofilament gillnets, beach seines, trawl nets, cast nets, and beating the water;<sup>5</sup>
- (ii) Access to the fishery is controlled through registration and licensing of fishing crafts, fishing vessels and fishers in Lake Victoria.<sup>6</sup>

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<sup>4</sup> LVFO,FMP2 2009 to 2014 of August 2008 section 13.7 activity 1 & 4 Results 7.1

<sup>5</sup> Council of Ministers of the Lake Victoria Fisheries Organization, minutes of February 27, Sections 5 - 9

<sup>6</sup> LVFO, RPOA - IUU, May 2004 3.3.(i) (iv) and (vi)

- (iii) A closed season to protect breeding and nursery grounds is implemented;
- (iv) A closed season to protect breeding and nursery grounds is implemented
- (v) The state of the fishery and the level of fishing efforts is assessed through frame surveys.

In order to control fishing efforts in the Lake Victoria, the Local Government Authorities has the management responsibility of ensuring that artisan and small scale fisheries operates under licenses. They are also required to promote aquaculture and quality seed production.

### **1.3.2 Monitoring of fishing activities and sector performance**

The Ministry of Livestock and Fisheries Development should appropriately monitor the fisheries activities in the Lake Victoria. According to Article 16 of the Protocol for sustainable development of Lake Victoria Basin, each Partner State shall, within its jurisdiction, monitor activities with a view to determining the potential risk they pose to the resources of the Basin. The ministry should ensure that:

- Sector performance is monitored and evaluated
- The performance of MCS activities is properly monitored and evaluated
- Control instruments are regularly monitored and evaluated

### **1.3.3 Actions to eliminate illegal, unreported and unregulated fishing**

Regarding the performance of the Ministry of Livestock and Fisheries Development in eliminating illegal, unreported and unregulated fishing (IUU), the Ministry has to ensure that:

- (i) Decisions of the LVFO Council of Ministers, regarding control of access to the fishery through registration and licensing of fishing crafts and fishers is implemented by ensuring that all fishing vessels in Lake Victoria are registered and licensed.<sup>7</sup>
- (ii) Implementation of the Regional Plan of Action for eradicating illegal fishing through improved monitoring, control and surveillance is done.

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<sup>7</sup> LVFO, RPOA - IUU, 204 3.3.(i) (iv) and (vi)

- (iii) Promotes co-management of the fisheries through the formation of Beach Management Units (BMUs) and ensure that BMUs perform their roles as per BMU guideline Section 5.4., which requires BMU to conduct Patrol, Monitoring and Surveillance of fisheries activities in their territory and in line with the Fisheries Regulations of year 2009.
- (iv) A database for sharing information with all LVFO, Regional MCS units, LGAs and other stakeholders is established.<sup>8</sup>
- (v) Conduct regular awareness campaigns to all stakeholders of Lake Victoria.<sup>9</sup>
- (vi) Training to fisheries stakeholders and construction of Market and landing site.

The LGAs are required to ensure that there is law enforcement and surveillance for fisheries activities. Also they are required to issue By-laws and participate in the formulation of regulations.

#### **1.4 Data Validation Process**

The Ministry of Livestock and Fisheries Development was given an opportunity to go through the draft version of the final report in order to examine its content from a factual point of view, and to provide comments to check the correctness of the information presented.

#### **1.5 Disclaimer note**

The audit was done in accordance with INTOSAI standards. The standards require that the audit is planned and performed in order to obtain sufficient and appropriate evidence to provide a reasonable basis for the findings and conclusions based on the audit objectives. It is believed that according to the audit objectives, the evidence obtained provides a reasonable basis for the findings and conclusions reached.

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<sup>8</sup> LVFO MCS Strategy and Action Plan May 2005 strategic objective 4 partner states should regulate the amount of fish caught LVFO, FMP2 2009 to 2014 of 2008 Section 9.5

<sup>9</sup> Council of Ministers of the Lake Victoria Fisheries Organization, minutes no.15 of February 2009

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## 1.6 Structure of the Report

The remaining part of this report covers the following:

**Chapter two** presents the description of key stakeholders and their responsibilities in the Lake Victoria fisheries management.

**Chapters three** presents the findings of the audit based on the audit questions.

**Chapters four and five** contain conclusion and recommendations of the audit respectively.

## CHAPTER TWO

### SYSTEM FOR MANAGEMENT OF FISHING ACTIVITIES IN LAKE VICTORIA

The objective of this chapter is to provide a system description of the management of fisheries activities in the Lake Victoria, monitoring, control and surveillance conducted.

#### 2.1 Key players in the fisheries management in Tanzania

Various players are involved in the management of fishing activities in the Lake Victoria. These are explained hereunder:

##### 2.1.1 Ministry of Livestock and Fisheries Development

The Ministry of Livestock Development and Fisheries (MLFD) vision is to have a progressive world-class fisheries sector which is economically, socially and environmentally sustainable. Its mission is to promote, facilitate and regulate the growth of modern fisheries, aquaculture and their products for sustainable socio-economic development through building capacity of LGAs in provision of quality fishery technical and professional services and enhancing partnership with the private sector.

The ministry is responsible for the preparation, implementation, monitoring and reviewing of fisheries policies and regulatory frameworks. In addition, it is also responsible for research, training and extension services to stakeholders in the fisheries sector through division of Research, Training and Extension (Refer Appendix one for the Organization structure).

The Director of Fisheries Development (DFD) of MLFD is responsible for supervising and coordinating the fisheries management activities including monitoring, control and surveillance. The following are some of the coordination roles of the division:<sup>10</sup>

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<sup>10</sup> National Fisheries Sector Policy and Strategy Statement of Dec 1997 pg 19-21

Formulation and review of policy and legislation and guidelines in fisheries sector

- Law enforcement and Surveillance in border and hotspots area
- Collaborate with district councils, government institutions, NGOs, international institutions, private sector and local community on fisheries management and its environment.
- Collect fisheries statistics, analyzing, keeping and disseminating important information on fisheries sector.
- Licensing for export
- Monitoring and evaluation of the sector performance
- Conduct awareness campaign in order to raise awareness among key stakeholders on the importance of good practices in fishing.

Also, through the Monitoring, Control and Surveillance (MCS) Unit, the DFD is responsible for law enforcement, surveillance and revenue collection from export of fish and fishery products (royalties), import and export licenses, registering and licensing fishing vessels above 11 meters long. It has regional offices in Mwanza, Kagera and Mara.

### **2.1.2 Prime Minister’s Office - Regional Administration and Local Government**

The Prime Minister’s Office - Regional Administration and Local Government (PMO - RALG) is responsible for coordinating, supporting and advising the LGAs on the implementation of fisheries policies. Also, Council Directors are responsible for implementing the fisheries policies and Legislations. Council Fisheries Officers report to Council Directors on administrative issues and to Regional Fisheries Advisors (RFA) on technical matters pertaining to fisheries. However, the RFA may not necessarily have a background in fisheries.



### **2.1.3 Regional Administrative Secretary (RAS)**

According to the functions and organization structure of the Regional Secretariats issued by President's Office Public Service Management, the RAS through Assistant Administrative Secretary (AAS) Economic and Productive sectors section in the office is responsible for providing expert facilitation on Economic and Productive Sectors to LGA. As regards to issues pertaining to fisheries, the Section is required to perform the following activities:

- Coordinate implementation of Fisheries Policies in the region;
- Build capacity of LGAs in providing Fisheries services
- Assist and advise LGAs on:
- Appropriate and affordable technologies in economic and productive sectors;
- Development, promotion and better production of fish industry;

### **2.1.4 Local Government Authorities (LGA)**

The LGA is responsible for:

- Issuing licenses for artisanal and small-scale fisheries operations.
- Law enforcement and surveillance
- Issuing of bylaws and participation in formulating regulations
- Promotion of aquaculture
- Preparation of development plans that includes Beach Management Unit (BMUs) priorities
- Registration of fishing vessels
- Extension services to guide different stakeholders
- Collection of revenue

According to the Fisheries Regulations 134(2), every officer in charge of fisheries in the LGA is required to submit quarterly reports delivered by BMU on fisheries management and development activities to the Director of Fisheries MLFD.

### **2.1.5 Beach Management Unit (BMUs)**

Beach Management Units (BMUs) constitute various stakeholders in fisheries community whose main functions are fisheries planning, management, conservation and development at the beach, in collaboration with the local and national governments. BMUs involve different fisheries stakeholders in the village. Among the many roles of the BMUs are:<sup>11</sup>

In collaboration with village council develop bylaws and conduct monitoring, control and surveillance in such a way that would reduce the incidence of illegal fishing and trading practices and environmental degradation within the BMUs areas.

- Participate in fisheries catch assessment surveys and frame surveys
- Engage in selection process for issuance of fishing vessel registration and fishing license.
- Ensure fisheries licensing fees paid by BMU members to the DFOs
- Keep updated register and submit quarterly reports to the fisheries officer in charge to the respective local government authority.

### **2.1.6. Regional and International Community**

The Lake Victoria Basin Commission (LVBC) and Lake Victoria Fisheries Organization (LVFO) are partners in sustainable development of the Lake Victoria Fisheries Management.<sup>12</sup> Their roles are:

- Provision of financial support
- Capacity building through technical support, training, research and transfer of technology

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<sup>11</sup> (Fisheries regulation, 2009 Regulation 134 (1) pg 86;-

<sup>12</sup> Refer LVFO Convention and LVBC protocol

- Enhancing cooperation among the member states by harmonizing national measures, developing and adopting conservation and management measures for the sustainable use of living resources of Lake Victoria for maximum socio-economic benefits.

### **2.1.7. Tanzania Fisheries Research Institute (TAFIRI)**

According to Section 6 of the TAFIRI Act 1980, the following are the functions of TAFIRI:

- To promote the development, improvement and protection of the fishing industry;
- To carry out, and Promote the carrying out of enquiries, experiments and research in fisheries, and in aquaculture generally;
- To carry out research in various aspects of fisheries for the purpose of establishing, improving or developing better methods or techniques of fishing, farming fish or manufacturing or using fish or fish products;
- To establish and operate a system of documentation and dissemination of the findings of inquiries, experiments and research in fisheries, which are carried out within the United Republic, for use by the Government, public institutions and other persons engaged in the fishing industry in the United Republic;
- To advise the Government, public institutions and other persons or bodies of persons engaged in the fishing industry in Tanzania on the practical application of the findings of inquiries, experiments and research carried out by or on behalf of the Institute;

As explained above, the System for Fisheries management in the Lake Victoria in Tanzania involves many stakeholders with different roles as summarized in the Figure 1 below:

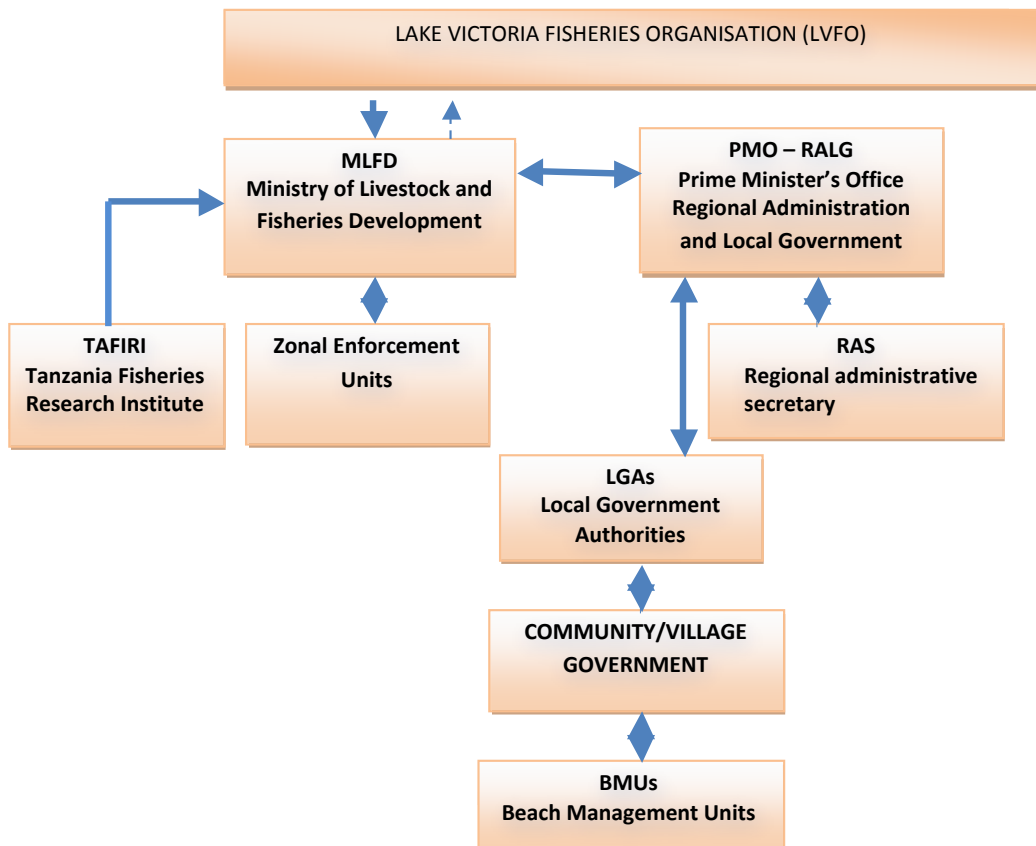


Figure 1: System graph for fisheries management in Lake Victoria

## 2.2 Control, Monitoring and Surveillance

Monitoring, Control and Surveillance (MCS)<sup>13</sup> is an effort to increase compliance with fishery laws and regulations. One important objective of MCS is the reduction and/or elimination of illegal, unreported and unregulated (IUU) fishing activities. It is often referred to as the “executive arm of fisheries management”.

