SOCIO-ECONOMIC RESEARCH REPORT 7

LAKE VICTORIA ENVIRONMENTAL MANAGEMENT PROJECT
and
LAKE VICTORIA FISHERIES RESEARCH PROJECT

SURVEY OF THE REGIONAL FISH TRADE

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List of Definitions

Makeze: Split fish products with light salting and sun-drying (West Nile region)

Mikado: Split fish products with heavy salting and sun-drying (West Nile region)

Pedo: Nile perch sundried fillets/sheets (West Nile region)

Makayabu/Bambala: Split fish products with light salting and sun-drying (South/western region), just like ‘makeze’

Acronyms

ADB	African Development bank
AFDO	Assistant Fisheries Development Officer
AFO	Assistant Fisheries Officer
DFO	District Fisheries Officer
DRC	Democratic Republic of DRC
NEJLV	Network of Environment Journalists for Lake Victoria
O/C	Officer In-Charge
SPSS	Statistical Package for Social Scientists
URA	Uganda Revenue Authority

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Introduction

1. Fish export trade, both regional and international, has significantly contributed to Uganda’s economic growth and to the livelihoods of many Ugandans in terms of revenue and employment.
2. While there is substantive information on local and international fish trade on which decisions could be based to appropriately develop the trade, information on regional fish export trade is lacking and where available, it has not been adequately documented.
3. This report contains the findings of the 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.

Methodology

4. The study was carried out at regional fish markets and Custom Border Posts within the West Nile, South/Western and Eastern regions and fish supply beaches on Lake Victoria
5. Data collection involved review of literature, study of Relevant records and reports at the district and custom border posts, key informant interviews with fisheries staff, unit questionnaire interviews with fish traders and taking samples of individual fish biometrics to the nearest Kilograms and centimetres.

Species, Forms, Quantities and Values of Fish Products

West Nile Region

6. Main Species dealt in were Nile perch, followed by *Bagrus bayad*, *Hydrocynus forshkalii*, *Alestes baremose*, *Brycinus nurse* and mukene.
7. Fish products of Nile perch were mostly immature.
8. The estimated annual quantity and value of fish exported to DRC through Panyimur was 392.46 tonnes and Ushs 415,965,000 respectively.

Southern/Western Region

Kasensero/Mutukula

9. At the time of the survey there was no fish trade between Uganda and Tanzania through Kasensero/Mutukula.

10. Salted Nile perch and Tilapia from Musanga and Male used to form the bulk of trade at Kasensero. Due to higher prices in Tanzania traders no longer come.

Katuna Border Post

11. Sun dried mukene and fresh Tilapia were the main species and forms of fish exported to Rwanda through the post.

12. Average monthly totals of Tilapia through the post were 15.8 tons, equivalent to Ug. Shs. 15,623,000, while monthly total exports for Tilapia were 34 tonnes with Ug. Shs. 8,497,250 accruing as revenue.

Bunagana

13. Before deployment of the task force, immature salted/smoked Nile perch and Tilapia formed the fish exports to DRC. Traders had changed to mukene

14. Estimated annual quantities and value of fish to DRC through the post were 1,349.69 tons with Ug. Shs. 446,998,286 accruing as revenue.

Mpondwe

15. Main fish species through the post were *Bagrus bayad*, *Tilapia ssp*, *Lates* s*sp*, *Hydrocinus forskhalii* and *Protopterus* in that order of significance.

16. Most species traded were mostly salted/sun dried.

17. Smoked fish factory by-products of Nile perch heads, skins and frames also formed significant quantities.

18. Most Nile perch, *Hydrocinus forskhalii* and *Tilapia ssp* were mainly of immature sizes, a situation attributed to mainly lack of harmonized legislation between Uganda and DRC, immature fish being easy to process and the sell of fish by heads not kilograms.

19. Estimated annual quantities and value fish through the post to DRC were 890 tons equivalent to Ug. Shs 5.5 billions and 244.8 tons of by-products equivalent to Ug. Shs 361,620,000.

Eastern Region

Malaba

20. Fish exports to Kenya were only through Malaba with non at Lwakakha at the time of the survey.

21. Fresh Tilapia was the main fresh fish species through the post

22. Estimated annual quantities and value of fish exported to Kenya via Malaba were 522 tons with Ug. Shs. 522,000,000 accruing.

Busia

23. Fresh and smoked Tilapia and sun-dried mukene were dominant.

24. Most fish encountered was above size at first maturity (Sexes combined)

25. Size structure of fish was well distributed in Busia market than Osukuru and Malaba markets.

26. Estimated annual quantities and value of fish exported to Kenya via Busia were 985.8 tons with Ug. Shs. 1.3 billion accruing.

