



**Generation, flow and utilisation of  
information on the regional fish trade**

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|---------------|---|
| Item Type     | monograph   |
| Authors       | Odongkara, K.   |
| Publisher     | National Fisheries Resources Research Institute (NaFIRRI)                       |
| Download date | 02/05/2022 15:34:57   |
| Link to Item  | <a href="http://hdl.handle.net/1834/35245">http://hdl.handle.net/1834/35245</a> |



IFMP Socio-economics Series 2

## GENERATION, FLOW AND UTILISATION OF INFORMATION ON THE REGIONAL FISH TRADE



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Implementation of a Fisheries Management Plan  
National Fisheries Resources Research Institute



Jinja, Uganda: May, 2006

## Acronyms

|         |  |
|---------|--|
| BMU     | Beach Management Unit                                  |
| CAO     | Chief Administrative Officer                           |
| CAS     | Catch Assessment Survey                                |
| CSO     | Civil Society Organisation                             |
| DFO     | District Fisheries Officer                             |
| DFR     | Department for Fisheries Resources                     |
| DRC     | Democratic Republic of Congo                           |
| EC      | European Commission                                    |
| FTI     | Fisheries Training Institute                           |
| IFMP    | Implementation of Fisheries Management Plan            |
| LTTA    | Long Term Technical Assistant                          |
| LVEMP   | Lake Victoria Environmental management Project         |
| LVFO    | Lake Victoria Fisheries Organization                   |
| LVFRP   | Lake Victoria Fisheries Research Project               |
| MAAIF   | Ministry of Agriculture, Animal Industry and Fisheries |
| NAFIRRI | National Fisheries Resources Research Institute        |
| NARO    | National Agricultural Research Organization            |
| NGOs    | Non Governmental Organizations                         |
| RPS     | Revenue Protection Services                            |
| SPSS    | Statistical Package for Social Scientist               |
| URA     | Uganda Revenue Authority                               |
| WG      | Working Group  |

## **Acknowledgements**

The author would like to acknowledge the support provided by the Director and staff of NAFIRRI during the implementation of the survey.

Special thanks go to the IFMP LTTA Dr. Fiona Nunan and to the Socio-economic Research and Monitoring Regional Working Group members, namely Mrs Caroline Kirema-Mukasa, Mr. Paul Onyango and Dr. Richard Abila in identification of the study.

Appreciation goes to the following persons who made various contributions in data collection, processing and report drafting, namely: Agnes Nasuuna, Michael Kaidhiwa, Edward Balaba, James Ogwal, Christopher Wanobere, Abubaker Ntambi, Bwambale Mbilngi and Godwin Khisa.

Thanks also go to Steven Mukasa and Charles Mbago, who were the drivers during field data collection.

Special thanks go to the DFR staff, District and Sub-county Fisheries Officers, Customs Officials, Assistant Fisheries Officers, BMU Executives and the Secretary, Mpondwe Market for supporting the survey by providing information.

## **Executive Summary**

### **Purpose**

1. The purpose of the study was to provide an in-depth understanding of information generation, flow and utilization within Uganda's regional fish trade. The study was carried out at district headquarters, border points, landing sites and border markets, involving DFOs, Customs Officials, BMU executives and market managers.

### **Authority and purpose of data collection**

2. The Authority that required DFR, DFOs and BMUs to collect regional data was the Fish Act, for which MAAIF through DFR was the custodian. Within the decentralisation framework, however, this authority was devolved to the Districts, under the responsibility of the CAOs. Customs Officials were required to collect data by URA.

### **Types of data and sources**

3. The data was mainly collected at landing sites, fish markets and border points. The main types of data collected were fish species, sources, quantities, values, destinations, means of transportation and types of documents possessed by traders.
4. Fisheries Officials collected the data to control fish trade as part of fisheries management and for planning. Customs Officials collected the data to assess fish exports and imports and also to comply with the customs standards. BMUs, on the other hand, collected the data to calculate the 25% of the revenue to be remitted back to them by the Sub-counties.

### **Formats and frequency of data collection**

5. There were no standard formats used for recording data by DFR, DFOs and BMUs except for Frame Surveys, CAS and Fish Movement Permits. However, URA provided standard formats for data collection by Customs Officials, including tally sheets, export registers and the Customs Bureau Entry Forms.

### **Supervision, training and facilities**

6. DFOs did not receive supervision and training specifically relating to regional fish export data activities, except under Frame Surveys and CAS. BMUs were supervised by the Sub-counties and Fisheries Officers concerning Fish Movement Permits, and some training was provided in that respect. Customs Officials, however, were well supervised and adequately trained under the URA training programmes.

7. The facilities, supplies and equipment used for data collection and processing included office space, stores, stationery, registers, pens, meter rules, weighting scale, tape measures, calculators, computers and gum boots. Fisheries institutions did not have adequate access to these facilities while the Customs Officials were well supplied and equipped.
8. The main constraints to data collection were inadequate resources and facilities and fish smuggling.

### **Data processing**

9. Processing of the data involved computing totals of quantities and values for the different periods as well as averages for prices, numbers of traders and of vehicles.
10. The main costs identified with handling and transmitting data included; purchase and maintenance of equipment, stationery supplies, photocopying and faxing, transport/fuel costs, allowances and communication costs.
11. The data were stored using files and folders kept in filing cabinets or drawers, as well as through the use of computers.

### **Reporting**

12. Most DFOs reported to Production Coordinators in their districts, who reported to the CAOs, who in turn reported to the Commissioner for Fisheries.
13. For Customs officials, the Central Customs office in Kampala was the place which received reports from the customs boarder points.
14. The BMUs reported to the Sub-county Sub-accountant through remitting financial returns from the fish movement permits. They also reported to the fisheries officers through remittance of fisheries data.
15. The data collectors produced monthly, quarterly and annual reports on their data.

### **Utilization of the data**

16. Utilization of the data by DFR was reported to be low. However, Districts used the data in planning and provision of social services to landing sites.
17. The DFOs themselves used the information in managing the fisheries and advising the CAO and the district Councils on issues relating to fisheries

18. The Central Government was one of the users, in encouraging investors into the country. Bank of Uganda and Ministry of Finance, Planning and Economic Development were the main users of the data.
19. URA was itself a major user of the data, to establish the volume of fish exports going across the borders.
20. BMUs used the data in calculating the 25% proportion of revenue which the landing sites were supposed to demand from the Sub-county.