<sup>13</sup> According to Rome MCS Conference of Experts in 1981 monitoring, control and surveillance are defined as follows: Monitoring – is the continuous requirement for measuring fishing effort characteristics and resource yields. Control – includes the regulatory conditions under which exploitation of the resource may be conducted. Surveillance – entails the degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities.<sup>2</sup>

MCS is an integral part of fisheries management, both requiring information to set the strategy and plan and also feeding information into the management system to assist in producing management decisions: or to put it another way the type of controls set will influence the monitoring and surveillance, while the monitoring and surveillance should influence the types of controls set.

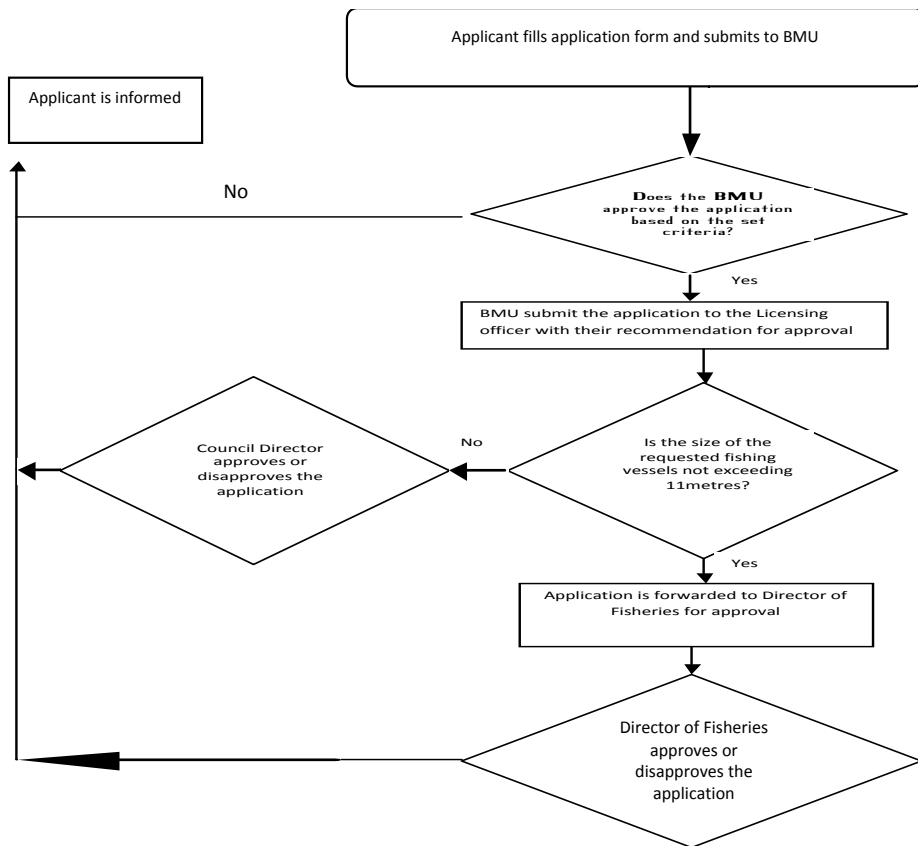
According to strategy and action plan for monitoring, control and surveillance of fisheries on Lake Victoria the MCS activities and results must be monitored and analyzed in relation to the objectives and priorities set, so that strategies can be regularly reviewed and improved.

### **2.2.1 Control of fisheries activities**

Control of fishing activities is done by Division of Fisheries in collaboration with LGAs, BMUs and other stakeholders. There are input and output controls that aim at protecting fish stocks from over-exploitation.

#### **a) Input controls (Fishing effort management)**

This provides information on number and size of fishing vessels (fishing capacity controls), transport vessels, number of fishers, fishing gears and fishing time. Fisheries Regulations of 2009, Regulation 4(1) - 4(6) restricts on the size of fishing vessels and its registrations. The fishing vessel whose overall length is up to 11.0 metres registration and licensing will pass through BMUs to LGAs. For fishing vessels of length more than 11.0 metres registration will be done with prior approval of the Director of Fisheries. Registration process is as shown in the Flow Chart under Figure 2 below:



**Figure 2: Registration process of Fishers and Fishing Vessels**

The Fisheries Regulation<sup>14</sup> states that, no person is allowed conducting fishing or export of fish or fishery products unless he or she is registered and licensed. The regulation also states that no person shall conduct fishing, or export fish or fishery products unless he/she is the holder of a valid license allowing him to engage on fishing activities.

### **b) Output controls (catch management)**

These are the controls which regulate fish catch. They limit amounts of fish to be taken from water, and they are referred to as management of catch. Forms of output control limits placed on the tonnage of fish or the number of fish that may be caught from a fishery in time (for example total allowable catches; in reality, usually total allowable landings). Limiting by catch may be considered as an effective way output control<sup>15</sup>.

<sup>14</sup> Fisheries Regulation of 2009,

<sup>15</sup> A fishery manager's guidebook management measures and their application, Fisheries Resources Division - FAO (Fisheries Department - Fisheries Technical Paper 424)

### c) Technical controls

These are controls which track where, when and how fish may be caught and also controls the types of fishing gears allowed. Controlling where fish is to be caught is done through:

- Identifying critical habitat areas and restricting fishing in those areas, imposing closed seasons for designated areas, species of fish and the methods of fishing;
- Restricting fishing in designated areas; according to fisheries regulation 2009.

Controlling how fish may be caught means restricting the size of fishing gears and the vessels to be used. The Fisheries Act No 22 of 2003, Part V, Section 17 stipulates the following:

- Restricting the number, size, and age of fishing vessels in any fishery;
- Restricting the use of certain types of fishing vessels and gears;
- Monitoring capacity of fishing fleets to avoid excessive fishing pressure;
- Examining performance of the existing fishing gear, methods and substituting for them those which are consistent with responsible fishing.

In order to maintain the Nile perch stock, the LVFO came up with the fisheries management plan for Lake Victoria 2009 to 2014. The following were proposed as new management measures for immediate actions:

- Affirmative action to eradicate illegal trade of undersized, immature Nile perch to neighboring regional markets,
- Intensify self-monitoring and control by fish processors to prevent the processing and export of illegally sized (<50cm) Nile perch,
- Targeted enforcement programmes to eradicate the most harmful illegal fishing practices including beach seining and the use of under-sized gill nets.

Actions needing more time and commitment:

- Increase penalties in fisheries regulations to make them a more effective deterrent,
- Sensitize the Judiciary to impose sanctions that create effective deterrent,
- Establish boat licensing as a management tool to control fishing effort and access to the fishery involving BMUs fully in licensing processes.

**Other recommended actions:**

- Further reduce fishing effort (in addition to the eradication of illegal fishing) through an effective mechanism that can be both enforced and monitored, e.g :
  - closed season (need to determine timing and duration and how closure can be applied to fishing on Nile perch only,
  - closed areas (need to consider where these are likely to be most effective, not just to protect spawning areas, but to effectively reduce fishing effort in an equitable manner).

## **2.2.2 Monitoring of fisheries activities and assessment of stock**

Monitoring of fisheries activities is an integral part of the national and international efforts to manage and regulate declining fish stocks. A 1981 Conference of Experts defined monitoring as “the continuous requirement for the measurement of fishing effort characteristics and resource yields.” This was expanded, in a 1993 workshop, to include the measurement of: catch, species composition, fishing effort, by-catch (i.e., species other than the targeted one incidentally captured by the primary effort) and area of operations.

As explained in section 2.1.7 above, the TAFIRI coordinates fisheries research and disseminates the research findings to the users. Also, TAFIRI and Fisheries research section under the MLFD play the monitoring role through analysis of the influence of the management measures on the fish stock and the fishery, while both the MCS and scientific sections provides information for the analysis, the MCS section provides details on how compliant the fishers are to this management measure.



It is therefore the task of the MCS unit to ensure that the management measures are complied with in order to inform the scientists (researchers) of the estimated level of non-compliance. With this information, the scientists are able to adjust their models to reflect a more accurate estimate of the size structure of the fish caught. This information is then passed to the MLFD management in two forms; firstly in the link between scientific research and fisheries management as scientific predictions on the status of the stock and as advice for future restrictions or management measures; and secondly through the link between MCS (strategy) and fishery management as information on non-compliance. If non-compliance is high (that is the controls are regularly being violated) it is an indication to management that the controls are unsuccessful<sup>16</sup>.

The purpose of monitoring fisheries resources is to provide up-to-date information on the state of the fisheries resources for their effective management. Information needed for monitoring fisheries resources include:

- Frame survey that provides extent of fishing effort and the characteristics of the fishing effort; it is done after two years.
- Catch Assessment survey that provides the information of how much fish have been harvested from the Lake i.e. (quantities of removals). It is supposed to be conducted on a sample basis from January -December.

The independent monitoring of the status of the fisheries resource base involves hydro-acoustic, trawling and gillnets surveys incorporating environmental and biological/ecological studies. It provides information on the size, composition and distribution of the stocks; Environmental impacts on the stocks; and response of the stocks to the exploitation pressure. The survey is done twice a year (February and August);

### **2.2.3 Surveillance of fisheries activities**

As defined above surveillance is the degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities. More emphasis in MCS systems is on the surveillance part, that is, the enforcement phase.

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<sup>16</sup> A fishery Manager's guidebook management measures and their application, Fishery Resources Division – FAO (Fisheries Department – Fisheries Technical Paper 424)

Fisheries surveillances activities include:

- Gathering of fisheries intelligence information through informers, and then planning for action
- Carrying out arrests, seizures and compounding
- Preparing charges, and presenting evidence in courts of law
- Controlling and verifying entry into fishery, imports and exports
- Supporting and guiding BMUs in conducting monitoring, control and surveillance activities.

## CHAPTER THREE

### AUDIT FINDINGS

In this chapter, findings regarding the three audit questions are presented. The first sections present findings that relate to the control of fisheries activities, the second section focuses on monitoring of the fishing activities including the performance of the sector while the third section addresses the action taken to combat illegal, unreported and unregulated fishing in the Lake Victoria.

#### 3.1 Controls on fishing activities

As explained under section 2.1.1 above, the MLFD has the overall responsibilities of ensuring that control measures are in place to prevent overfishing of the Nile perch. Fisheries regulations require a set of limit on the amount, size and age on species composition of fish that may be caught or landed. According to the Regulation, Nile perch caught should be of above 50 cm and below 85cm. This size is considered as matured Nile perch. The following issues were noted:

##### **Fish stock is below the recommended amount**

LVFO has set the maximum biomass of 750,000 tons to remain in the Lake. Tanzania's part set maximum amount is estimated 382,500 tonnes. Fishing beyond this amount is regarded as overfishing. However, according to interview and review of documents, the total available stock of Nile perch in the lake Tanzanian's part is estimated at 165,439 tonnes while the annual quantity of removal of Nile perch is estimated to be 101,298 tonnes. Table 1 below gives a picture of the status of Nile Perch stock in lake.