Organization of the Trade from Fish Supply Districts

27. The trade had been in existence for a long time especially among border communities.

28. The trade became more vibrant in the 1970s with the proliferation of Magendo.

29. Traders were organized in formal groups and companies with a few individual traders.

30. 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 trucked basing on groups and companies as opposed to individuals.

31. Most traders had an average of 1 trade trip in a month. Number of trade trips mostly depended on catch and distance to markets.

32. Most traders (55% of respondents) bought their fish from fishermen at the beach and they were mostly wholesalers.

33. Fish was distributed mainly through the recorded and regulated channel and the unrecorded and unregulated channel.

34. The unrecorded and unregulated channel mainly constitutes immature fish of especially Nile perch and Tilapia.

35. The biggest proportion (65%) sold their fish at Uganda – Rwanda border.

36. The majority preferred to sell their fish to regional countries mainly due to better prices offered and presence of ready markets.

37. The most out standing problem during fish distribution was the presence of many regulatory points for both revenue collection and size/quality assurance.

Trade at Border Markets/Customs Border Posts

West Nile Region

38. Fish was exported through Padea and Vurra Custom Border Post to DRC and destined for DRC towns of mainly Kudikoka, Aruu, Aliwara and sometimes Kinshasa.

39. Panyimur was the nodal market for all fish exported to DRC. However, other regional fish market outlets also operated on specific days.

40. Most respondents (92.3%) in the West Nile region mentioned Lake Albert as the main source of supply of fish products they traded in followed by Lake Victoria (7.7%).

41. Most traders hired space on vehicles to transport their fish to the various destinations of DRC.

Southern/ Western Region

42. Fish traders interviewed mentioned landing sites of Lambu, Kasenyi, Kiyindi, Katosi and Bwondha on Lake Victoria and Lwampanga, Kikalaganya and Zengebe on Lake Kyoga as the main sources of fish.

43. Traders of *Rastreneobola argentea* " mukene" and *Tilapia* spp bought and sold in wholesale.

44. Traders bought their supplies in cash and sometimes supplied on credit. An average of 5 mukene traders hired one truck (Fuso/Diana/Canter) at an average cost of U.shs 600,000/= to transport fish up to Rwanda.

Mpondwe

45. On average, there were four trucks of fish crossing the border post on every market day. There were also other traders using public means and bicycles especially those who were dealing in fresh fish.

46. Few of the Traders had the documents that were needed at the Customs post, namely, Loading Certificate/Letter of Inspection and Export Licence.

Bunagana

47. Fish landing sites of Lambu, Bukakata and Kasenyi were the main sources of fish. The fish exports were destined for RDC towns like Goma and Bukavu.

48. Two mukene traders hired one truck (Fuso/Dyana/Canter) at an average cost of U.shs 700,000/= to transport fish up to DRC.

Eastern Region

49. Beaches of Masese, Walumbe, Namoni, Bukoba, Malindi, Kiyindi, Katosi and Bwondha on Lake Victoria and Bukungu, Namasale and Kawongo on Lake Kyoga were the main sources of fish traded in.

50. Much of the trade was conducted on the Ugandan side where Kenyan traders picked fresh Tilapia everyday and processed products every Monday and Thursday.

51. Both fresh and processed forms of fish were destined for Kenyan border towns such as Malaba and Busia and as far as Kisumu, Eldoret, Kakamega and Nairobi.

52. The Kenyan traders ferried their merchandise across on carts, locally known as *Mukokoteni* in Basket. Traders destined for distant markets such as Nairobi and Eldoret used ice to preserve their fish.

Impact of Government Policies

53. Trade policies of Investment promotion and Liberalization had come with both positive and negative impacts to the trade. Positively, they reported that the number of fish traders accessing regional markets, which offered better prices, had increased. This led to better incomes for traders. However, on a negative note, they argued that in the long run the trade might be affected due to resource depletion especially as a result of over capitalization and poor fishing methods.

54. A large proportion of fish traders (13%) from the fish supply districts reported over taxation as one of the activities of Government that had affected their trade.

55. In West Nile region (47.5%) and Eastern region (35%) attributed scarcity of fish supplies to the strictness of the law enforcers against immature fish.

Conclusions and Recommendations

56. Survey of markets and customs offices in the Border Districts of Koboko Moyo, Adjumani (West Nile Region), Ishasha Custom Post (Southern/Western Region) and supply beaches on Lakes Albert and Kyoga.
57. Monitoring of trade through declaration of fish consignments at customs especially in the West Nile region.
58. Construction of facilities and infrastructure in support of the trade at supply beaches, regional markets and Custom posts.
59. Relocation of regional markets from 'no-man's land' to mainland before the boundary barriers, a case of Mpondwe.
60. Fish inspection at the loading points and checks during transportation to curb trade in immature fish.
61. Harmonisation of fisheries legislation among the riparian states.