#### **Feedback received**

21. There was generally lack of feedback to the data collectors on submission of the reports. DFOs strongly expressed concern that in general, there was no feedback from higher offices to which reporting was done.
22. BMUs, however, reported that they received the 25% portion of the revenue which was sent back from the Sub-county, based on their reports.

#### **Limitation in disseminating data**

23. Limitations in dissemination of the data included inadequacy of facilities, skills, and transportation as well as lack of feedback from the recipient authorities.

#### **Market Data**

24. At the market, data collection was carried out as part of revenue collection on the several commodities, with authority from the District Local Government.
25. The data was basically on quantities of fish and amount charged, collected by issuing of receipts. It could not, however, reveal the amount of fish traded across the border because the receipts issued did not show destinations.

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## **1. OVERVIEW OF THE RESEARCH**

### **Introduction**

The study on Generation, Flow and Utilization of Information on the Regional Fish Trade is one of the main studies carried out under the programme of the Socio-economic Research and Monitoring Working Group on Lake Victoria. The programme is aimed at monitoring changes in socio-economic conditions of communities around the lake and how the management regime affects such conditions.

Fish marketing plays a vital role in the national and local economies of Uganda. A significant proportion of the Lake Victoria basin population depends on fish marketing activities for their livelihood. Besides bringing in income from foreign and domestic markets, fish marketing employs many people, particularly women. Yet this sub-sector continues to face important bottlenecks that need to be understood and addressed. There is need for up-to-date information on the changing marketing trends, including the fish distribution systems, demand and supply levels as well as the constraints in the system. There is also need to understand market dynamics, the costs and returns from marketing. Planning and development of fish marketing, therefore, requires new and reliable information obtained through continued research and monitoring.

Improved marketing should lead to improved livelihoods for those involved in catching, transporting, processing and selling fish. Improved generation and use of information will support better management planning and will improve the provision of support to the post-harvest sector. Results of this study will contribute to the overall objectives of IFMP by providing information for monitoring the performance of the project, particularly for assessing how the project contributes to reduction in poverty (improved returns from marketing, reduced costs of marketing), increased employment opportunities (reduced marketing constraints, increased access to marketing information) and improved food security (improved distribution of fish).

Information on the regional fish trade, covering types of fish commodities trades, sources of supply, destinations, transit border points, traders involved and policy issues relating to the trade, is essential for planning and monitoring the regional market for fish and how Ugandans are taking advantage of the opportunities it presents. On the basis of this study, a strategy would be developed to strengthen the information system for improved management of the trade and of the fisheries resources as a whole.

## Background

A recent report (Odongkara et al., 2005) presented findings of a survey on regional fish trade at the border districts of West Nile, Southern/Western and Eastern Regions key markets and selected fish supply beaches on Lake Victoria.

- a) There have not been a vibrant fish trade between Uganda and Tanzania through Kasensero/Mutukula. Historically, salted Nile perch and Tilapia from Tanzania used to form the bulk of fish trade at Kasensero. However, due to improved prices in Tanzania, traders no longer came to Uganda.
- b) At Katuna Border Post, sun dried mukene and fresh Tilapia were the main species and forms of fish exported to Rwanda through the post.
- c) Immature salted/smoked Nile perch and Tilapia formed the fish exports to DRC through Bunagana border Post. However, following deployment of the task forces around, traders changed to exporting mukene.
- d) Mpondwe Border Post had been the gateway for *Bagrus bayad*, Tilapia ssp, *Lates .sp*, *Hydrocinus forskhalii* and *Protopterus* to DRC. Most species traded were salted/sun dried. Smoked fish factory by-products of Nile perch heads, skins and frames also formed significant quantities.
- e) Fish exports to Kenya were through Malaba and Busia. At Malaba, fresh Tilapia was the main fish product through the post. At Busia, fresh and smoked Tilapia and sun-dried mukene were dominant products.
- f) A characteristic of the regional fish trade was that traders were organized in formal groups and companies, with only a few operating as individual traders. The organization based on groups and companies was mainly for purposes of collectively meeting costs of transport and licensing, collective responsibility in case of a problem and quality concerns that could easily be traced, basing on groups and companies as opposed to individuals.

The report noted that while there was substantial information on local and international fish trade on which planning and decision making could be based, information on regional fish export trade was lacking and where available, it had not been adequately documented.

On the basis of this observation, it has been necessary to carry out this study on the generation, flow and utilization of Uganda's regional fish trade information.

## **Objectives**

The overall objective of the study is to develop an in-depth understanding of information generation, use and transfer on regional fish trade. The study would assess information available along the marketing chain within the regional fish trade and contribute to developing strategies to improve the information generation, flow and utilization.

The specific objectives of the research were as follows:

- a) Identify the authorities under which the data were collected and the purpose for which it is collected
- b) Identify the different types of data collected and the main sources.
- c) Study the formats for data recording and frequency.
- d) Assess the training, equipment and supervision given to data collectors.
- e) Identify the costs associated with the handling and transmitting of the data.
- f) Assess the data processing, storage and outputs generated
- g) Identify the authorities the data are reported to
- h) Identify the main users of data and the purpose to which they are put
- i) Examine the limitations in generation and dissemination of data
- j) Assess the feedback received by data collectors

## **Methodologies**

Data collection was undertaken as follows:

- a) Key informant interviews were held with District Fisheries Officers (DFOs) of Kisoro, Kabale, Kasese, Rakai, Masaka, Mpigi, Bugiri, Busia, and Kampala.
- b) Interviews were held with the Market Officers at Mpondwe,
- c) Interviews were held with Custom Officials of Busia, Malaba, Bunagana, Katuna, Mpondwe and Mutukula.
- d) Interviews were also held with members of BMU executives of Namirembe, Ddimu, Kamaliba, Kasenyi, Gaba, Kiyindi, Bwondha, Wakawaka, Bumeru A and Busiro Landing Sites.

The checklists used for the interviews are attached as Appendices 1 and 2.

## **2. RESULTS AND DISCUSSIONS**

### **Authority to collect regional fish trade data**

The Department of Fisheries Resources (DFR) reported that the authority that required them to collect data was the Fisheries Act. Provisions in the Act did not specifically address regional fish data only but covered all aspects that could yield technical data in the fisheries.

Most of the DFOs interviewed reported some levels of data activities on regional fish trade. However, Mpigi and Kabale Districts did not collect any regional fish trade data.

The authority to collect data was identified in different places, depending on the collecting institutions (Table 1).