**Table 1: Status of the Nile perch stock**

	Whole Lake	Tanzania (51%)
Stock available (tonnes) September-October, 2011	324,391	165,439
Max. Biomass required to be retained in the lake	750,000	382,500
Percentage		43%
Estimated rate of annual Nile perch per catch	198,624	101,298
Estimated stock remaining for regeneration	125,767	64,141
Yield biomass ratio		0.3%

**Source:** Technical report stock assessment regional working group 2011 and Auditor's analysis

As it can be reflected from table I above, the difference between the minimum required stock and available stock of Nile perch shows that, exploitation of the Nile perch exceeded the minimum limit set by 57% leaving a stock of estimated 64,141 tons available for regeneration at the estimated regeneration rate of 0.3. According to interview with ministries official the problem of declining in Nile Perch stock is a result of number of issues in the controlling and monitoring mechanisms currently in place.

### **Fishers operates without being registered**

Access to the fishery is on condition of being registered and obtaining a valid license. Registration and issuance of license is one of management tool for controlling fishing pressure into fishery. The use of licensing as a control tool helps the fisheries management arms to identify the maximum number of fishers, gears and vessels in the lake.

Based on frame survey of 2010, it was realized that 50% of fishers and vessels working in Lake Victoria were not registered (as shown in Table 2). This indicates the presence of large magnitude of unregistered vessels and fishers for year 2008 and 2010.

**Table 2: Number of registered and unregistered fishers**

Year	Estimated number of vessels/ craft working in the Lake	Number of unregistered vessels/ crafts	% Unregistered Vessels/crafts
2008	30,208	17,274	58%
2010	26,983	13,492	50%

**Source:** Frame surveys 2010

Table 2 reflects that almost half of operating vessels/craft are unregistered. According to documentary review in the visited Districts, the registration of fishers and vessels working in their jurisdictions was either not available or not updated. An outdated register was noted in Ilemela, Nyamagana, Ukerewe, Bukoba and Mara District while Ukerewe District did not have register of fishers and fishing vessels. According to interviews with fisheries stakeholders, inadequate documentation of fishers and vessels is caused by the licensing issuance done on the spot (landing sites) during councils' official inspection visits which leaves fishers' and vessels' information without being properly recorded in the registration forms.

### **Inadequate measures to regulate the amount of Nile Perch caught**

The MLFD has the responsibility of setting total allowable catch per year as a means of catch management to prevent overfishing. It was noted that there was no limit set for the amount of fish/Nile perch to be caught per year. According to interview with MLFD officials, this is due to the nature of fishing which includes small scale fishing. Fishers fish according to their capacity of harvesting fishes. Though there was a limit set for the size of fish to be caught, still there were cases of fishing immature Nile perch and use of illegal gears which contribute to the stock depletion of Nile perch.

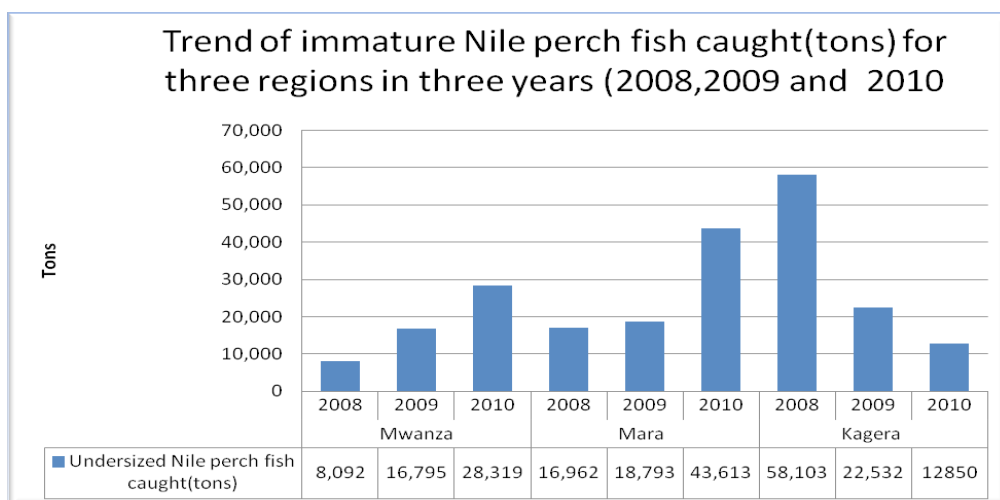
There is no recorded strong monitoring and close inspection by DFOs and MCS centres to control the fishing pressure of Nile perch by ensuring that fishers use the right gears, catch the right type and size of fish. Likewise, there is no effective system in LGAs and MCS units to ensure that fishers use legally acceptable gears apart from what is reported during registration.

## Inadequate control of catching immature fish

LVFO technical report on stock assessment shows that the number of fishers who use smaller-meshed net grew much more rapidly in 2011. The rate of catching immature fish is increasing over the years as shown in Figure 3. These are immature fishes which cannot breed and contribute to restocking the population.

According to conducted interviews, fishing using small nets is indiscriminate; any fish which gets in the way of the net will be caught if they are big enough to get through the mesh. Table 4 shows a slight increase in the use of hooks. Hooks are preferred because they are cheaper than gillnets, depending on the hook size. Hooks can catch any size of the fish, so enabling fishers to catch smaller Nile perch as well.

**Figure 3: Rate of catching immature/undersize Nile Perch**



**Source:** Progress report of MCS unit of Mwanza, Mara and Kagera of 2008 - 2010

Figure 3 shows significant increases in the catch of immature fish over three years in Mwanza and Mara while a declining trend is seen in Kagera region. The data presented is based on the seized and confiscated illegal fish by the MCS during patrols carried out in the Lake Zone. However, according to interview with MLFD fisheries officials, the trend of immature fish catch is high in Kagera region though there was no data from the side of fisheries division.

Appendix 4 points out unsatisfactory Surveillance and patrols in all three regions with average of two months spending for patrol each year. Immature Nile perch and other illegally caught fish are smuggled, unnoticed by surveillance officials, given that only 9 few number of patrols all done annually.

The effect of catching immature fish not only affects the ecosystem but also the community of fishers because of financial losses. In addition catching immature fish limits the number of mature fish reaching recommended slot size in the fish processing factories. In all regions, fish processing factories claimed to work below their capacity because of inadequate fish supply. For example in Mara region Nile perch authorized size supplied to the fish factories decreased gradually from 2007 to 2010 as shown in Table 3.

**Table 3: Nile Perch market slot size decrease in fish factories in Mara**

Year	Kg
2007/2008	8,149,816
2008/2009	5,487,026
2009/2010	4,877,812
2010/2011	3,757,611

Source: Mara MCS reports

### Increasing rate of using illegal gears

In February 2009, the Council of Ministers of Lake Victoria, approved the zero tolerance measure to remove illegal gears to a minimum by 50% by June 2009 and by 100% by December 2009. The focus was set to wipe out illegal fishing methods that target mostly undersized Nile perch such as the use of beach seines, undersized gillnet <5", monofilament nets, cast nets and traps or baskets. Frame surveys of 2008 and 2010, showed the presence of prohibited gears in the lake. Photo 1 shows prohibited gears used by fishers.



**Photo 1:** Prohibited gears used by fishers apprehended by surveillance officers in Mwanza

These types of illegal gears are efficient in capturing undersize Nile perch. Table 4 shows trend of illegal fishing gears in Tanzania for the years 2008 and 2010.

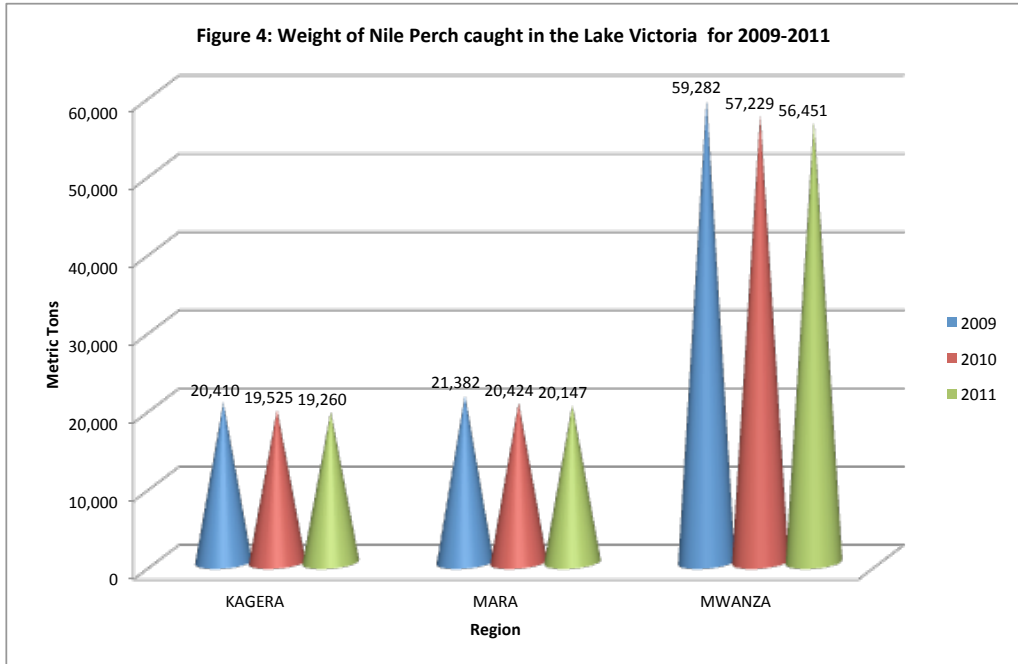
**Table 4:** Trend of illegal fishing gears targeting Nile Perch on Lake Victoria

Gear description	Lake-wide totals		
	2008	2010	Percentage Change
Traps/basket	604	928	-54
Cast net	43	44	-2
Long line hooks	4,137,774	4,160,618	-0.5
Beach seines	1,776	1,301	27
Monofilament	4,801	2,905	39
Gillnet <5"	87,579	44,843	44

Source: Frame survey 2008 and 2010 Technical report stock assessment regional working group 2011



Table 4 above shows an increasing rate of illegal gears such as trap/ basket, cast net and long line hooks, and there was a decline of illegal gears of beach seines, monofilament and gillnet <5". These gears contributed to the decline of the production of Nile perch in the lake as shown in Figure 4 below:



Source: Fisheries division-MLFD

Figure 4 shows declining of Nile perch caught in all visited regions. Kagera decline by 6%, Mara by 6%, Mwanza by 5% from 2009 to 2011.

### 3.2 Monitoring of Fishing Activities

The audit aimed at looking on how the responsible government key players implement effective role in monitoring fisheries activities in the Lake Victoria. According to LVFO fisheries management plan, management of fish stock requires careful monitoring. Such monitoring should be considered to be an integral part of the management system. The Catch Assessment Survey (CAS) was set as the primary tool in determining the extent to which the target catch limit has been achieved. Surveillance and monitoring of fishing activity was required to both enforce the closed season for Nile perch and gauge the degree to which it has been effective.

As explained in Chapter 2, the MLFD has the overall responsibility of monitoring fisheries activities in Tanzania. This includes monitoring of the existing control measure<sup>17</sup>. The audit noted that:

### **Formal M&E not Effectively Conducted**

According to MCS strategy and action plan 2005, the MLFD is required to conduct full analysis of performance and impact of MCS activities and disseminate the results for further decision making. As an alternative to monitoring and evaluation, the MLFD conducts assessment through fisheries frame survey and Fish Catch Survey to evaluate the trend of fisheries in the Lake. All surveys aim to collect information on fishing effort in the lake (Number of fishers, Vessels, fishing capacity of vessels etc and amount of fish caught). Frame Survey is done after 2 years while Fish catch assessment is sampled throughout the year (in 10 days per month throughout 12 months). However, Ministry has not practiced this after the phase out of the implementation of a Fisheries Management Plan (IFMP) project.

### **Inadequate regular inspection and monitoring of fishing activities**

One of the monitoring mechanisms includes inspection of the fishing activities to see whether control mechanisms work. According to the Fisheries Act 2003, Part VI on Fish and fishery products standards, fish inspector is required among others to carry out regular inspections and monitoring of the activities carried out in the fish establishment, fish landing station, fish transportation vehicles and vessels, fish market and auction halls. The BMUs plays a role in the monitoring of the fisheries activities in the lake. The role has been to a large extent left to the Local Government level.