1 INTRODUCTION

The Fisheries sub-sector contributes substantially to the Uganda's economy compared to other agro-sub-sectors. In the last two decades, considerable efforts in terms of investments from Government and the private sector have been directed in the sector from which significant developments especially in terms of increased fish export revenues; income and employment to nationals were registered.

With the considerable investments efforts in the sector, the out put volume of fish and fish products from the six key fish productive water bodies of Lake Victoria, Kyoga, Albert, Edward, George and the Nile Basin has been remarkable. Presently, the key challenge has been to expand the markets for fish in order to absorb the increased output volume.

The Fisheries sub-sector contributes substantially to the Uganda's economy compared to other agro-sub-sectors. However, while there is substantive information on local and international fish trade (Namisi, 2000; NEJLV, 2002) on which decisions could be based to appropriately develop the trade, information on regional fish export trade is lacking and where available, it has not been adequately documented, yet, it is argued that the trade contributes substantially to Government revenues and incomes to local people. The trade is conducted between Uganda and her neighbouring states of Democratic Republic of DRC (DRC), Sudan, Rwanda and Kenya.

In line with the Plan for Modernization of Agriculture goals, of providing information for trade promotion (MAAIF, 2000), this study seeks to provide reliable trade information to stakeholders upon which they would appropriately develop trade development programmes.

This report contains the findings of the 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. It presents findings on species fish diversity, product forms, size structure, quantities and their values, supply and distribution channels, traders' costs and incomes and implications of policy on the trade.

2 STUDY OBJECTIVES

The objectives of the study were:

a) To establish the species composition, forms, size structure, quantities and values of fish products exported to the regional markets.

b) To examine the organisation of the trade and distribution of fish.

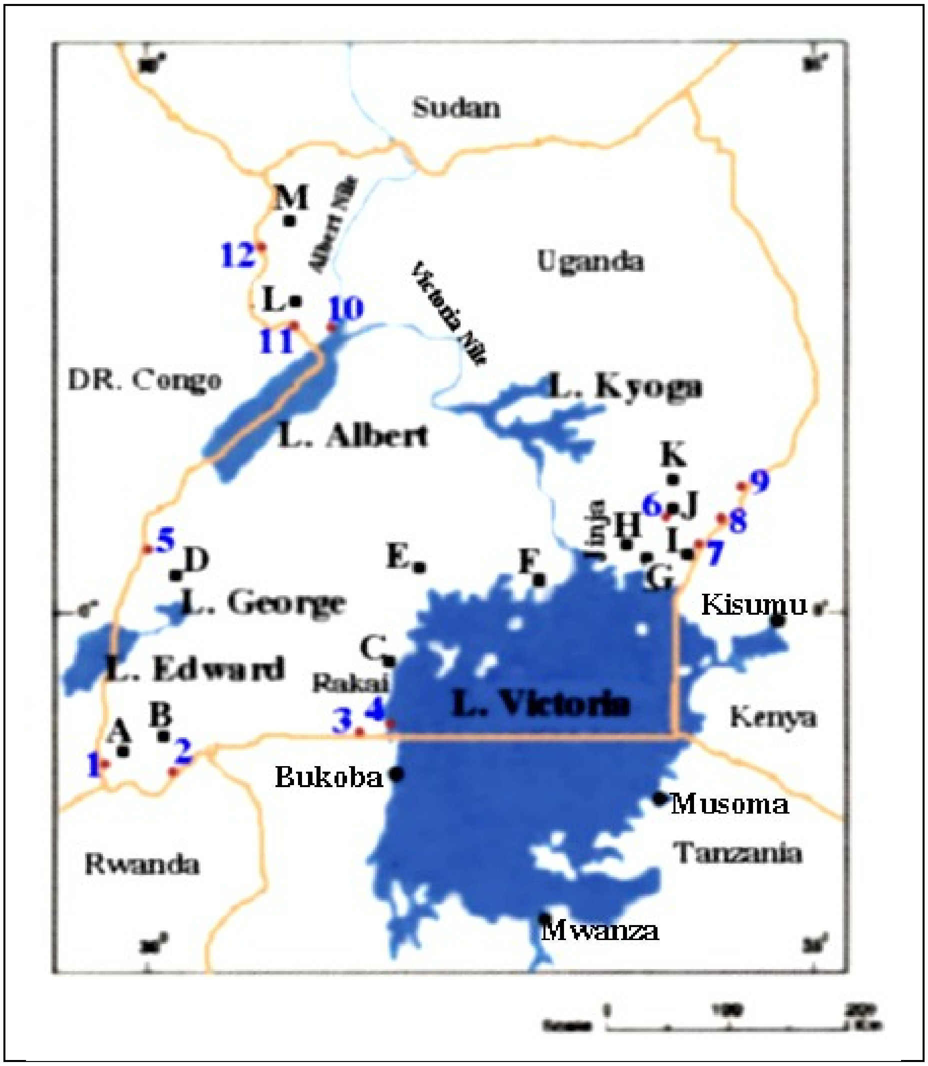
c) To assess the impact of Government polices on regional fish export trade.