Most of the DFOs reported that the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), through the Department of Fisheries Resources was the authority that required them to collect data. The authority was provided for under the mandate, objective and policy of DFR. However, with the advent of decentralization, the authority of data collection had been devolved to the districts and vested in the Chief Administrative Officers (CAOs). However, there was reported to be lack of interest in the data within some districts, with the result that resources were not allocated to its collection.

LVFO has also been mentioned as a body that has requested for regional trade data to be collected by the DFOs.

BMUs reported that they obtained their authority from DFR and the districts. They were required to record particulars of fish consignments through the Fish Movement Permits. However, at many beaches the permits were not yet operational.

The Customs Officials at the border points reported that they were required to collect data by the Uganda Revenue Authority (URA). It was a regulation that whatever came in or went out of the country had to be documented, describing and recording particulars of all the goods, including fish.

*Table 1: Authority under which respondents collected regional trade data*

| Respondents                | Fisheries Officials | Customs Officials | BMUs |
|----------------------------|---------------------|-------------------|------|
| Authorities                |                     |                   |      |
| MAAIF/DFR                  | 4                   |                   | 8    |
| District Local Governments | 4                   |                   | 1    |
| Uganda Revenue Authority   |                     | 4                 |      |
| LVFO                       | 1                   |                   |      |

### **Purpose of data collection**

From the position of DFR, the purpose of data collection was to guide Government on how to effectively manage the fisheries resources. Another reason was to provide a base for scientific analysis of the performance of the sector in relation to other sectors nationally, regionally and internationally. The information collected could also be used for purposes of learning, planning and also to identify areas that need intervention based on available data.

Among the bodies involved in data collection, a number of purposes were identified, for which the data was being collected (Table 2). The majority of the Fisheries Officials reported that they collected the data to control fish trade as part of fisheries management and to assess fish exports and imports.

Customs Officials collected the data mostly to assess fish exports and imports and also to comply with the customs standards which required that there should be documentation on such goods.

The BMUs collected the data mainly to assess production from the relevant water bodies and for planning purposes.

*Table 2: Purposes for which data was collected*

| Respondents   | Fisheries Officials | Customs Officials | BMUs |
|---|---------------------|-------------------|------|
| Purpose   |                     |                   |      |
| To assess production of the different water bodies- | 1                   |                   | 8    |
| Control trade flows for                             | 4                   |                   |      |

|  |   |   |   |
|--|---|---|---|
| sustainable management   |   |   |   |
| To assess fish exports and imports   | 3 | 3 |   |
| To ensure documentation of exports and imports                                 |   | 2 |   |
| Assessing fish quality assurance   | 1 |   |   |
| To determine whether immature fish was still being caught at the landing sites | 1 | 1 |   |
| For planning purposes  | 1 | 1 | 6 |
| To assist revenue collections  | 1 |   |   |
| To assist in computing 25% remittance to Sub-counties                          |   |   | 1 |

### **Types of data collected**

DFR considered that there was no data recorded as regards regional fish trade. It was reported that the Department concentrated on collection of data under Catch Assessment Surveys and Frame surveys which were being funded by IFMP. It was reported that they also had some data under the monitoring, control and surveillance and fisher community institutions. The area of regional fish data collection was, however, still considered grey and a lot had to be done. Clearly, DFR was not in touch with the regional fish trade data collection by DFOs, URA, BMUs and Market Masters.

Various types of data had been collected by the different categories of respondents (Table 3). Most of the Fisheries Officers reported collecting data on fish species, weights and means of transportation.

Customs Officials mainly collected data on fish species, sources, values and destinations.

BMUs reported collecting information mostly on fish species and weights, using the Fish Movement Permit system.

*Table 3: Types of data collected*

| Respondents              | Fisheries Officials | Customs Officials | BMUs |
|--------------------------|---------------------|-------------------|------|
| Types of data            |                     |                   |      |
| Fish species             | 6                   | 3                 | 6    |
| Fish forms               | 4                   |                   | 5    |
| Sources                  | 4                   | 3                 | 5    |
| Weights                  | 6                   |                   | 6    |
| Values                   | 4                   | 3                 | 2    |
| Means of transportation  | 5                   |                   | 5    |
| Destinations             | 4                   | 3                 | 5    |
| Names/Numbers of traders | 4                   |                   | 2    |
| None                     | 2                   |                   |      |

### **Other types of data that could be collected**

Only DFOs indicated that there would be need to collect other types of data beyond those being collected. These were identified as follows:

- a) Particulars of traders
- b) Sizes of fish traded
- c) Types and validity of trading documents
- d) Types of gears used to catch fish
- e) Cost prices
- f) Selling prices
- g) Type of packaging materials

### **Sources of data collected**

The data was collected or received from various sources. The DFOs' main sources of data were recordings on market days at border markets and those from the landing sites which served as collecting centers for fish destined to the regional markets, like Kasensero.

The Customs Officials collected their data at the border posts, which were their main points of operations.

The BMUs and Market Masters collected their data mainly at the landing sites which were centers for collection and at border markets.



*Table 4: Sources of data collected*

| Respondents   | Fisheries Officials | Customs Officials | BMUs |
|---|---------------------|-------------------|------|
| Data Sources  |                     |                   |      |
| Recorded at the landing sites which were collecting centers for regional trade fish | 2                   |                   | 9    |
| Traders stopped at strategic points   | 1                   |                   |      |
| Recorded on market days at border markets   | 3                   |                   | 1    |
| Fish movement permits   | 1                   |                   |      |
| Fish quality assurance certificates   | 1                   |                   |      |
| Recorded at border posts  |                     | 5                 |      |

### **Formats for data recording**

Fisheries Officials had no standard formats for recording data specifically on the regional fish trade. Mention was made of other forms used by the officers, namely the Frame Survey and CAS forms which provided some of the information which could provide some of the relevant data. However, a few of the DFOs improvised their own forms for collecting such data. In Kampala, tally sheets and summary sheets were designed for the purpose. At Kiyindi Landing Site, books were being used to keep records. In Kisoro District, form 'M' designed for monitoring and surveillance was used.

Customs Officials had standard forms to use for fish data recording. However, the forms were many and varied. The officers at the different border points reported as follows:

- a) At Mutukula Border Point, for fish in transit from factories in Tanzania through Uganda to overseas destinations, the Customs Official prepared a transit paper, which was commonly referred to as C38. In documenting the trade, the customs office filled out forms with agreed formats, which were understood at all custom points.
- b) At Katuna Boarder Point, the traders had been provided with forms called 'Customs Bureau of Entry Forms' that they would present to the customs officials on reaching Katuna Border Post. The customs office provided these to

every legitimate fish dealer and it comprised of: type, quantity, origin, destination and value of the fish on the truck. The Customs Officials had registers where the information on the Customs Bureau of Entry Forms would then be transferred.