However, it was noted that BMUs had little capacity to detect IUU. According to BMUs function, every person engaging in fisheries activities including fish processors, traders, gear repairers, suppliers and boat builders within the Beach Management Units area shall be registered as members of such Beach Management Units. Since BMUs are responsible for a considerable number of roles, close monitoring of the way they perform their activities is of more importance. However, it was observed as follows:

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<sup>17</sup> “Monitoring procedure” means a planned sequence of observations or measurements of control parameter to assess whether a critical control point is under control

## **BMU lack development and operational plans**

According to the Fisheries Regulations 2009, the functions of the BMU include: to develop a BMU fisheries management and landing station development plan in consonance with higher level fisheries management plans; develop annual and quarterly work plans and budgets to implement the management and development plans.

However, it was found that over 70% of the BMUs worked without any fisheries management plan, work plan or development plan. Ideally these tools have to be prepared and approved by the respective BMU assemblies. The M&E report reviewed showed that only a small percentage (16%) of BMUs conducted and documented patrols. Some of the hindrances to efficient BMU patrol operations included lack of teamwork and commitment in BMU Committee Members, threats from illegal fishers and also lack of support from respective LGAs.

## **Performance of BMUs inadequately evaluated**

The ministry responsible for fisheries is supposed to evaluate the BMUs Performance on annual basis. Information to be assessed is based on the progress report of BMUs sent to DFOs and MCS unit. During the audit it was noted that, MLFD had not conducted an annual evaluation performance of BMUs since 2007. The last evaluation of BMUs was done in 2007.

Based on interviews with fisheries officials at MLFD, it was realized that, there was no budget provision since 2007 for conducting annual monitoring and evaluation of BMUs in Lake Victoria, and the one conducted in 2007 was funded by the European Union.

According to the Harmonized BMU Guidelines, LGA and District Technical staff has the role of monitoring and evaluating the performance of the BMUs in accordance with prescribed performance criteria issued by Department of Fisheries. However, no evaluation has been conducted to BMUs in the visited LGAs.

## **Participatory Monitoring and Evaluation not adequately done by BMUs**

The BMU guideline requires the entire BMU membership to take part in monitoring and evaluating their performance. By end of each year,

BMU Assembly is supposed to examine what they had set out to achieve in their annual work plan, how much has been achieved and reasons for non-achievement. Records taken are to be used to guide BMU in developing next plans.

However during the audit it was found that, the BMUs Committees and Assembly meetings are not done as required. It was revealed in the visited BMU that some BMU leaders were reluctant in convening meetings in their respective BMUs, and according to interview it was revealed that, meetings were some how difficult as the majority of leaders did not see the importance of holding meetings. Formal monitoring and Evaluation by BMU is not done as required. The last evaluation was done in 2007. Appendix 2 outlines some parameter required to be assessed.

According to findings of 2007 M&E report many BMUs performed poorly in reference to the parameter above. As explained earlier in this report, BMUs also get involved in recommending people to be given fishing licenses to the DFOs. Involvement of BMU members is to ensure that only people who are registered with the BMUs are given access to fishing in a given water territory.

### Presence of Informal Landing Sites

From the monitoring and evaluation report reviewed, it was realized that only a small proportion of BMUs (4%) was involved in vetting of licensing. After the review of the frame survey of 2010, it was also noted that; BMUs are not effectively helping the control of IUU in the Lake because of the presence of informal landing sites. Informal fish landing sites were observed in all three regions as shown in the table below:

**Table 5: Number of landing sites operated without BMU**

Region	Total Landing sites	Landing sites with BMU	Landing sites without BMU
Kagera	173	109	64 (37%)
Mara	141	112	29 (21%)
Mwanza	295	216	79 (27%)

Source: Frame survey 2010

As reflected in Table 5, Fish landing sites without BMU Management are found in all three regions. These are fishing sites whereby control of IUU is virtually not done.

## **Conflicting objectives of BMUs**

According to the interviews with fisheries officials in Mwanza, Kagera and Mara regions, it was realized that even in landing sites with BMUs, the performance of law enforcement in controlling illegal fishing is weak. There are conflicting objectives between the two roles of BMUs; on the one hand BMUs are supposed to enforce the laws (see section 2.1.5). While on the other hand fishers are required to be members of BMUs play the role of exploiters of the fishery resource.

## **Surveillance role not adequately done by BMUs**

According to guidelines, surveillance visits are required to be conducted by BMU officials to detect IUU. The audit found out that, the Government has not established a clear protection mechanism for the BMUs officials who are devoted to fight illegal fishing in the Lake. Based on the LVFO report, some BMUs officials have been subjected to life threatening attacks including burning down of some of their houses because of their commitment to fight illegality in their BMUs.

## **BMUs activities not adequately funded**

According to BMU Guidelines, BMUs generate funds for their operation through revenue collection at the beaches, landing site user fees, fish movement permit, and fines levied for infringements of bylaws. Our interviews with members of the BMUs revealed that very few BMUs on Lake Victoria shoreline collected revenue at the beaches on behalf of District Councils. The few that exist were found in Sengerema and Bunda districts only. The rest of the District Councils revenue collection is done by private agents contracted by the District Authorities.

## **Fisheries data not adequately managed**

Collection of fisheries information is one of BMU activities prescribed in the guidelines. The majority of the BMUs (94%) dealt with were found not to have collected any catch data and where they did such information was found to be collected in patches. The number of BMUs that collect and discussed their catch data monthly was very low (17 BMUs, 4%).

Based on the interviews held with BMU official at Kayenze BMU, it was noted that the activity of recording the fish catches and traded at the landing site was solely left to the private company procured by the

council to collect fish revenue at the landing site. As a result, fish data were not recorded because according to the BMU guidelines, it is the role of BMU to record fish data at each landing site and document such information for CAS activities.

In some of the BMUs visited such as Namasabo-Ukerewe and New Igombe-Mwanza city and BWAI -Mara, they had no updated catch records because some Village Executive Officers (VEO) kept registers in their offices which were unavailable to BMU leaders.

It was also noted that, most of the people involved in data collection at village level lack basic training in data collection and reporting. Further, most of the data collectors in the lower levels of administration are not from the MLDF. A good number of them are agricultural extension officers answerable either to the Ministry of Agriculture, Food and Cooperatives or LGAs.

### **MCS activities not adequately funded**

As explained under section 2.1.1, MCS centres are responsible for law enforcement, surveillance, monitoring and revenue collection (royalties). Table 6 shows funds allocated to MCS activities against total revenue collected.

**Table 6: Revenue collection from fisheries resources against funding activities**

<b>Region</b>	<b>Financial Year</b>	<b>Revenue Collected (Millions TZS)</b>	<b>Funds allocated for MCS (Millions TZS)</b>	<b>Percentage of Funds allocated for MCS</b>
<b>Mwanza</b>	2007/2008	4,302	57	1.3%
	2008/2009	3,783	92	2.4%
	2009/2010	3,510	69	2%
	2010/2011	-	71	
<b>Mara</b>	2007/2008	1,198	90	7.5%
	2008/2009	871	71	8.2%
	2009/2010	771	52	6.7%
	2010/2011	-	38	-
<b>Kagera</b>	2007/2008	714	52	7.3%
	2008/2009	655	40	6.1%
	2009/2010	639	66	10.3%
	2010/2011	-	42	-

**Source:** Financial records from Kagera, Mara and Mwanza FSUs

Table 6 Shows that revenue collected with the declining trend comparing amount collected in 2007/08 against 2009/2010. The amount allocated to run MCS activities as compared with the revenue collected vary from 1.3% and 2.4% in Mwanza region; 6.7%-8.2% in Mara region; and 6.1%-10.3% in Kagera region.

### **Fish catch and fishing efforts information**

The Ministry is supposed to undertake supervisory and monitoring role to ensure that information about fishing in Lake Victoria and information on fish catch are captured and are accurate<sup>18</sup>. The information could be used in the planning and setting fisheries targets based on the available Nile perch stock. According to CAS standard operating procedure, it is supposed to be conducted in three phases January- April, May - August and September - December during the time of Lake Victoria fisheries management plan project for the lake Victoria. The ministry is responsible to collect fish catch information for ten days every month in the sampled landing sites throughout a year. However this is not done

<sup>18</sup> Catch Assessment surveys (CAS) provide the information of how much fish caught from the Lake i.e. (quantities of removals)

regularly in the lake Victoria. Also as indicated under section 2, BMUs have the responsibilities of collecting and recording these data in their jurisdictions, though they are not fully filling these responsibilities.

According to interviews with the Ministry’s official responsible for undertaking this monitoring role and summarized in Table 7, the catch assessment survey is not done regularly as required. From 2008 to 2011, 12 CAS were supposed to be conducted, However, it was found out that only 3(25%) CAS was conducted.

**Table 7: Catch Assessment Survey conducted between 2008-2011**

Year	1 <sup>st</sup> Quarter (January -April )	2 <sup>nd</sup> Quarter (May -August )	3rd Quarter (September-December )
2008	CAS done	CAS not done	CAS done
2009	CAS not done	CAS not done	CAS not done
2010	CAS done	CAS not done	CAS not done
2011	CAS not done	CAS not done	CAS not done

Source: MLFD

According to the interviews, this was due to inadequate funds allocated to this activity and also poor recording of fish caught at the landing site. As stipulated in section 2.1.5 above, the BMUs have the responsibilities of recording daily fisheries data from the land site and the Ministry is responsible for monitoring the data.

Also, the ministry obtained fisheries data through the frame survey<sup>19</sup> conducted after two years. The frame survey report contains the information on, number of fish landing sites on the lake, information on the number of fishermen and types of fishing crafts, Information on the modes of propulsion of the fishing craft to provide an insight on how far the vessels can fish, Information on the types and sizes of fishing gears especially the number of illegal fishing gears in the fishery<sup>20</sup>.

The audit found out that frame survey was conducted after two years as scheduled. However, the audit noticed disparity of data between the data of the frame survey and the data collected by the auditors, the gap was seen in the number of fishers and fishing crafts.

<sup>19</sup> The overall objective for conducting the Frame Surveys is to provide information on the facilities and services at the landing sites, the composition, magnitude and distribution of fishing effort to guide development and management of the fishery.

<sup>20</sup> Frame Survey 2010



During the audit it was noted that in all districts visited, DFOs did not use the data contained in the framed survey but rather used their own information of number of fishers and vessels which was considered to be very unrealistic. For example in some districts such as Ukerewe, the register of fishers was missing and in some districts like Ilemela, Nyamagana, Bukoba and Mara had not updated their information on the number of fishers and vessels working in the areas.

Hydro-acoustic survey is also another method used to estimate fish stock biomass in the lake. Best practice requires that two Hydro-acoustic surveys be done per year. Hydro-acoustic, trawl survey, biological and environmental surveys examine the status of the fish stock, their biology and interactions among themselves and with the environment.

A review of documents revealed that two hydro acoustic surveys were done in 2009 and 2010<sup>21</sup>. This makes 2 out of 4 recommended in two years which is equal to a performance of 50%. According to TAFIRI, the required surveys were not conducted as planned because the Ministry could not fund this activity. The two conducted surveys were funded by donors through LVFO. However, there was no evidence on the use of the information obtained from the hydro acoustic survey reports by the District Fisheries Offices for example as a basis for setting total allowable catch which is yet to be practiced.

As a result, there is limited current knowledge and awareness on the status of fish stock in the Lake by relevant authorities to make proper decisions on the control measures required on Lake Victoria.

### **Measures to regulate amount of Nile Perch caught per year**

The Fisheries Act 2003 requires that a limit for Nile Perch to be caught or traded has to be set; limitation should be in terms of the amount, size, age and other characteristics recommended by scientists. During the audit it was noted that the Ministry has set the slot size of Nile Perch to be caught to be between 50cm and 85cm. A Nile Perch of this size is considered as matured, while Nile Perch below this size is considered as immature, and is not allowed to be caught for trading purposes.