3. METHODOLOGY

3.1 Study Area

The study was carried out at regional fish markets and Customs Border Posts within the West Nile, South/Western and Eastern regions and fish supply beaches on Lake Victoria (Figure. 3.1).

Figure 3.1: Map Showing Study Areas



Key:

Sample Districts:

A. Kisoro, B. Kable, C. Masaka
D. Kasese, E. Wakiso, F. Mukono
G. Bugiri, H. Mayuge, I. Busia
J. Tororo, K. Mbale, L. Nebbi
M. Arua

Sample CBP/Markets:

Bunagana, 2. Katuna, 3. Mutukula
Kasensero, 5. Mpondwe, 6. Osukuru
Busia, 8. Malaba, 9. Lwakakha
Panyimur, 11. Paidha, 12. Vurra

Beaches, Border Markets and Customs Posts (Table 3.1) were selected basing on information provided by Fisheries Department personnel. At survey sites, individual respondents were randomly selected while knowledgeable people were purposively selected. In all, the survey yielded 100 individual trader responses and 20 key informant interviews.

Table 3.1: Sample Beaches, border markets and customs posts

District	Landing sites	Fish market	Border posts
West Nile Region			
Arua		Arua Town Market	Vurra
Southern/Western Region			
Rakai		-	Kasensero/Mutukula
Kabale		-	Katuna
Kisoro		-	Bunagana
Kasese		Mpondwe	Mpondwe
Eastern Region			
Mayuge	Bwondha and Bugoto		
Bugiri	Lubango and Murwanda		
Mbale		-	Lwakakha
Tororo		Osukuru Market and Malaba Fish Market	Malaba
Busia		Busia Central Market	Busia
Central Region			
Masaka	Lambu and Kachanga		
Wakiso	Kasenyi and Kigungu		
Mukono	Kiyindi and Senyi		

3.2 Data Collection

Data collection involved the following activities:

a) Literature reviews of documents related to the study.

b) Relevant records and reports at the district and custom border posts were reviewed.

c) Key informant interviews with fisheries staff at the districts, fish markets, beaches and officials at custom offices.

d) Unit questionnaire interviews with fish traders involved in the regional trade.

e) Samples of individual fish biometrics to the nearest kilograms and centimetres were taken.

3.3 Data analysis

Data obtained from unit questionnaire was entered on SPSS data editor and summarized into frequencies. Data from samples of individual fish biometrics was analysed using MS Excel program.

4. RESULTS

4.1 Socio-demographic Characteristics of Traders

Most traders (45.7%) were males. Average age for the traders was 32 years and most had been in the trade for an average of 4 years. The majority (52.4%) were Ugandans followed by Kenyans (39%). Others were Rwandese and Congolese nationals.

Most respondents (48.8%) reported having attained primary education, followed by secondary level (32.9%) and 13.4% had not attained any form of education.

At the different markets, traders got their fish at different lake sources. Lake Victoria was reported as the most dominant source (64.4%), 31.7% reported Lake Albert while an insignificant proportion reported Lake Kyoga.

4.2 Species, Forms, Sizes, Quantities and Values of Fish Products

4.2.1 West Nile Region

The main species dealt in was Nile perch, followed by *Bagrus bayad*, *Hydrocynus forskhalii, Tilapia ssp*, *Alestes baremose* and *Brycinus nurse* and mukene. Mukene was sundried, while the other products were mainly salted and sundried and some small quantity was smoked.

The AFOs Panyimur reported that fish products of Nile perch were mostly immature. Table 4.1 indicates a sample of individual fish biometrics taken at Panyimur. Fresh samples were not available in the market at the time of the survey. Size structure was ascertained on the dried specimens, implying that fish had undergone shrinkage due to loss of water. What was reported as total length compounds the shrinkage factor.