- c) In the case of Bunagana Border Point, there were forms called F88, which had been given to them by the Uganda Revenue Authority, where they could record data on the fish through the border point.
- d) At Malaba Border Point, it was reported that Customs Officials were provided with specific formats for data collection. The formats commonly available were tally sheets and export registers that were used to record data at the border points around the country.

BMUs reported that the official format for data collection was through the Fish Movement Permit. However, some of the BMUs had not received the forms, so they were using exercise books for their records.

BMUs only issued Fish Movement Permits to traders who traded locally in Uganda and had no powers to authorize any traders to take fish across the borders of Uganda. Consequently, their information could not clearly indicate that any fish was crossing Uganda borders into neighbouring countries. People who traded fish regionally might have got permission from the Commissioner of Fisheries.

A few BMUs issued fish quality inspection certificates, which were standard forms designed and produced by DFR. However, these were limited to gazetted landing sites only.

### **Frequency of data collection**

Some DFOs reported that they did not formally receive regional fish trade data from the field regularly, primarily because no such data was being recorded anywhere in their districts. Among those who received, they did so within different frequency patterns as follows:

- a) The DFO Kabale reported that some data was collected at Katuna Border Point but the District Fisheries Office did not access it. The DFO Kisoro said that data was received daily and recorded because fish used to go through Bunagana Border Point on a daily basis, as a Fisheries staff was posted there.

- b) The DFO Rakai reported that the data, mainly from Kasensero Landing Site, could be received any time whenever needed but normally they were remitted monthly and quarterly.
- c) For the case of Kasese and Masaka Districts, the DFOs received data on a monthly basis.

In other cases, DFOs could only receive data quarterly because of the long distances to and from the landing sites, islands and markets as well as because of limited staff and inadequate facilitation.

For other types of data, the Frame Survey data was recorded biannually, CAS data was recorded quarterly and production data was recorded monthly.

Customs Officials at the different border points reported different frequencies with which they recorded fish data.

- a) At Mutukula Border Point, it was based on availability of fish and the type of order received by the fish processing factories in Tanzania. On average, the Customs Officer received fish products 3-4 times a week with an estimated total weight of 30 tonnes.
- b) At Katuna Border Point, trucks of fish went through every day and, therefore, data recording was done on a daily basis.
- c) At Bunagana Border Point, data was mainly collected once a week on Mondays, which was a market day.
- d) At Malaba Border Point, data was collected every day, from Monday to Sunday.

BMUs reported that the frequency of collecting data depended on availability of fish to be taken to various destinations in the country. The volume of trade was reflected in the number of movement permits issued and, thus the frequency of data recording.

- a) At Ddimbo Landing Site, data collection was on a daily basis.
- b) At Namirembe Landing Site, it was reported that three vehicles left the landing site weekly, carrying about 5-6 tonnes of fresh tilapia but it was not certain whether they all crossed the border at Katuna Border Post.
- c) For Kasenyi Landing Site, data was recorded on a daily basis apart from public holidays.

- d) At Wakawaka Landing Site, data on smoked and sun dried fish was collected weekly.

### **Supervision and training**

At the level of DFOs, supervision was by the Production Co-ordinators who reported to the CAOs. However, this supervision was general and did not focus on regional fish trade data work and was, therefore, considered inadequate. Furthermore, limited technical supervision was reported to be forthcoming from DFR in support of this function.

At the level of Sub-county and landing site staff, supervision was by the DFOs, but this was hindered by lack of clear data collection plans and limited resources.

Many DFOs had only received general training on data work, not specifically related to regional fish trade data and some of them had it quite a long time ago. A few of them reported never having received any data training.

DFOs and other Fisheries Officials in the districts on Lake Victoria, however, had received considerable data training in relation to Frame Surveys and CAS.

Other Fisheries Officials expressed concern that often, the training received was often not put into practice.

The Customs Officials reported that generally, the recent restructuring of the Uganda Revenue Authority had done a good job in the area of training and supervision. Some reported receiving supervision from their station supervisors on a daily basis, while others received supervision visits to their border posts two times a week. Various types of relevant training were reported by the Customs Officials as follows:

- a) Internal training in Customs documentation.
- b) URA basic training for one month.
- c) Intermediate Customs training for three months.

However, it was reported that the trainings have been general and not specifically addressing the needs of regional fish trade information gathering, flow and use.

Some Customs Officials also reported that they had never undergone any special training apart from school education.

BMUs reported that they were supervised by and received guidance from the local Fisheries staff, who facilitated and supervised the process of issuing movement permits.

Many of the BMUs had not received any training yet, having been elected into office only recently. However, a few had attended a training workshop, which spelt out the duties and responsibilities of a BMU. They had not, however, received any training in data collection.

### **Equipment and facilities**

A few of the DFOs reported having stationery and field items as given in Table 5. Forms and pens were the most common facilities available, as these were easily affordable even without specific budgetary provisions for the regional fish trade data activities.

It was highlighted that the landing sites involved with Frame Surveys and CAS were equipped with weighing scales, tape measures, gumboots, formats and raincoats, supplied specifically for those activities under IFMP.

However, some DFOs, notably of Kabale and Mpigi Districts, reported that they had no equipment in their offices which would help them to collect regional fish data.

Customs officials reported that they were generally well equipped to collect the information. The majority had the required office space, forms, registers, pens, calculators and even computers for data processing.

The BMUs were least equipped for data collection. Some of the items reported were weighing scales, forms, tape measures and office space.

A number of BMUs did not have any equipment but they instead borrowed things like a weighing scale, books for recording and at times they improvised sticks and marked them as rulers for measuring fish length.