However, during the audit it was found out that, the Ministry has not set the maximum limit of amount of Nile Perch to be caught annually due to the nature of fishing, whilst the information on the maximum biomass (stock) for Nile Perch is available for the whole Lake. This information

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<sup>21</sup> Technical report: Stock assessment regional working group, 22<sup>nd</sup> to 25<sup>th</sup> November 2011, Ridar Hotel, Seta , Uganda, pg2

is given by Lake Victoria Fisheries Organization (LVFO)

The difference between the minimum required stock and available stock of Nile perch shows that, exploitation of the Nile perch exceeded the minimum limit set by 57% leaving a stock of estimated 64,141 tones available for regeneration at the estimated regeneration rate of 0.3 as indicated in table 1.

Likewise, the audit further noted that, control of catching immature fish was inadequate; figure 3 above depicts the increasing trend of catching the undersized Nile Perch; as a rule continuing catching juvenile fish will leave the lake without enough stock for regeneration. Nevertheless, lack of adequate monitoring and close inspection by DFOs and MCS officials is also to a large extent attributed to uncontrolled fishing pressure of Nile Perch and therefore contributed to acute decline of the Nile Perch Stock.

In contrast, it was noted that MLFD and the riparian districts lacks reliable monitoring reports to give an indication whether fishers use the right gears, catch the right type and size of fish. Moreover, it was learnt that LGAs and MCS units do not implement monitoring mechanism in place to ensure fishers use legally acceptable gears apart from what is reported during registration.<sup>22</sup>

### **3.3 Action against Illegal, Unreported and Unregulated fishing**

#### **Law enforcement and punishment**

Common finding during patrol includes collection of fish without permit, transporting fish in unauthorized vehicles, selling of spoiled fish, selling of poisoned fish, selling of fish without license, selling immature fish, illegal fishing gears and unregistered vessels. Effective enforcement includes surveillance, arrests, penalties, and reporting. During the audit we found that, the MCS focus on surveillance and arrest, while prosecution and reporting are not always adequately covered. But since patrols are not adequately done, the rate of seizing illegal gears is small.

As explained under section 3.2 above, the number of illegal gear is still high. The total number of illegal gears seized per region per year is as shown in Table 8 below<sup>23</sup>

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<sup>22</sup> Auditor calculation done by taking 51% of the maximum biomass of the whole lake i.e. Tanzania, Uganda and Kenya

<sup>23</sup> Data for financial year 2011/12 ended May 2012

**Table 8: Usage of illegal gears 2008/09 - 2011/12**

Region	2008/09	2009/10	2010/11	2011/12
Mwanza	7,098	1,379	1,141	45,537
Mara	7,286	3,253	593	35,140
Kagera	12,453	10,661	4,681	65,980
Total	26,837	15,293	6,415	146,657

Source: MLFD-Report from Lake zone for 2008/2009 - 2011/May,2012

Table 8, above discloses a high number of illegal gears caught in all three regions in 2008/2009 the highest being in Kagera, followed by Mara and Mwanza. The table shows the decreasing trends in year 2009/2010 and 2010/2011 financial years' lowest being in Mara with only 593 gears caught. There is an increase of caught illegal gears in all three region during financial year 2011/2012, number of illegal gears caught increased by 97.5 % in Mwanza, 98.3% in Mara and 93% in Kagera. Based on the report from annual report of the Ministry this increase was due to increase on the use of beach sein (Kokoro) in the lake. Table 9 below depicts the huge increase in use of beach seine.

**Table 9: Trend of using Beach Seine (Kokoro) in Lake Victoria Fisheries**

MCS Unit	Beach Seine <sup>24</sup>			
	2008/09	2009/10	2010/11	2011/12
Mara	1, 262	585	102	34,658
Mwanza	1, 325	659	131	45,213
Kagera	1, 659	580	161	65,431
Total	4246	1824	394	145,302

Source: MLFD-Report from Lake zone for 2008/2009 - 2011/May, 2012

Table 9 above suggest the massive increase in the use of Beach seine, between the financial year 2010/2011 and 2011/2012 from 394 to 145,302 beach seines (the average percentage increase was 368%). The opinion from stakeholders<sup>25</sup> on increasing use of this type of illegal gear was that; apart from the demand of local factory and communities, there is

<sup>24</sup> According to FAO-A beach seine is a seine net operated from the shore. The gear is composed of a bunt (bag or lose netting) and long wings often lengthened with long ropes for towing the seine to the beach. The head rope with floats is on the surface, the footrope is in permanent contact with the bottom and the seine is therefore a barrier which prevent the fish from escaping from the area enclosed by the net. This kind gear is prohibited to be used for fishing in Lake Victoria

<sup>25</sup> meeting done in Mwanza in 2012,

an increase of demand market forces for small size Nile perch in the neighboring countries of Congo, Rwanda, South Sudan and Burundi.

Smuggling<sup>26</sup> of illegally caught Nile Perch across borders has substantially increased and MCS officials are most of time unable to reach Borders for inspection. As a result those fish are not put on record and subsequently export tax revenue is lost to the government. Also, because of using large amount of small mesh net the quantity of catches has shown a declining trend on Lake Victoria. Further more due to the decline of the Nile perch stock, fishers have developed a wrong feeling that no fish would be caught unless small mesh-sizes are used.

A comparison of the number of defaulters recorded against number of court cases opened revealed the highest percentage of court cases opened against defaulters to be 29% as shown on Table 10 below:

**Table 10: Law enforcement and prosecution<sup>27</sup>**

Region	Year	Number of defaulters	Number cases opened in the court	Percentage of cases opened against defaulters
Mwanza	2008/2009	90	25	28
	2009/2010	121 <sup>28</sup>	0	0
	2010/2011	55	0	0
	2011/2012	44	2	5
Mara	2008/2009	89	22	25
	2009/2010	66	19	29
	2010/2011	21	1	5
	2011/2012	17	3	18
Kagera	2008/2009	188	21	11
	2009/2010	314	48	15
	2010/2011	177	23	13
	2011/2012	107	15	14

**Source:** MCS Centres Annual reports

<sup>26</sup> Smuggling could be because of the higher market price compared with neighboring local market.

<sup>27</sup> 2011/2012 data has information that ended May 2012 only

<sup>28</sup> This data differs from the data from the MCS Unit of Mwanza which was Number of defaulter for this year 137 and number of cases opened 17. We decided to retain the information obtained from the Ministry

Also, Table 10 shows that Mwanza had 121 and 55 number of defaulters for the year 2009/2010 and 2010/2011 respectively but none of them had cases opened.

The illegal fish dealers caught were not apprehended and sent to court; the percentage of cases opened is inadequate. For example in Mwanza no cases were taken to the court in 2010/2011. This suggests that resolving cases of arrest and confiscation of caught illegal gears is done unofficially and this has the risk that extortion of money by patrolling agents can occur. According to interviews with MCS unit in Mwanza, most cases are not taken to court. MCS officials lack some basic knowledge of filling cases and prosecution.

It was revealed that; cases opened in courts took longtime and were costly. This is attributed by prolonged time for investigations and examination by prosecutors. For example, out of 80% of cases filed at the Resident Magistrate court - in Mwanza in 2008/2009, 31 cases were dismissed and culprits set free<sup>29</sup> because of poor filling of the cases by MCS officers who lack professional training in prosecution. It was noted that, MLFD has not conducted enough education programs or seminars on fisheries legislation and related infringements for court staff and judges.

Even when vessels were caught red handed engaging in IUU activities, penalties faced by the crew and vessel owners were too small to act as effective deterrent measure and were therefore are seen simply as a cost of doing business.

## **Funds released and patrol activities conducted**

MCS units are funded through government budget. Key activities which are funded includes conducting patrols on the lake, inspection (in landing sites and in fish factories), publicity, conduct surveys to indentify fishing gears, sellers, manufacturer of fishing gears, vessels etc. Based on the document reviewed (quarterly progress report) the crucial activities funded is the patrol of fishing activities.

After reviewing the financial statements of MLFD, to ascertain the amount of funds given for MCS activities, we found out that, granted budget cover all key MCS activities. For example, in Mwanza Region MCS teams spent an average of 60 days or two months per year for surveillance and patrol activities. Table 11 shows the funds released for MCS activities and the number of patrols conducted.

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<sup>29</sup> As per CPA s.225 (5)

**Table 11: Effectiveness of the Funds allocated for MCS activities<sup>30</sup>**

Region	Year	Actual funds released	Number of days in the year spent on patrol activities	Percentage of number of days per year
Mwanza	2008/2009	92,514,126	52	14%
	2009/2010	68,735,000	51	14%
	2010/2011	71,270,623	44	12%
Mara	2008/2009	71,400,000	52	14%
	2009/2010	51,896,184	45	12%
	2010/2011	37,768,400	45	12%
Kagera	2008/2009	40,132,000	166	45%
	2009/2010	65,878,839	144	39%
	2010/2011	42,200,000	113	31%

**Source:** Financial data from MLFD and Regions MCS

As shown in Table 11 above, the MCS region of Mwanza and Mara spent on average only two months a year for patrol and Kagera spent about 5 months for patrol per year. It can be assumed that, overall performance of MCS in conducting surveillance or patrol in their respective regional offices is poor. It was expected that, fighting against illegal fishing practices would be given high priority by allocating enough funds and time for patrols.

As stated earlier, inadequate allocation of funds has negatively affected performance of patrols. Additionally, as the funds for surveillance activities and payment of allowances to MCS staff are delayed, MCS staff may be exposed to a risk of collusion with perpetrators. With the financial constraints, Kagera Region reduced the number of inspections to be conducted at the borders with the neighboring countries. Also, Mwanza Region reduced from TZS. 92,514,126 in 2008/2009 to 71,270,623 in 2010/2011.

### **Coordination of information sharing on IUU**

The need for sharing information and data among member states as well as the regions surrounding it is of utmost importance in ensuring sustainable fishing<sup>31</sup>. LVFO needs each member state to set up a data sharing system among the members. These systems are supposed to be connected to each member state to help in facilitating availability of timely and up-to-date information to other states.

<sup>30</sup> Assuming 365 days in a year

<sup>31</sup> ARTICLE 24, Exchange of Data and Information

Some of the key information and data for sharing among member states includes security issues, composition and distribution of fish stocks; extent of fishing effort, quantities of removals, environmental impacts on the stocks and so forth. Some information is needed for surveillance, while other information may be needed in a less timely manner but over longer time series.

The MLFD had set a target to establish a reliable database for provision of timely and accurate information operational by June 2010<sup>32</sup>. Based on the review of the Ministry's document and interview with the Ministry's officials, we found that MLFD has yet to establish a data sharing system. As a result we found that; there was poor collection and sharing of information on the amount of fish catch, fish stock, intelligence information to deter illegal fishing. BMUs who own much of the data and information were not equipped with suitable working tools such as computers, and telephones for easy sharing of information from the ground.

The flow of information and reporting system between BMUs and district councils and central MCS unit is not well structured and not performing well. We found that, there was communication breakdown between the DFOs and Regional Fisheries Advisors. DFOs report direct to District Executive Directors while the Advisors report to the Director of Fisheries. With this arrangement there is no connectivity of ensuring the flow of information from BMUs to the Ministry. Currently, the frame survey or catch assessment reports are not regularly prepared, as the surveys are conducted every two years and thus there is no other way of getting up-to-date data for immediate decision making.

As a means of improving network for fisheries professionals, every year fisheries stakeholders hold a meeting to discuss various issues on fisheries and sharing experiences. However, due to scarcity of funds in the past two financial years 2010 and 2011 such meetings have not been held.

## **Awareness campaigns to IUU**

In 2009, the Council of Ministers of Lake Victoria<sup>33</sup> agreed that each member state should organize national stakeholders' conferences to raise awareness and political commitment, and to sensitize the stakeholders on the dangers and impact of their fishing illegalities on their livelihood.

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<sup>32</sup> MoLDF- Medium Term Strategic plan 2009 - 2011

<sup>33</sup> Council of Ministries of the Lake Victoria Fisheries Organization, minutes no. 15 of February 2009

The audit team reviewed the strategic plan and the annual report of the MLFD to find out whether the planned awareness campaigns were carried out and if they had any effect on reducing illegal fishing in Lake Victoria.

During the audit it was noted that, awareness campaigns in Lake Victoria were not adequately conducted, although awareness activities were planned in each MCS unit visited but those plans were not fully performed. No specific funds were allocated for in 2010/2011 and 2011/2012 in MCS units of Mwanza, Kagera and Mara. But in 2009/10 in all regions i.e. Mwanza, Kagera and Bukoba they received funds from development partners, some of which was used for carrying out awareness campaigns. Problems related with lack of budget for awareness campaign were also found in all LGAs visited.