Table 4.1: Size Structure (Total Length) for Species taken at Panyimur

Species	Mean	Range	Size at first maturity (Lake Albert)
Bagrus bayad	49.27±5.63 cm TL	33-63 cm TL	42 cm TL
Alestes baremose	42.44±3.0 cm TL	37-51 cm TL	24cm TL
Brycinus nurse	87.3± 13.5mm TL	37-51 mm TL	50 mm TL
Hydrocynus forskalii	42.08± 3.12 cm TL	38-51cm TL	18 cm TL
Lates ssp	35.46 ± 9.64 cm TL	28-69cmTL	46 cmTL
Synodontis schall	33.15 ± 3.43 cm TL	22-39 cm TL	Not ascertained
O. niloticus	36.12± 4.64 cmTL	29-51 cm TL	24 cm TL

Source: FIRRI Survey Data, 2003

Quantities and values of fish by species and form exported to DRC from Panyimur fish Market for the months of November and December 2002 showed that export quantities were stable (Table 4.2).

Table 4.2: Quantities and values of Fish by Species and Form Exported to DRC from Panyimur from January – April 2002

January	Form	Weight (kgs)	Weight (Tonne)s	Value (Ug. Shs
B. bayad	Salted	15,375	15.375	20,500,000
Tilapia ssp	Salted	4,425	4.425	4,425,000
H. forskhalii	Salted	1,102	1.102	1,450,000
Lates ssp	Salted	1,575	1.575	1,575,000
B. nurse	Sundried	2,052	2.052	820,000
Total		**24,529**	**24.529**	**28,770,000**
Febuary				
B. bayad	Salted	21,780	21.78	22,440,000
Tilapia ssp	Salted	4,950	4.95	4,950,000
H. forskhalii	Salted			

January	Form	Weight (kgs)	Weight (Tonne)s	Value (Ug. Shs
Lates ssp	Salted	9,900	9.9	9,900,000
B. nurse	Sundried	4,800	4.8	1,920,000
Total		**41,430**	**41.43**	**39,210,000**
March				
B. bayad	Salted	19,620	19.62	26,160,000
Tilapia ssp	Salted	2,325	2.325	2,325,000
H. forskhalii	Salted	760	0.76	1,000,000
Lates ssp	Salted	1,575	1.575	1,575,000
B. nurse	Sundried	11,000	11	4,400,000
Total		**35,280**	**35.28**	**35,460,000**
April				
B. bayad	Salted	19,230	19.23	25,640,000
Tilapia ssp	Salted	8,265	8.265	8,265,000
H. forskhalii	Salted	285	0.285	375,000
Lates ssp	Salted	551	0.551	435,000
B. nurse	Sundried	1,250	1.25	500,000
Total		**29,581**	**29.581**	**35,215,000**
Monthly Average		**32,705**	**32.705**	**34,663,750**
Estimated Annual Totals		**392,460**	**392.46**	**415,965,000**

Source: Fisheries Records, Panyimur Fish Market

The estimated annual quantity and value of fish exported to DRC through Panyimur were 392.46 tonnes and Ug. Shs 415,965,000/= respectively.

4.2.2 South Western Region

4.2.2.1 Kasensero/Mutukula

At the time of the survey, there was no fish trade between Uganda and Tanzania conducted through Kasensero/Mutukula as reported by the AFO, Kasensero. The AFO however, revealed that salted fish (Nile perch and Tilapia) and sundried mukene used to be imported from Tanzania in the early 1990s. The AFO also reported that in 2000 – 2001, 2 tonnes per day of fresh Nile perch used to be landed at Kasensero from the nearby beaches of Masanga and Male in Tanzanian. This was attributed to the higher prices offered in Uganda by then. However, from 2002 to date, prices for Nile perch are higher at beaches in Tanzania than Uganda. A kilogram of Nile perch costs the equivalent of Ug. Shs 2500/= while in Uganda a Kilogram goes for Shs. 2200/=. Because of the strict restrictions and regular patrols on the lake, there is no Ugandan trader/fisher taking fish to Tanzania.

4.2.2.2 Katuna Customs Border Post

Sundried mukene and fresh Tilapia were the main species and forms of fish exported to Rwanda through Katuna. The DFO reported that the Tilapia dealt in was of the recommended sizes.

The quantities and values of fish by species exported to Rwanda through Katuna Custom Border Post from October 2002 to January 2003 (Table 5.3).

Table 4.3: Quantities and values of Fish by Species Exported to Rwanda through Katuna Border Post from October 2002- January 2003

Month	Species			
	O. niloticus (Tilapia)		R. argentea	
	Weight (in tons)	Value (Shs)	Weight (in tons)	Value (Shs)
October 2002	15.30	10,232,000	43.30	10,889,000
November 2002	12.70	13,440,000	30.90	7,120,000
December 2002	23.00	23,400,000	42.20	11,130,000
January 2003	12.10	15,420,000	19.40	4,850,000
Monthly Average	**15.8**	**15,623,000**	**34**	**8,497,250**
Estimated Annual Total	**189.3**	**187,476,000**	**407**	**101,967,000**

Source: URA Records, Katuna Custom Border Post

The estimated annual quantity and value of fish exported to Rwanda through Katuna Border Post was 596.3 tons and Ug. Shs 289,443,000/= respectively.