*Table 5: Equipment and facilities for regional fish data collection*

| Respondents            | Fisheries Officials | Customs Officials | BMUs |
|------------------------|---------------------|-------------------|------|
| Equipment & Facilities |                     |                   |      |
| Office space           | 3                   | 4                 | 1    |
| Forms                  | 3                   | 4                 | 1    |
| Registers              |                     | 4                 | 1    |

|                |   |   |   |
|----------------|---|---|---|
| Pens           | 3 | 4 |   |
| Meter rule     | 1 |   |   |
| Weighing scale | 2 | 1 | 2 |
| Tape measures  | 1 | 1 | 1 |
| Calculators    | 1 | 4 |   |
| Computers      | 1 | 2 |   |

### **Costs for handling and transmitting data**

The DFOs identified the following as the major costs associated with handling and transmitting data:

- a) Purchase and maintenance of equipment
- b) Stationery supplies.
- c) Photocopying and faxing
- d) Transport/fuel costs
- e) Allowances
- f) Communication costs.

However, because there was no data collection in some districts, these costs were not being met. Some DFOs were of the view that there were no specific costs attached to collection of regional fish data, as all data received was collected as part of the routine work of the field staff and, therefore, did not attract any additional costs.

### **Constraints in data collection and solutions**

DFOs cited the following as constraints in data collection:

- a) Lack of pressure from Central Government (DFR) in enforcing requirements governing the fisheries, like monthly reporting, which de-motivated them.
- b) Fish traders who did not recognize and respect fisheries staff and did not cooperate with them with respect to fish inspection and data collection.
- c) Inadequate facilitation in terms of allowances, transport facilities and stationary.
- d) Inadequate equipment.

- e) Failure to establish the quality standards for regional fish traded, due to the diversity in packaging and materials used.
- f) Lack of appropriate software to handle data analysis.
- g) Shortage of trained data collectors, particularly within the minor markets.
- h) The continued illegal existence of certain landing sites that didn't adhere to data collection systems, and
- i) Fish smuggling

Some of the suggestions made by the DFOs to be undertaken by the DFR were as follows:

- a) Write to the Chief Administrative Officers (CAOs) informing them of the need to collect and process regional fish trade data as a new assignment for the District Fisheries Department.
- b) Ensure enforcement of quarterly reporting to DFR on the state of regional fish trade.
- c) Provide facilities to ensure continuity of work, e.g. fax machines, computers and offices at border points
- d) Exert more pressure on the District Fisheries Officers through regular inspection and supervision visits by the DFR staff.
- e) Provide more training, sensitization and supervision to the data collectors on a regular basis.
- f) Develop materials and provide facilitates to the communities who worked with the data collectors, like the BMUs and in so doing motivating them.
- g) Establish a legal framework by which the fish markets should be run, similar to gazetting of border points and landing sites.

Generally, the Customs Officials reported fewer constraints in collecting the data, citing proper equipping and professionalism in custom handling and documentation as key factors that eliminated constraints. However, some of the few constraints reported were:

- a) Some traders lacked the accompanying documents such as renewed licenses and, therefore, a lot of time was wasted negotiating to establish what was to be done for such people.

- b) Dealing with traders carrying immature fish was hard, as they would struggle to be allowed to take their fish to Rwanda on top of failing to inspect their fish.
- c) Language barrier was a serious problem because some business persons failed to avail information to them due to differences in languages.
- d) The large variety of data on the different goods which they had to capture, apart from fish.

BMUs reported the following constraints in the process of collecting data:

- a) Movement of fishermen from one beach to another greatly hampered collection of data
- b) Wrong declaration of quantities being taken from the landing sites by traders
- c) Most traders allegedly had military attachments, which they used in order to avoid meeting all the fish trade requirements, as provided for by the law.
- d) Mixing of the different species of fish, especially the smoked fish products, in one unit.
- e) Refusal to declare data on immature fish products.
- f) Inadequate and unreliable equipment.
- g) Lack of trained personnel.
- h) People's negative perceptions towards data collection, leading to resistance.
- i) Inadequate communication, hence poor monitoring of trade.

They suggested sensitization of the traders and provision of data recording facilities as possible measures of helping to alleviate these problems.

### **Data processing and outputs generated**

There was no data processing concerning regional fish trade at the district offices of Kabale and Mpigi, as they were not involved in collecting such data.

The DFOs involved reported that data processing was carried out, with the aid of calculators and/or computers, as follows:

- a) Arranging data recorded on paper for analysis.
- b) Summation of quantities and values by species from the movement permits.



- c) Summation of the estimated fish quantities and values on the different trucks.

This would also help to establish the quantities and values of fish exported for a specified period.

The expected outputs of the exercise were the monthly and annual reports produced, although this was not always achieved.

Among the Customs Officials, data processing varied slightly from station to station, depending on the facilities available as follows:

- a) At Mutukula, data processing was handled by use of computers and simple calculators.
- b) At Katuna, data processing involved copying the information from the Customs Bureau of Entry forms to the registers and making summaries.
- c) At Bunagana, it involved manual handling using calculators and rough papers in making additions.
- d) At Malaba, it was reported that to ease the analysis of any data collected at the different border points, the URA was installing a harmonized networked data entry and processing package to ensure that they could easily analyze information collected when the need arose.

All these processes would then lead to production of periodical reports ranging from a week to a year.

The BMUs reported processing data by adding up totals of weights, amount of money collected and dates on which the trips were made, all from the fish movement permits.

They also produced simple monthly summary tables on weights, values and percentage by tonnage of each fish species traded, generated using calculators.

Every month they compiled summary reports, which they sent to the Sub-county Sub-accountants, and to the Fisheries Officers.

### **Data storage**

The main method of data storage for DFOs consisted of files and folders, stored in filing cabinets or drawers and kept in offices or stores (Table 6). Some DFOs also reported having computer based data storage facilities.

Customs officials also stored their data mostly on files and folders and registers securely kept in stores. Use of computer storage was also reported at 2 of the stations surveyed.

Data at most of the BMUs was stored in folders, files, charts and kept either in the Fisheries office, BMU office, in wardrobes/boxes at the chairman’s house or at a member of the committee’s residence.

*Table 6: Methods of data storage*

| Respondents     | Fisheries Officials | Customs Officials | BMUs |
|-----------------|---------------------|-------------------|------|
| Methods         |                     |                   |      |
| Files & folders | 5                   | 4                 | 6    |
| Registers       | 2                   | 4                 |      |
| Computers       | 4                   | 2                 |      |

### **Constraints in processing and storing data**

DFOs reported the following as the main constraints encountered in processing and storing data:

- a) Manual compilation of the data was considered quite tedious and time consuming.
- b) Lack of modern equipment like computers and appropriate software to handle data processing accurately.
- c) Electricity load shading at most of the time, when the computers could not be put to use.
- d) Limited availability of filing cabinets and office space for secure storage of data.
- e) Limited number of trained staff

Customs Officials reported that there were generally no major constraints in processing and storing data for the boarder posts where information was got. This was attributed to the provision by URA of a unified data entry and processing system used country-wide that had been a major facility for the up to date data storage and processing at all Customs border points.