A one-month campaign was effectively conducted by a special task force. The result of those campaigns was that total number 1,909 pieces of various illegal gears were voluntarily surrendered. The surrendered gears were beach seines nets 329; nets seine nets <10mm 244, monofilament nets 1301 and gillnets <5” 20 Pieces. A result from the 2009 awareness campaign is evidence that, there are positive responses when the awareness campaigns are adequately done.

According to the annual reports prepared by the Ministry, it was noted that, the Ministry has not conducted awareness campaigns for Lake Victoria fisheries. The Ministry has not identified the risk areas so as to put more efforts for awareness; for example groups of fishers who live in islands, fish dealers, fish factories, market and the general community as consumers of illegally caught fish. We found that the Ministry’s plans for conducting awareness does not show the frequency and areas where awareness should cover and key issues on controlling illegal fishing in their awareness.

Awareness campaigns done by the Ministry was generalized to impact on illegal fishing in Tanzania, more emphasis was given to marine fisheries. Table 12 shows that the Ministry has produced and distributed the Outdoors banners (Mabango), newsletters, brochure; TV programs, Radio programs on various issues about fisheries in Tanzania<sup>34</sup>

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<sup>34</sup> This was not particularly targeting fishing on Lake Victoria



**Table 12: Performance of Awareness campaigns done by the Ministry**

Item/Year	2009/2010	2010/2011	2011/2012
Stakeholders meetings	1 <sup>35</sup>	-	-
Advertisement in Outdoors banners (Mabango)	1000	1000	10
Number of newsletters produced and distributed	6000	2000	2118
Number of brochure produced and distributed	3000	-	6425
Number TV programs	20	12	15
Number aired Radio programs	50	20	52

**Source:** Budget speeches of 2009/2010, 2010/2011 and 2011/2012

Table 12 shows the reality of the conducted awareness campaigns. The audit could not discover whether newsletters and brochures produced reached the intended targets especially in villages and islands. Likewise, on the TV and Radio programs aired, the audit could not find out its effectiveness and impacts on controlling the illegal fishing on Lake Victoria fisheries

### Support provided by RAS in the region

As explained under section 2.1.3, it was expected that Assistant Administrative Secretary (AAS) Economic and Productive sectors in the visited regions, among other activities coordinate implementation of fisheries policy and regulations in their regions. This includes also building capacity of LGAs in providing Fisheries services.

According to interview with MCS officials and AASs in the respective regions, fisheries issues are coordinated by an officer whose background is other than fisheries. This is as shown in the Table 13.

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<sup>35</sup> In addition, the Ministry continued to provide training for 124 fishermen, owners and staff at the fish products processing factories in Lake Victoria

**Table 13: Fisheries advisors in the Lake Zone regions**

Regions	Assistant Administrative Secretary background	Sector coordinator under AAS background
Kagera	Economics	Other than fisheries
Mara	Commerce	Other than fisheries
Mwanza	Agriculture	Other than fisheries

**Source:** Interview with MCS officials and AASs in Mara, Mwanza and Kagera regions

As shown in Table 13 above, all regions do not have fisheries advisors with expertise in fisheries to coordinate implementation of fisheries sector in their respective region. According to interview with MCS officials and AASs much of the coordination role is played by the MCS officials. RAS use the in-charge of MCS officials to provide them with information regarding implementation of fisheries activities in their respective regions. This information is then submitted to PMO-RALG.

However, these MCS centres are responsible for law enforcement, surveillance, monitoring and revenue collection (royalty from industries processing fish for export). All revenue collected as shown under Table 6 is sent to Treasury. MCS activities are financed by funds from the MLFD as shown under Table 6.

## CHAPTER FOUR

### CONCLUSIONS

The audit findings presented in the previous chapters lead to draw the following conclusions.

#### Overall conclusion

The Ministry of Livestock and Fisheries Development and the LGAs along Lake Victoria have not effectively carried out a monitoring, control and surveillance measures for combating decline of the Nile perch stock in Lake Victoria. In general, Both LGAs of the riparian districts and MLFD have not taken remedial actions to rescue the decline in the Nile perch stock in Lake Victoria.

This deplorable situation was because of weak control in the LGAs. This encompassed lack of awareness among the fishing communities on sustainable fisheries management with the aim of incorporating them, in managing the Nile perch resources. Both the Ministry and LGAs are not allocating adequate financial, human and boats and cars for fisheries management activities particularly in areas with high risks in illegal activities.

#### Specific conclusions

The following are specific conclusions based on the audit findings

##### 4.1 Controls on fishing activities

**Control measures are not adequately implemented to fight illegal fishing**

##### Little effort is applied to control the IUU in Lake Victoria

The MLFD has not taken remedial actions to rescue the decline in the Nile perch stock in Lake Victoria. Licensing procedures in the districts are not effectively followed, as many fishers and vessels are not registered with the BMUs. It is estimated that 50% of the fishers and fishing vessels working in Lake Victoria are not duly registered and licensed therefore

working illegally. Failure to register all vessels operating in Lake Victoria has increased the risk of having fishers who are operating illegally and hence causing the decline of the Nile perch fish stocks.

The MLFD has not set up a limit for licenses to be offered from each district. This limit would have been used as the basis for controlling fish stock, and would have allowed regeneration of the stock. Similarly, the MLFD through the Division of Fisheries has not established enforceable plans of switching from open access to limited access fishing to control the stock.

### **Available stock does not support demand**

The available Nile perch stock is not able to support further exploitation for commercial use. The MLFD does not conduct close monitoring and inspection to fight Nile perch fishing pressure. There is no constant or sustainable effort from the Ministry to fight the use of illegal gears in the Lake. The use of illegal fishing gears has increased, and this is manifested by the increasing trend of immature fish caught over the years in Mwanza, Kagera and Mara. Importation and manufacturing of restricted fishing gears are not well controlled and hence their numbers and use has substantially increased in the market.

The effect of overfishing affects not only the Lake ecosystem but also the community of fishers because of financial losses. It is estimated that; there are 30 million people depending on the Lake Victoria fishery for their livelihood. In all the regions, fish processing factories are now working below their operating capacities because of inadequate fish supply within the lake.

While it is clearly known that effects of overfishing are reversible, the Ministry has not acted strongly to fight the declining stock of Nile perch. There is no enforced plan to introduce alternative ways of fish-farming outside the Lake waters (aquaculture) to help meet the growing demand for fish.

There are no proper systems to regulate the fish caught on a sustainable manner, as a result it is difficult to establish the total amount of fish caught in a year and estimate the remaining total biomass of the Nile perch in Lake Victoria. Similarly, if proper controls were instituted and operationalised, the illegal practices of trade of immature Nile perch could easily be controlled. This is because all domestic fish markets are controlled by LGAs.

## **Inadequate allocation of resources for MCS**

The Ministry and LGAs have not adequately allocated the required resources (financial, equipment and number of personnel) to conduct regular patrols. Priority in allocation of resources did not consider the associated risks of illegal fishing incidences and demand. For example, there are no fisheries staff stationed in major islands of Lake Victoria such as Ukerewe where most fishers and fishing activities are taking place. Instead, fisheries staff are stationed at the headquarters of the regions for example the MCS staff for Kagera are in Bukoba Municipality, for Mwanza Region are in Mwanza City and for Mara Region are in Mara Municipality. The positioning of the staff at the regional headquarters coupled with the insufficient funding of the patrolling activities renders the work of these fisheries staff almost impossible.

Because of weaknesses in the allocation of staff, MCS officials mostly focus their surveillance and patrol on the major road side, landing sites and town market centers. Since the control is done in less risky areas and sometimes outside the lake water, the decline in the volume of fish stock will continue. The approach of dealing with the perpetrators of illegal fishing outside the Lake is not cost effective because damage resulting from these acts are irreversible e.g. removal of juvenile Nile perch from the Lake.

Fishers tend to migrate from areas which are frequently patrolled to islands where MCS teams do not normally go, as a result a high rate of illegal fishing activities are more practiced in unpatrolled islands and they operate without any fear of being apprehended.

## **Inadequate coordination between the MLFD and LGAs**

MCS unit has no offices in the districts therefore they depend on DFOs and BMUs for fisheries information. It was noted that, there is poor coordination between MCS, DFOs and BMUs. The poor coordination is a result of weak administrative linkage between Central Government and LGAs. This explains why, the Ministry of Livestock Development and Fisheries (MLFD) or MCS in this case cannot under normal circumstances take any action against the District Fisheries Officers who fail to abide to the central government directives, instructions and fisheries legislations.

In general, the decline of Nile Perch stock in Lake Victoria is the result of the failure of the Ministry and LGAs to implement various measures agreed upon with other riparian states on the control of illegal fishing

targeting Nile Perch catch in Lake Victoria.

The Ministry has not set the National Plan of Action for combating decline of Nile Perch stock as agreed by other partner states and consequently fishing of Nile Perch is done without an enforceable control.

#### **4.2 Monitoring of fishing activities**

**Monitoring role is not adequately implemented to reduce declining of Nile Perch stock**

##### **Inadequate monitoring of existing controls**

The MLFD has to the lesser extent monitored the existing controls which are supposed to be implemented in order to reduce the problem of overfishing. This is because formal monitoring and evaluation have not been effectively conducted by the MLFD. BMU lack development and operational plans despite the fact that it has the major role to play as regards to fisheries. Over 70% of the BMUs worked without any fisheries management plan, work plan or development plan.

Performances of BMUs are hardly evaluated. This is caused by the failure of the LGAs to allocate or set aside budget for the evaluation activities not allocated with funds. Full analysis of performance and impact of MCS activities, and the dissemination of results are not adequately conducted by the Ministry.

##### **Unsatisfactory participatory Monitoring and Evaluation by BMUs**

Only small proportion of BMUs (4%) was involved in vetting of licensing for fisheries. Failure to vet all vessels operating in Lake Victoria resulted into having a large number of fisheries who are fishing in the Lake without licenses. Similarly, landing sites are operating without BMUs. This implies that control of IUU is not adequately done.

##### **Lack of clear funding model to assure sustainability of BMUs**

LGAs lack clear funding mechanism for the BMUs activities. BMUs generate funds for their operation through revenue collected at the beaches, landing site user fees, fish movement permit, and fines levied for infringements of bylaws. There is no defined percentage of funds to be allocated to BMUs. Since BMUs are under the Village Government,

the current fund allocation from LGAs to various BMUs activities is done through Village Government. However funds allocated by Village Government to BMUs could not be established.

The failure to have a well defined funding model has made it harder for the councils to clearly understand how funding levels can be defined for the required activities. This has also made it much harder for the BMUs and Councils to enforce the stated laws and regulations in relation to fishing activities around the lake.

### **Inadequate management of fisheries data**

To assess performance of fisheries effectively and be able to manage exploitation of fisheries resources at ideal exploitable levels, up-to-date fish catch data are required. Only (17 BMUs, 4%) compiled and discussed catch data. The reason cited is that people involved in data collection at village level were not competent in data collection and reporting. However, fish catch data are not regularly collected because of lack of fish catch information collected by BMUs. It is therefore difficult for fisheries managers to set up strategies of managing the industry.

### **Inadequate Measures to regulate Nile Perch caught per year**

The MLFD has not taken adequate measures to regulate the Nile perch stock by ensuring that the amount of Nile perch caught per annum are clearly controlled. The trend indicates that the Nile perch stock would hardly make a recovery if exploitation continues at the current pace and rate. This would result into the Nile perch fishing collapse at some point as there are few juvenile fish to support stock regeneration. The above imminent risk is attributed by the failure to implement measures to regulate the amount of fish caught in the lake.

### 4.3 Actions against Illegal, Unreported and Unregulated fishing

#### Minimal action taken against illegal, unreported and unregulated fishing

##### Weak law enforcement

In all LGAs visited and MCS units, illegal fishers were not adequately arrested compared to the illegalities done. MCS units and Districts put less effort and priority in fighting illegal fishing. For instance in Mwanza region alone no cases were brought to court in 2010/2011. Of the few cases brought to court in the previous years, the ruling of cases was seen to take long. Even in the likely event that a vessel was caught engaging in IUU activities the penalties faced by the crew and vessel owners were often too small to act as a deterrent effect to other defaulters.