4.2.2.3 Bunagana Border Post

Before the deployment of the Taskforce, immature salted/smoked Nile perch and Tilapia (makayabu) formed part of the fish exports, however, since June 2002, it was mainly sundried mukene that was exported to DRC.

Table 4.4: Quantities and values of *R. argentea* exported to DRC through Bunagana Border Post between June - December 2002

Month	Weight (tons)	Value (Ug. Shs)
June	88.4	24,600,000
July	106.88	23,800,000
August	130.2	33,050,000
September	119.48	46,213,000
October	139.92	54,661,000
November	106.68	41,338,000
December	95.76	37,087,000
Average Monthly	**112.47**	**37,249,857**
Estimated Annual Total	**1,349.69**	**446,998,284**

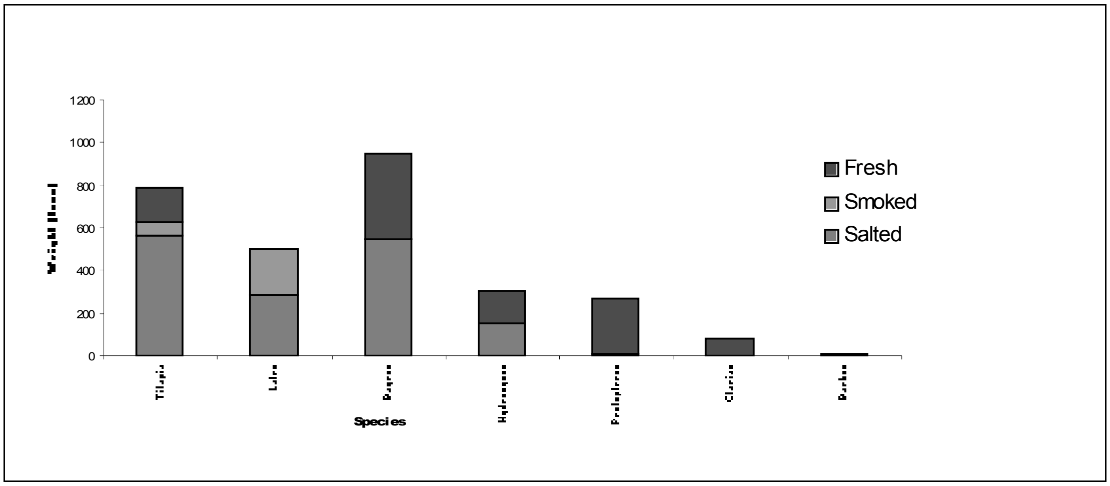
Source: URA Records, Bunagana Custom Border Post

The estimated annual quantity and value of fish exported to DRC through Bunagana CBP was 1,349.69 tons and Ug. Shs 446,998,286/= respectively.

4.2.2.4 Mpondwe Custom Border Post

The main fish species exported in 2002 were *Bagrus bayad*, *Tilapia spp*, *Lates spp*, *Hydrocynus forskhalii*, *Protopterus*, *Clarias* and *Barbs*. The most dominant form was salted/sun dried (Figure 4.1).

Figure 4.1: Species and Forms of Fish Exported to DRC via Mpondwe CBP 2002



Smoked Fish Factory by-products (Nile perch -heads, skins and fish frames) also formed significant quantities of the exports.

The fisheries staff reported that most of the processed exports of *Lates ssp*, *Hydocynus forskhalii* and *Tilapia ssp* were immature and this was attributed to the following reasons:

i) Lack of harmonized legislation between Uganda and DRC for the shared resources of Lakes (Albert and Edward). The law in DRC encouraged fishers to catch fish (even juveniles) as long as it was outside the breeding grounds. Therefore traders from Ntoroko (border Landing site in Bundibujo – Uganda and DRC) used the Mpondwe route, which had a well-developed road network and claim fish, was in transit to DRC but from DRC through Mpondwe.

ii) The immature fish was easy to process (required less amounts of salt), cheaper, tender and therefore had market.

iii) The sale of fish by numbers (heads) other than kilograms.

Table 4.5: Quantities and values of fish by species and form exported to DRC through Mpondwe Custom Border Post for 2002.