Generally, the BMUs did not face many problems in processing and storing the data because they compiled simple summaries, which did not need a lot of academic knowledge and also because the data was not too much for them to handle. Among the few problems identified were:

- a) Lack of capacity to produce many copies of their reports for distribution to the different offices.
- b) Lack of permanent offices, fitted with file cabinets, to store data.
- c) Inadequate staff trained in data processing and storage techniques.

### **Authorities reported to**

Most of the DFOs said they reported to the Production Co-ordinators in their districts, who reported to the CAOs, who also reported to the Commissioner for Fisheries at DFR.

Some DFOs had been reporting to DFR, believing that to be a requirement, as DFR would need the data for planning and policy formulation. However, they had stopped due to the following alleged weaknesses within DFR:

- a) Failure to facilitate the districts in doing data work.
- b) Lack of feed back by DFR on reports made by districts.
- c) Lack of punishment to districts that failed to make reports.

For most of the Customs Officials, the Central Customs office in Kampala was the authority, which received reports from the customs border points. At that office, it was easy to provide and trace any information or data required at any time.

However, at Katuna, reporting was made to the SPRS and Police on a daily basis. This was in form of both processed and unprocessed data. This was because these authorities had to verify that the fish traders had the right documents and could endorse every vehicle before it would proceed to Rwanda. Reporting was made on forms called Customs Bureau of Entry.

The authorities to which the BMUs reported were the Sub-county Sub-accountants through remitting financial returns from the fish movement permits, and obtaining a

receipt acknowledging receiving the money. They also reported to the Fisheries Officers through remittance of fisheries data. Some BMUs also made monthly reports to DFOs.

### **Frequency of reporting**

The DFOs generally reported monthly and quarterly to the CAOs and annually to DFR. They also prepared reports to other funders of specific projects, depending on the nature of activities undertaken. For CAS, reports were submitted quarterly to DFR and LVFO. For Frame Surveys, they were submitted biannually.

The Customs Officials of Bunagana and Mutukula reported that there was no standard time frame for reporting because the process was continuous from one level to another on a daily basis. For Katuna, reporting was made on a daily basis to SRPS and Police because they had to get approval for every truck crossing the border.

At Malaba, it was reported that formal reports to the customs supervisor were drafted on a monthly basis. These reports were used to monitor the performances at the border points and were later used by the customs supervisor to write out an annual report to the Headquarters.

BMUs reported that the frequency of reporting to the Sub-county depended on how fast the fishing permits were issued out to the traders. However, to the Fisheries Office, it was often on a daily basis because he/she was always with them when executing normal duties. In addition, regular monthly reports were made to the Sub-County authorities and to the DFOs.

### **Utilization of the data**

The opinions of DFOs on utilization of regional fish trade data varied from district to district. There were those who thought no one was interested in the data and no one was utilizing it. DFR, which would be the main user, reportedly had not asked for the information for years. Others, however, could identify some users for it and the possible uses to which it was being put. The Central Government was cited as one of the users of the data, for encouraging investors into the country. Districts used the data in planning and provision of social services to landing sites of high production and for improving the smaller landing sites which were potential sources of revenue to the district. The DFOs

themselves also reportedly used the information in managing the fisheries and in advising the CAOs and the District Councils on issues relating to the fisheries

DFOs also identified potential uses of information on regional fish trade for presentation to Parliament by the members in debates on policy issues relating to fisheries. International agencies like FAO would also use the data in compiling world reports on the fisheries. Other possible users of the data were the District Revenue Departments, NAFIRRI, FTI, fishers and Micro Finance Institutions.

The view of Customs Officials was that Bank of Uganda and Ministry of Finance, Planning and Economic Development were the main users of the data. The data would be used for planning purposes and gauging the performance of the economy.

Other users were the NAADS office based at the boarder post, the Uganda Bureau of Statistics and the Ministry of Agriculture, Animal Industry and Fisheries. These would also use this information to acquaint themselves with the origins, destinations, forms, quantities, fish species and the under-sized fish that was getting through to the neighbourig countries.

URA was itself a major user of the data, to know the volume of fish exports going across the borders. It was further used as proof to the exporters incase anyone made any claims and also for future references, it could be used for cross checking.

According to BMUs, the Sub-county and the Fisheries Department were the users of their data. The Sub-county used the data to assess the performance of the tendered landing sites, while the Fisheries Department used it to monitor fish production to facilitate management of the resource. Furthermore, DFR could use the data in fisheries management and policy planning.

Fish traders were interested in the data to assess the quantities on the market and the prevailing market prices, in order to make their own trading decisions.

The study also examined the extent to which the various data collectors made use of their own data they collected. The responses varied from one category of institutions to another.

DFOs said they used the data and information for their own planning purposes as a department and for their reference, in case there was need to know whatever took place at the different fish landing sites or markets. They also availed it to other users who needed the information. Perhaps more significantly, they used the data/ information

when trying to convince the District Council to provide facilities like sanitation to landing sites, which had high fishing activities, showing how they were important sources of revenue to the Districts. They also used the data to attract Micro Finance Institutions to the fishing communities to prove that they could be credit worthy.

The Customs Officials made use of the data for self-evaluation and determining the efficiency of the station. However officials at Bunagana and Katuna reported that they had no own use for the data that they were gathering.

BMUs reported using the data only when calculating the 25% proportion of revenue, which the landing site was supposed to demand from the Sub-county basing on available data, which showed revenues collection for a specified period. In most cases, without records, the Sub-accountant might not be able to calculate the actual amount of money to be received.

The data also helped them in assessing the variations in the catches, which informed them of the trends of the fishery.

### **Feedback received**

DFOs strongly expressed the concern that in general, there was no feedback of any sort from higher offices to which reporting was done. Reporting was said to have become a one-way flow, which often acted as a disincentive to effective communication. However, they were aware that sometimes DFR and LVFO prepared presentations and publications for higher authorities using their information. The data was, therefore, used for national guidance and advice from MAAIF.

Customs Officials reported that in most cases there was no need of a feedback on data reported to higher authorities within URA unless there was a complaint of wrong entry. If all transactions were handled professionally then feedback would not be necessary. However, if the officials from the Uganda Bureau of Statistics came to collect data, then they (Customs Officials) would expect feedback from them.