##### Non prioritization of fights against illegal fishing

Fight against illegal fishing practices is not being given high priority by the Ministry and LGAs. Funding availed to the control and surveillance department are inadequate to support regular inspections or patrols and the reason for the inadequate funding is the lack of commitment or priority to plough back money generated by the fishery as it is a self-sustaining sector. There is a shortage of funds for the fight against illegal fishing despite the fact that enough revenue was being collected by LGAs and Central Government but very little was ploughed back to support MCS activities so as to enhance management and conservation of the fisheries resources.

##### BMUs not performing well in enforcing laws and regulations

BMUs have not effectively fight against illegal fishing on Lake Victoria; this is attributed by lack of enough support from other government institutions such as LGAs, Judiciary and Police Force, leaders from village government which are supposed to ensure that laws and regulations even in lake areas are adhered too. Similarly, the MLFD has not established a clear protection for the BMU officials while fighting illegal fishing in the Lake. The ability of BMUs in MCS is affected by a lack of sustainable funding.



## **Awareness/ sensitization campaigns are not adequately done**

The Ministry has not conducted awareness campaign to the sensitize citizens and community in general on the importance of conducting fishing activities legally. This shows that citizens have not been educated or informed on the identified risk and risk areas; for example groups of fishers who live in islands, fish dealers, fish factories, market and the general community as consumers of illegal caught fish were supposed to be educated on how they address the problem of illegal fishing in Lake Victoria. Likewise, the ministry's plans for conducting awareness does not show the frequency and areas where awareness campaign should cover and key issues on controlling illegal fishing in the planned awareness campaign.

On the other hand, awareness campaigns are not prioritized and therefore there is no specific budget allocated. Lack of awareness on the importance of conducting fishing by using best practices is the main driving force leading to an ever increasing level of IUU. In fact, the Ministry has not established and operationalized reliable data sharing system for providing timely and accurate information on IUU to citizens and other institutions in order to increase their level of understanding of the problem at hand.

## **Weak system of sharing information on IUU**

The flow of information and reporting system between BMUs, district councils and central MCS units are not well structured, and are also not performing well. As a result, MCS lack reliable, timely and accurate data due to communication breakdown between the DFOs and Regional Fisheries Advisors.

## **Inadequate Fisheries coordination provided by RAS**

Fisheries sector is not well coordinated at the regional level due to absence of responsible advisors required to coordinate the implementation of fisheries policies, assisting and advising the LGAs on issues with regard to fisheries at regional level and in turn advising RAS to assist on sector improvement. Little funds allocated to MCS centres not only finance law enforcement, surveillance, monitoring and revenue collection activities, but also administrative (coordination) role supposed to be conducted by AAS at the RAS office. Absence of fisheries officer in RAS office responsible for coordinating implementation of fisheries sector policies in the region

contributed to RAS not to provide adequate coordination, assistance and advice to LGA pertaining to implementation of fisheries policy and regulations consequently little efforts put to LGAs to fully implement the fisheries policy and regulations in their jurisdictions.

## CHAPTER FIVE

### RECOMMENDATIONS

The Audit findings and conclusion has lead to the following recommendations regarding monitoring, control and action taken to combat illegal, unreported and unregulated fishing in Lake Victoria:

#### 5.1 Control fishing of Nile perch so as to maintain stock from its depletion

The MLFD should ensure that:

- Access to the fishery is controlled through registration and licensing of fishing crafts, fishing vessels and fishers in Lake Victoria,
- The total amount of the *Nile perch* caught, and the distribution of fishing efforts in the lake is properly ascertained,
- A closed season to protect breeding and nursery grounds is implemented;
- Fish farming (aquaculture) is promoted to meet heavy demand of fish,
- Allocation of resources is adequately done and should be based on the performance indicators on the area of fishing control,
- There is an improved collaboration between PMO-RALG and MLFD,
- Collaboration with partner states is strengthened in addressing the problem of decline of Nile Perch.

The PMO-RALG should ensure that:

- LGAs control access to the fishery through registration and licensing of fishing crafts, fishing vessels and fishers in the Lake.

## **5.2 Monitoring the fisheries activities in the Lake Victoria**

The MLFD should ensure that:

- Sector performance is properly monitored and evaluated,
- The performance of MCS activities is properly monitored and evaluated,
- Control instruments are regularly monitored and evaluated,
- Institute a clearly defined funding model for BMUs activities.

The PMO-RALG should ensure that:

- LGAs properly monitor and fund BMUs activities
- LGAs regularly monitor and evaluate control instruments

## **5.3 Actions to combat illegal, unreported and unregulated fishing (IUU) in Lake Victoria**

To MLFD should ensure that:

- The Regional Plan of Action for eradicating IUU fishing through improved monitoring, control and surveillance is implemented,
- A database for sharing information with all LVFO, Regional MCS units, LGAs and other stakeholders is established and regularly reviewed,
- Awareness campaigns to all stakeholders of Lake Victoria is properly conducted necessary legal actions are taken against all defaulter.

The PMO-RALG should ensure that:

- LGAs take necessary legal actions against all defaulter
- The fisheries sector is given priority and well coordinated at regional level.

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## Appendix 1

### Audit Questions and Sub Questions

This report provides the results from applying the following three audit questions:

**Audit Question 1:** To what extent does the Ministry control fishing of Nile perch so as to maintain the required minimum stock?

Sub Questions
Sub-question 1.1: Is the minimum required amount of Nile Perch in the Lake Victoria maintained?
Sub-question 1.2. To what extent are the vessels operating on Lake Victoria registered and licensed?
Sub-question 1.3. Does the Ministry of Livestock and Fisheries Development put measures to regulate the size of Nile Perch fish to be caught?

**Audit Question 2:** Are the fisheries activities in the Lake Victoria adequately monitored by the Ministry of Livestock and Fisheries Development?

Sub Questions
<i>Sub-question 2.1:</i> Does the Ministry of Livestock and Fisheries Development appropriately monitor the performance of fishing activities?
<i>Sub-question 2.2</i> Do Beach Management Units (BMUs) appropriately implement their role of monitoring fishing activities in the Lake Victoria?
<i>Sub-question 2.3.</i> Does the Ministry of Livestock and Fisheries Development appropriately evaluate the performance of BMUs?
<i>Sub-question 2.4.</i> Are fisheries data appropriately collected and reported?
<i>Sub-question 2.5.</i> Does the Ministry of Livestock Development take appropriate action based on the reported fisheries data to improve the situation?

Audit Question 3: Has the Ministry of Livestock Development and Fisheries implemented effective measures in order to combat illegal, unreported and unregulated fishing (IUU) in Lake Victoria?

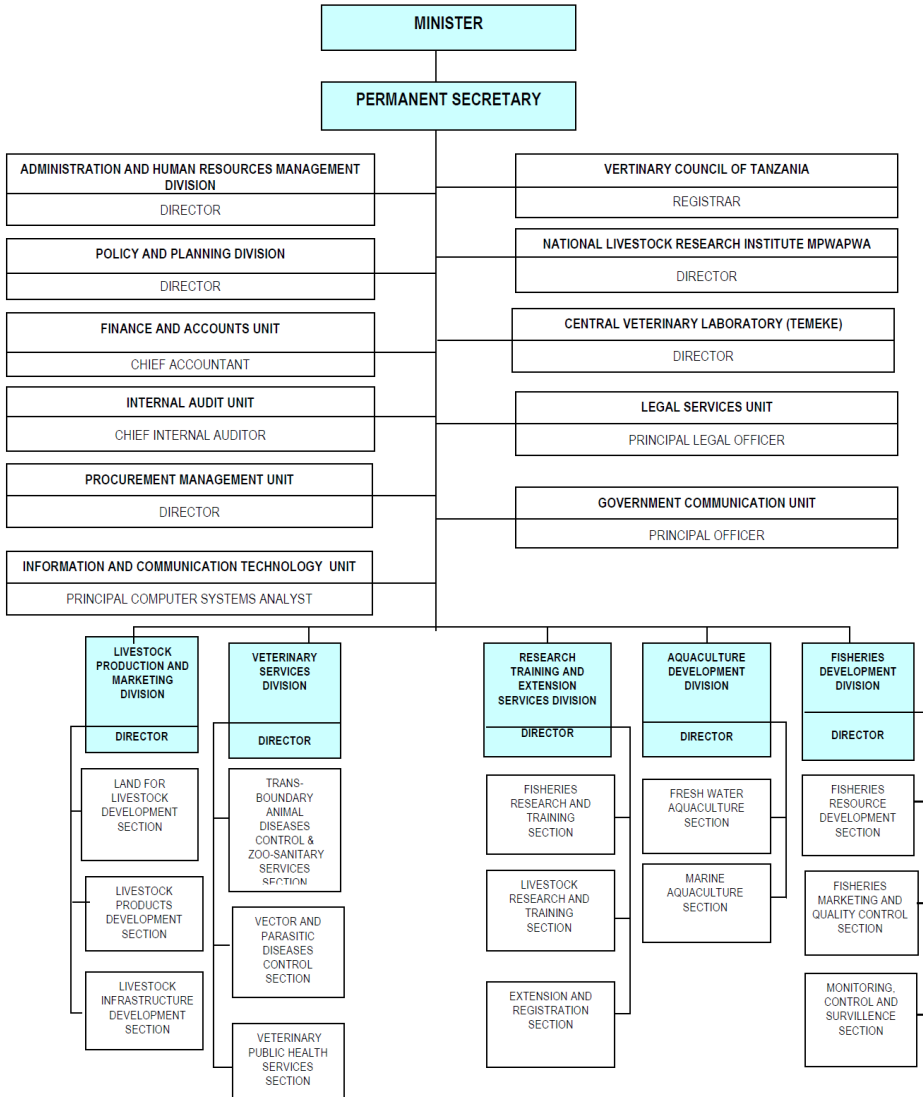
<b>Sub Questions</b>
<i>Sub-question 3.1:</i> Are BMUs adequately enforcing laws and regulations to reduce IUU?
<i>Sub-question 3.2.</i> Does the Division of Fisheries sufficiently conduct regular patrols to enforce regulations to reduce <i>illegal IUU</i> ?
<i>Sub-question 3.3.</i> To what extent does the Division of Fisheries conduct regular awareness campaigns to deter IUU?
<i>Sub-question 3.4.</i> Is there a system in place for sharing information on IUU and if so, does it function well?



## Appendix 2

### ORGANISATION STRUCTURE OF AN ORGANISATION

#### THE ORGANISATION STRUCTURE OF THE MINISTRY OF LIVESTOCK AND FISHERIES DEVELOPMENT



### Appendix 3

#### ASSESSMENT OF BMU PERFORMANCE THROUGH MONITORING AND EVALUATION REPORT

	Parameter
1.	All fisheries stakeholders listed in BMU register
2.	BMU Committee meetings held at least once a month
3.	BMU Assembly meetings held at least once a quarter
4.	BMU Committee includes 30% boat crew
5.	Fisheries information collected according to agreed schedule.
6.	Monthly fisheries information compiled & discussed by BMUC
7.	MCS patrols conducted each month
8.	Protected fishing breeding a nursery ground established and patrolled.
9.	Vetting of licensees is transparent and fair
10.	Visiting boats, inspected, recorded & permission to land granted
11.	Cash book balance monthly
12.	All income and expenditure Recorded
13.	Quarterly & annual financial reports show detailed balance sheet
14.	Areas of jurisdiction of BMUs agreed
15.	Fees collected in accordance with BMU guidelines and Rules of Procedure
16.	The number of illegal fishing boats
17.	The numbers of illegal fishing gears
18.	The number of vehicles trading carrying illegal fish decreases.
19.	Catch per net increases for given mesh size

Source: BMU Guideline

## Appendix 4

### LAW ENFORCEMENT AND APPLICATION OF PUNISHMENT<sup>36</sup>

Region	F/Year	Man days spent for patrols	Total Number of illegal gears caught <sup>37</sup>	Number of defaulters	Number cases opened in the court	Percentage of cases opened against number of culprits
Mwanza	2008/2009	1135	7,098	90	25	28
	2009/2010	1130	1,379	121 <sup>38</sup>	0	0
	2010/2011	962	1,141	55	0	0
	2011/2012	675	45,537	44	2	5
Mara	2008/2009	1150	7,286	89	22	25
	2009/2010	990	3,253	66	19	29
	2010/2011	986	593	21	1	5
	2011/2012	534	35,140	17	3	18
Kagera (including Kanyigo)	2008/2009	1328	12,453	188	21	11
	2009/2010	1148	10,661	314	48	15
	2010/2011	901	4,681	177	23	13
	2011/2012	853	65,980	107	15	14