Species	Form					
	Salted		Smoked		Fresh	
	Qty (tonness)	Value (Ug. Shs	Qty (tonnes)	Value (Ug. Shs	Qty (tons)	Value (Ug. Shs
Tilapia ssp	561	847,750,000	62	130,500,000	160.9	216,707,750
Lates	289.8	406,700,000	208	308,400,000		
Bagrus	543.2	868,180,000	6.2	12,175,000	404	824,196,200
Hydrocynus	149	288,550,000			158.6	812,000,000
Protopterus	13	11,700,000			252.5	536,403,600
Clarias					77.3	238,255,667
Barbus					4.705	40,455,200.00
Total	**1,556**	**2,422,880,000**	**276**	**451,075,000**	**1,058**	**2,668,018,417**

Source: AFDO Records 2002, Mpondwe

Quantities and values of by-products exported to DRC for the months of November and December 2002 were obtained (Table 4.6)

Table 4.6: Estimated quantities and values of By-products exported to DRC through Mpondwe Customs Border Post

Month	Fish Factory By-product					
	Heads		Skins		Skeletons	
	Weight (tonnes)	Value (Ug. Shs)	Weight (tonnes)	Value (Ug. Shs)	Weight (tons)	Value (Ug. Shs)
November 2002	10.4	15,600,000	18	27,000,000	1.8	2,160,000
December 2002	3.2	4,800,000	6.1	9,150,000	1.3	1,560,000
Monthly Average	**6.8**	**10,200,000**	**12.05**	**18,075,000**	**1.55**	**1,860,000**
Estimated Annual Total	**81.6**	**122,400,000**	**144.6**	**216,900,000**	**18.6**	**22,320,000**

Source: Fisheries Records, Mpondwe Custom Border Post

The quantity and value of fish exported to DRC through Mpondwe Border Post for the year 2002 was 2,890 tonnes and Ug. Shs 5.5 billion respectively while the annual estimated quantities and values of by-product was 244.8 tons and Ug. Shs 361,620,000 respectively.

4.2.3 Eastern Region

There were no fish exports to Kenya via Lwakakha Border Post. The main species dealt in by traders through Malaba border post was fresh Tilapia. At Busia, fresh and smoked tilapia and sundried mukene were the main fish products exported to Kenya.

Most fish encountered were above size at first maturity (sexes combined) as indicated by the length frequency analysis below. Size at first maturity for *O niloticus* is 21.5 cm TL for male and 22.5 cm TL for females for L. Victoria. Some immature *O. niloticus* were indicated in the length frequency analysis for Osukuru and Malaba markets. Size structure for *O niloticus* in the individual markets are indicated:

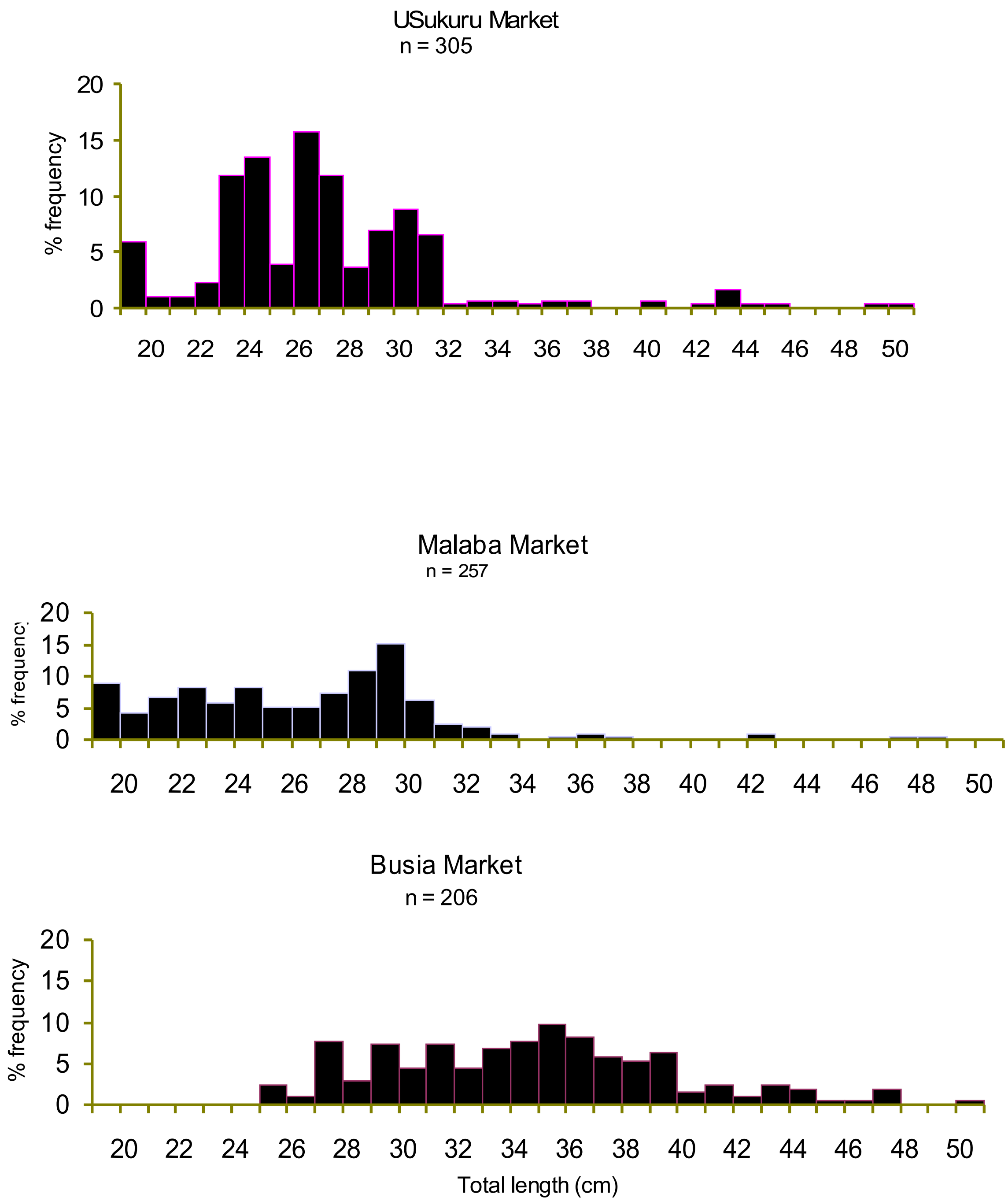
Table 4.7. Size Range and Modal Length of Fresh Fish in Eastern Region Markets