As for Katuna Border Post, there was need for feedback from the RPS and Police after reporting. This was to confirm to the reporting officers that the trader was or was not having the right trading documents and, therefore, could be allowed or stopped from crossing to Rwanda.

BMUs reported that they also did not receive any feedback apart from the 25% portion of the revenue which was sent back from the Sub-county. No responses were reported from Fisheries Officers or the DFOs on the submissions of the BMUs..

### **Limitations in disseminating data**

The key limitations in disseminating data as identified by DFOs were:

- a) Lack of feed back by DFR after reporting to them.
- b) Lack of facilities for printing, photocopying and translating into local languages.
- c) Lack of skills to process dissemination material as well as to carry out dissemination.
- d) Lack of transport and facilitation for dissemination.
- e) Lack of awareness among stakeholders about the existence of the data/information dissemination.
- f) The culture of using data was not in the institutions which would have used the data.
- g) Limited platform for dissemination.

The Customs Officials were satisfied that there were no serious limitations in disseminating the data they collected as it could be availed to any authority whenever required. Furthermore, with the introduction of the networked data programme/package called ASCUDA, information would reach out to every relevant authority that might need it as soon as it is received at the boarder. Furthermore, URA ensured that not only was the data collected harmonized but the data was processed, written out and published.

BMUs reported that apart from submitting reports on their data, they were not engaged in further dissemination of the information. This was attributed to lack of funds, equipment and expertise to do the work.

### **Mpondwe Market Data**

In order to obtain the market view of regional fish trade data collection, the case study of Mpondwe Market was used, based on an interview held with the Market Secretary.

The Market Secretary's main duty was to collect revenue on the several commodities in the market including fish, some of which would then be taken to DRC by the traders for sale. The collections were only made every market days of Tuesdays and Fridays. This was under the authority of the District Local Government with the direct supervision of the area Sub-county Chief and sometimes the District Financial Committee, which could come once or twice a month.

The process of revenue collection was confirmed by issuing of receipts to the traders that basically showed quantities of fish and the amount charged on those quantities. Those receipts had been provided by the Local Government Authorities as a format for revenue collectors to follow in executing their duties.

At the end of every market day the receipt carbon copies were brought together and the total collections were calculated.

Reporting was made monthly to the Local Government headquarters. This comprised of a summary of the monthly total collections including fish. The main disadvantage here was that the monthly summary reports could not isolate the receipts of fish that would go to DRC. Thus it was difficult to establish the quantity and value of fish passing through the market going to DRC.

The market officials kept their archives in form of receipt carbon copies and photocopies of monthly reports in files in their office which was located near the market. They did not have any use for it but said that the District authorities used it to compile the total collections from the market, for assessing the price of tendering the market. They cited the problem of bargaining with the traders as the only problem in the course of executing their duties.



### **3. CONCLUSIONS AND RECOMMENDATIONS**

#### **Conclusions**

Collection, processing and dissemination of regional fish trade data was a requirement of the Fish Act, for which MAAIF/DFR are responsible. However, there was little commitment on the part of DFR or Local Governments to ensure that the data were generated and utilised. It was also a requirement under URA to collect these data.

The data was mainly collected at landing sites, fish markets and border points. The main types of data collected were fish species, sources, quantities, values, destinations, means of transportation and types of documents possessed by traders. Fisheries Officials collected the data to control fish trade as part of fisheries management and for planning. Customs Officials collected the data to assess fish exports and imports and also to comply with the customs standards. BMUs, on the other hand, collected the data to calculate the 25% of the revenue to be remitted back to them by the Sub-counties.

There were no standard formats used for recording data by DFR, DFOs and BMUs except for Frame Surveys, CAS and Fish Movement Permits. However, URA provided standard formats for data collection by Customs Officials, including tally sheets, export registers and the Customs Bureau Entry Forms.

DFOs and BMUs did not receive much supervision and training specifically relating to regional fish export data activities, except under Frame Surveys and CAS. Customs Officials, however, were well supervised and adequately trained under the URA training programmes.

The facilities, supplies and equipment used for data collection and processing included office space, stores, stationery, registers, pens, meter rules, weighting scale, tape measures, calculators, computers and gum boots. The main constraints to data collection were inadequate resources and facilities and fish smuggling.

The main costs identified with handling and transmitting data included; purchase and maintenance of equipment, stationery supplies, photocopying and faxing, transport/fuel costs, allowances and communication costs.

Most DFOs reported to Production Coordinators in their districts, while BMUs reported to their Sub-counties.

For Customs officials, the Central Customs office in Kampala was the place which received reports from the customs boarder points.

Utilization of the data by DFR was reported to be low. However, Districts used the data in planning and provision of social services to landing sites.

The DFOs themselves used the information in managing the fisheries and advising the CAO and the district Councils on issues relating to fisheries

Bank of Uganda and Ministry of Finance, Planning and Economic Development were the main users of the data.

BMUs used the data in calculating the 25% proportion of revenue which the landing sites were supposed to demand from the Sub-county.

Limitations in dissemination of the data included inadequacy of facilities, skills, and transportation as well as lack of feedback from the recipient authorities.

At the market, data collection was carried out as part of revenue collection on the several commodities, with authority from the District Local Government. The data was basically on quantities of fish and amount charged, collected by issuing of receipts. It could not, however, reveal the amount of fish traded across the border because the receipts issued did not show destinations.

### **Recommendations**

On the basis of the findings and conclusions of the study, the following recommendations have been made:

1. MAAIF/DFR and Local Governments should renew their commitments towards the data collection, including regional fish trade data.
2. DFR, Local Governments, NAFIRRI and UBOS should develop standard formats for use in data collection.
3. Fish smuggling should be controlled by the authorities concerned, to enable data collection to take place.
4. Personnel unloved in data collection should be provided with training on a regular basis, to build their capacity.
5. Government should avail the necessary facilities, supplies and equipment for data collection at various strategic data collection points.

6. A budget should be developed at DFR, Local Governments and BMUs and funds set a side specifically for collecting, handling and transmitting data on regional fish trade.
7. Computer-based data storage mechanisms should be set up at the various data processing points.
8. A clear reporting mechanism should be developed by the authorities requiring the generation of regional fish data. This mechanism should fit with the decentralized administrative units for effective monitoring and follow up.
9. Given the irregularities in regional fish trade as a result of the seasonality in fish catches, it is recommended that the frequency of reporting be quarterly to allow collection of meaningful data for analysis.
10. There is need to build capacity in the relevant institutions to use regional trade data in planing and decision making.
11. Authorities receiving data and reports should endeavour to acknowledge receipt and make comments on the main findings reported.
12. DFOs should support collection of data at selected markets, in collaboration with market authorities and other organs of Local Government.