Source: MLFD-Report from Lake zone for 2008/2009 - 2011/May, 2012

<sup>36</sup> 2011/2012 data includes period ending May 2012

<sup>37</sup> The summed up illegal gears include: Gillnet<127mm, Monofilament net, Hooks, Mosquito net, Daga nets, Illegal operating boats and boats engines, Kokoro

<sup>38</sup> This data differs from the data from the MCS Unit of Mwanza which was Number of defaulter for this year 137 and number of cases opened 17. We decided to retain the information obtained from the Ministry

## Appendix 5

### EFFECTIVENESS OF THE FUNDS ALLOCATED FOR MCS ACTIVITIES

Region	Year	Actual funds released	Number of days/ months spent in patrol activities	Total Number of various illegal gears caught during patrol	Number of illegal operating Vessels(Boats) caught during patrol
Mwanza	2008/2009	92,514,126	52(2)	7,098	97
	2009/2010	68,735,000	51(2)	1,379	55
	2010/2011	71,270,623	44(1)	1,141	56
Mara	2008/2009	71,400,000	52(2)	7,286	78
	2009/2010	51,896,184	45(2)	3,253	52
	2010/2011	37,768,400	45(1)	593	7
Kagera	2008/2009	40,132,000	166(6)	12,453	164
	2009/2010	65,878,839	144(5)	10,661	623
	2010/2011	42,200,000	113(4)	4,681	135

Source: Financial data from MLFD and Regions MCS

## Appendix 6

### THE DISPARITY BETWEEN NUMBER OF FISHERS AND FISHING CRAFTS YEAR 2010

LGA	Number of fisher according LGA	Number of fisher according F r a m e survey	% difference	Number of vessels according LGA	Number of vessels according F r a m e survey	% difference
Musoma	933	10671	91%	311	2729	88%
U k e - rewe	7272	18,239	40%	2424	4,278	57%

Source: LGAs

## Appendix 7

### LIST OF OFFICIALS PARTICIPATED IN THE STAKEHOLDERS CONFERENCE

The following is a list of Participants who attended the Focus Group Discussion prepared by NAOT on 23rd April 2012 to discuss and deliberate on the preliminary findings of the Performance Audit on Management of fisheries activities in Lake Victoria in Tanzania.

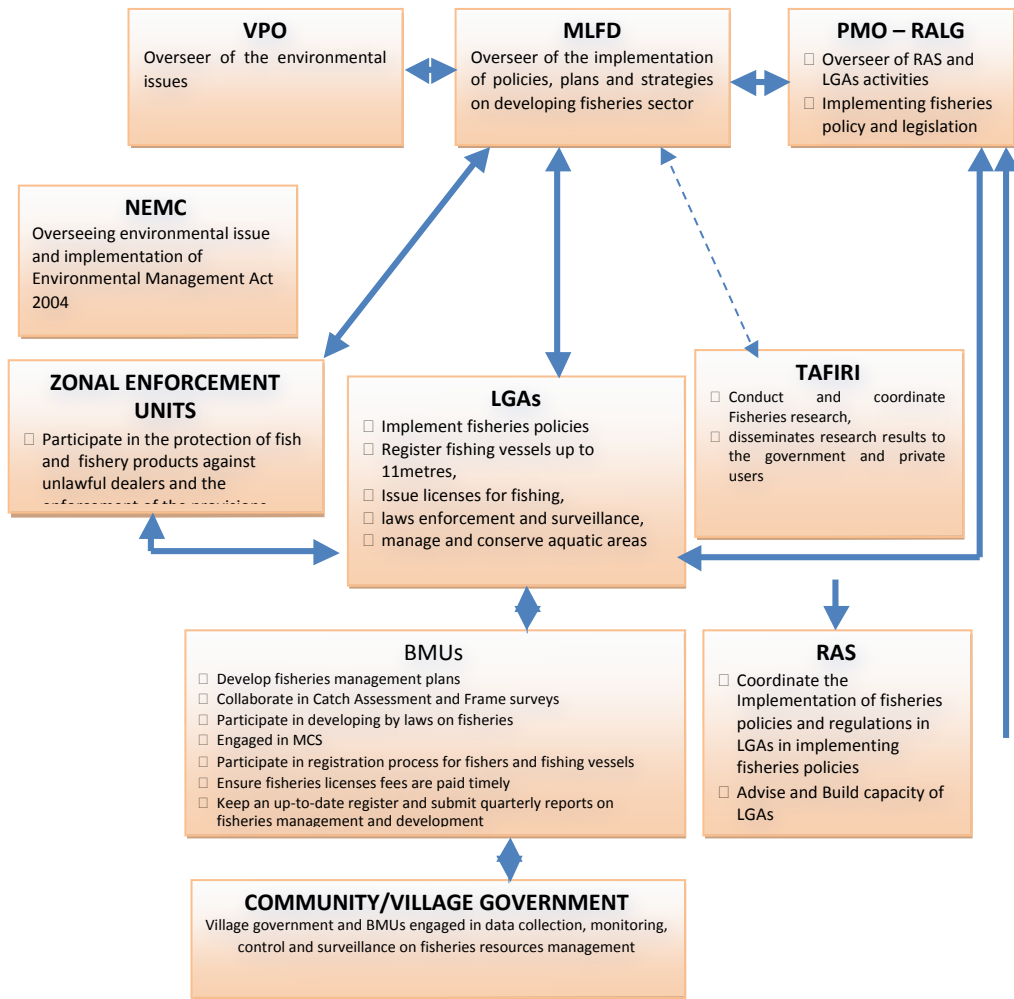
S/N	NAME OF THE PARTICIPANT	ORGANIZATION	DESIGNATION
1.	Lameck Mongo	Fisheries Unit-Mwanza	Head, monitoring, control and enforcement
2.	Braison Meela	MCS -Mwanza	MCS Officer
3.	Juma Makongoro	MCS -Mwanza	MCS Officer
4.	John Edward	Police - Mwanza	Police officer
5.	Fred Kanuti	BMU-Representative	BMU-Representative
6.	Benedict Kwangu	LANESO-NGO	Chairman
7.	Donald Kasongi	Accord-NGO	Coordinator
8.	Boniface Chacha	NEMC-MWANZA	Senior Environmental Officer
9.	J.Rwebangira	Fisheries Unit-Kagera	Monitoring, Control and enforcement Officer
10.	Pius Mabuba	LVEMP II	National Coordinator LVEMP II
11.	Samson Owino	BMU-Representative	BMU-Representative
12.	Kauswa Phineasi	Mwanza City Council	Fisheries Officer
13.	Judith Musua	Ukerewe District	District Fisheries Officer
14.	Apolinary Kyojo	Fisheries Unit -Mara	Head, monitoring, control and enforcement
15.	Eqid Katunzi	TAFIRI-Mwanza	Centre Director
16.	Godfrey Ngupula	TAFIRI- Mwanza	Researcher
17.	Batman Msuku	TAFIRI - Mwanza	Researcher
18.	Enock Mlaponi	TAFIRI - Mwanza	Researcher
19.	Dr. Chacha J.Mwita	University of Dar es salaam	Lecturer

## Appendix 8

### SYSTEM FOR MANAGEMENT OF FISHING ACTIVITIES IN LAKE VICTORIA

#### Key players in the Lake Victoria fisheries management in Tanzania

The System for Fisheries management in Lake Victoria involves many actors with different roles as shown in Figure 1 below:



## (Footnotes)

- 1 MLFD - Medium Term Strategic plan 2009 - 2011
- 2 Fisheries resource in the Lake Victoria accounts for over 25% of the Region's GDP
- 3 Names of Districts are GEita, Ilemela, MAgu, Misungwi, Nyamagana, Sengerema, Ukerewe, Bukoba rural, Bukoba urban, Muleba, Chato, Mara rural, Mara Municipal, Bunda and Rorya
- 4 LVFO, FMP2 2009 to 2014 of August 2008 section 13.7 activity 1 & 4 Results 7.1
- 5 Council of Ministers of the Lake Victoria Fisheries Organization, minutes of February 27, Sections 5 - 9
- 6 LVFO, RPOA - IUU, May 2004 3.3.(i) (iv) and (vi)
- 7 LVFO, RPOA - IUU, 204 3.3.(i) (iv) and (vi)
- 8 LVFO MCS Strategy and Action Plan May 2005 strategic objective 4 partner states should regulate the amount of fish caught LVFO, FMP2 2009 to 2014 of 2008 Section 9.5
- 9 Council of Ministers of the Lake Victoria Fisheries Organization, minutes no.15 of February 2009
- 10 National Fisheries Sector Policy and Strategy Statement of Dec 1997 pg 19-21
- 11 (Fisheries regulation, 2009 Regulation 134 (1) pg 86;-
- 12 Refer LVFO Convention and LVBC protocol
- 13 According to Rome MCS Conference of Experts in 1981 monitoring, control and surveillance are defined as follows: Monitoring - is the continuous requirement for measuring fishing effort characteristics and resource yields. Control - includes the regulatory conditions under which exploitation of the resource may be conducted. Surveillance - entails the degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities.<sup>2</sup>



<sup>14</sup> Fisheries Regulation of 2009,

<sup>15</sup> A fishery manager's guidebook management measures and their application, Fisheries Resources Division - FAO (Fisheries Department - Fisheries Technical Paper 424)

<sup>16</sup> A fishery Manager's guidebook management measures and their application, Fishery Resources Division - FAO (Fisheries Department - Fisheries Technical Paper 424)

<sup>17</sup> "Monitoring procedure" means a planned sequence of observations or measurements of control parameter to assess whether a critical control point is under control

<sup>18</sup> Catch Assessment surveys (CAS) provide the information of how much fish caught from the Lake i.e. (quantities of removals)

<sup>19</sup> The overall objective for conducting the Frame Surveys is to provide information on the facilities and services at the landing sites, the composition, magnitude and distribution of fishing effort to guide development and management of the fishery.

<sup>20</sup> Frame Survey 2010

<sup>21</sup> Technical report: Stock assessment regional working group, 22<sup>nd</sup> to 25<sup>th</sup> November 2011, Ridar Hotel, Seta , Uganda, pg2

<sup>22</sup> Auditor calculation done by taking 51% of the maximum biomass of the whole lake i.e. Tanzania, Uganda and Kenya

<sup>23</sup> Data for financial year 2011/12 ended May 2012

<sup>24</sup> According to FAO-A beach seine is a seine net operated from the shore. The gear is composed of a bunt (bag or lose netting) and long wings often lengthened with long ropes for towing the seine to the beach. The head rope with floats is on the surface, the footrope is in permanent contact with the bottom and the seine is therefore a barrier which prevent the fish from escaping from the area enclosed by the net. This kind gear is prohibited to be used for fishing in Lake Victoria

<sup>25</sup> meeting done in Mwanza in 2012,

<sup>26</sup> Smuggling could be because of the higher market price compared with neighboring local market.

<sup>27</sup> 2011/2012 data has information that ended May 2012 only

<sup>28</sup> This data differs from the data from the MCS Unit of Mwanza which was Number of defaulter for this year 137 and number of cases opened 17. We decided to retain the information obtained from the Ministry

<sup>29</sup> As per CPA s.225 (5)

<sup>30</sup> Assuming 365 days in a year

<sup>31</sup> ARTICLE 24, Exchange of Data and Information

<sup>32</sup> MoLDF- Medium Term Strategic plan 2009 - 2011

<sup>33</sup> Council of Ministries of the Lake Victoria Fisheries Organization, minutes no. 15 of February 2009

<sup>34</sup> This was not particularly targeting fishing on Lake Victoria

<sup>35</sup> In addition, the Ministry continued to provide training for 124 fishermen, owners and staff at the fish products processing factories in Lake Victoria

<sup>36</sup> 2011/2012 data includes period ending May 2012

<sup>37</sup> The summed up illegal gears include: Gillnet<127mm, Monofilament net, Hooks, Mosquito net, Daga nets, Illegal operating boats and boats engines, Kokoro

<sup>38</sup> This data differs from the data from the MCS Unit of Mwanza which was Number of defaulter for this year 137 and number of cases opened 17. We decided to retain the information obtained from the Ministry

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