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**Implementation of the Fisheries Management Plan**

**GENERATION, FLOW AND UTILIZATION OF INFORMATION ON THE  
REGIONAL FISH TRADE**

**Key informant Interviews with DFOs and DFR Officials**

1. What is the authority by which you collect and /or receive regional fish trade data?
2. What is the purpose for your data activities?
3. What types of data do you record?
4. What other types of data could you collect?
5. What types of data do you receive?
6. What other types of data could you receive?
7. From what sources do you collect and receive the data?
8. Have you been provided with a format for recording the data you collect and receive? (copies of forms, books, tally sheets etc..?)
9. What is the frequency with which you collect and receive the different types of data?
10. Do you receive training and supervision in the data collection and processing?
11. What data equipment and facilities do you have access to?
12. What costs are associated with handling and transmission of the data you receive?
13. What constraints do you encounter and what should be done to improve the quality of the data?
14. How do you process the data? What outputs do you generate?
15. How do you store the data?
16. What constraints do you have in processing and storing the data?
17. To what authorities and in what forms do you report the data?
18. What is the frequency of reporting?
19. Who are the users of the data and for what purposes?
20. What use do you yourselves make of the data?
21. What feedback do you get on the data?
22. What are the limitations in disseminating the data?

**Implementation of the Fisheries Management Plan**

**GENERATION, FLOW AND UTILIZATION OF INFORMATION ON THE REGIONAL FISH TRADE**

**Key Informant Interviews with Data Recorders: Customs Officials, Market Managers and BMUs**

1. What authority requires you to record data on fish exports and imports?
2. What is the purpose for your data recording?
3. What types of data do you record?
4. What other types of data could you collect?
5. Have you been provided with a format for recording the data? (copies of forms, books, Tally sheets etc..?)
6. Did you receive training and supervision in the data collection?
7. What equipment and facilities do you have for taking measurements and for data recording?
8. What is the frequency with which you record the different types of data?
9. What constraints do you encounter and how can the quality of the data be improved?
10. How do you process the data?
11. How do you store the data?
12. What constraints do you have in processing and storing the data?
13. To what authorities and in what forms do you report the data?
14. What is the frequency of reporting?
15. Who are the users of the data and for what purposes?
16. What use do you yourselves make of the data?
17. What feedback do you get on the data?
18. What are the limitations in disseminating the data?

Appendix 3

**Principal Persons Met**

| <b>Names</b>              | <b>District</b> | <b>Position/Status</b>        | <b>Place/ Institution</b> |
|---------------------------|-----------------|-------------------------------|---------------------------|
| Mr. Kagwa Moses           | Kosoro          | I/C Customs                   | Bunagana Boarder Point    |
| Mr. Baryaruha Augustine   | Kisoro          | Asst Fisheries Officer        | Bunagana Boarder Point    |
| Mr. Mwanja Julius         | Kabale          | Clearing Agent                | Katuna Borader Point      |
| Mr. Kizza Wilson Nzaghale | Kasese          | Fisheries Development officer | Mpondwe Border Market     |
| Mr. Rwaributware Donat.T  | Kabale          | District Fisheries Officer    | Kabale District           |
| Mr. Kaana Mbagu           | Kasese          | District Fisheries Officer    | Kasese District           |
| Mr. Ojor Richard          | Rakai           | Branch Manager Operations     | Mutukula Boarder Point    |
| Mr. Okongo Charles        | Rakai           | Branch Manager                | Mutukula Boarder Point    |
| Mr. Bwanika Joseph        | Rakai           | District Fisheries Officer    | Rakai District            |
| Mr. Lutaya Vicent         | Masaka          | Asst Fisheries Officer        | Ddimu Landing Site        |
| Mr. Mukaku John           | Masaka          | Chairman BMU                  | Ddimu Landing Site        |
| Mr. Semambo Moses         | Masaka          | Fish Inspector                | Ddimu Landing Site        |
| Mr. Birimuye Godfrey      | Masaka          | Chairman BMU                  | Namirembe Landing Site    |
| Mr. Lutwama George        | Masaka          | Asst Fisheries Officer        | Namirembe Landing site    |
| Mr. Bukenya Robinson      | Masaka          | BMU Member                    | Namirembe Landing Site    |
| Mr. Mukasa Tom Bukenya    | Masaka          | District Fisheries Officer    | Masaka District           |
| Mr. Namukonge Sam         | Wakiso          | Fisheries Officer             | Kasenya Landing Site      |
| Mr. Munyami Ali           | Mpigi           | District Fisheries Officer    | Mpigi District            |
| Mr. Edirisa               | Mpigi           | Chairman BMU                  | Kamaliba Landing Site     |
| Mr. Kazad Nasur           | Kasese          | Market Secretary              | Mpondwe Boarder Market    |
| Mr. Musolo Elias          | Mayuge          | Chairman BMU                  | Bwondha Landing           |
| Mr. Okello James          | Mayuge          | Secretary BMU                 | Bwondha Landing           |
| Mr. Nambale Joseph        | Mayuge          | Fisheries staff               | Bwondha Landing           |
| Mr. Okello J. Michael     | Bugiri          | Chairman BMU                  | Wakawaka                  |
| Mr. Menya Ezeekyer        | Bugiri          | Committee member BMU          | Wakawaka                  |
| Mr. Obinge Sam            | Bugiri          | Secretary BMU                 | Wakawaka                  |
| Mr. Henry Makanga         | Busia           | District Fisheries Officer    | Busia Market              |
| Mr. Egesa Eugene          | Busia           | Fisheries staff               | Busia                     |
| Mr. Kitaka Richard        | Tororo          | Customs Official              | Malaba Boarder            |
| Mr. Nyamutale Placid      | Kampala         | District Fisheries Officer    | D.F.O Office              |

|                       |         |                |                 |
|-----------------------|---------|----------------|-----------------|
| Mr. Kaleebi Godfrey   | Kampala | Secretary BMU  | Gaaba Landing   |
| Mrs. Nakato Priscilla | Mukono  | Fish Inspector | Kiyind Landing  |
| Mr. Ntale George      | Mukono  | Assistant F.O  | Kiyindi Landing |