Market	Size range	Modal length
Osukuru	19-43 cm TL	27 cm TL
Malaba	19-43 cm TL	29 cm TL
Busia	25-47 cm TL	35 cm TL

Source: FIRRI Survey Data, April 2003

Sizes were well distributed in Busia market compared to the other two markets.

Figure 4.2: Sample of individual Fresh fish biometrics taken at Osukuru, Malaba and Busia Markets.



The fisheries staff in charge of Osukuru and Malaba fish markets gave the following estimates in Table 6.1 that can give us a picture of the quantities and values of fish exported to Kenya via Malaba Custom Border post.

Table 4.8: Estimated Daily, Monthly and Annual Quantities and Values of Fresh Tilapia exported to Kenya through Malaba Border Post

Market	Number of Traders	Estimates		
		Daily	Monthly	Annual

		Qty (Kgs)	Value (Shs '000)	Qty (Kgs)	Value (Shs'000)	Qty (Kgs)	Value (Shs '000)
Osukuru	10 Small -Scale	250	250	7,500	7,500	90,000	90,000
Malaba	45 Small -scale	450	450	13,500	13,500	162,000	162,000
	5 Medium scale	750	750	22,500	22,500	270,000	270,000
Estimated Monthly Total	**60**	**1,450**	**1,450**	**43,500**	**43,500**	**522,000**	**522,000**

Source: FIRRI Survey data April 2003

Note: A kilogram of Tilapia was valued at Ug.shs 1,000. The markets operated on a daily basis.

The estimated annual quantity and value of fish exported to Kenya via Malaba Border Post was 522 tonnes and U. Shs 522,000,000 respectively.

Table 4.9: Quantities and values of fish Exported to Kenya through Busia between July 2002 and January 2003

Month	Species	Form	Exports from Busia Central Market: Weight (tons)	Exports from Busia Central Market: Value (Shs)	Direct Exports taken by Trucks: Weight (tons)	Direct Exports taken by Trucks: Value (US $)
July 2002	Tilapia	Fresh	78.2	101,660,000		
		Smoked	9.5	16,150,000	6.5	
	Mukene	Sundried	16.9	20,280,000	4.3	
	Monthly Total		**104.6**	**138,090,000**	**10.8**	**9,720**
August 2002	Tilapia	Fresh	68.3	88,790,000		
		Smoked	7.2	12,240,000	2	
	Mukene	Sundried	18.7	24,310,000	6.3	
	Monthly Total		**94.2**	**125,340,000**	**8.3**	**7,470**
September 2002	Tilapia	Fresh	86.1	111,898,800		
		Smoked	10.1	17,173,400	6.4	
	Mukene	Sundried	21.1	27,405,300	2.1	
	Monthly Total		**117.3**	**139,304,100**	**8.5**	**15,300**
October 2002	Tilapia	Fresh	58.4	15,400,000		
		Smoked	4	6,800,000	5.2	
	Mukene	Sundried	10.8	14,040,000	0.8	
	Monthly Total		**73.2**	**36,240,000**	**6**	**5,400**
November 2002	Tilapia	Fresh	42.6	55,380,000		
		Smoked	3.2	5,440,000	3	
	Mukene	Sundried	5.2	6,760,000	0.3	
	Monthly Total		**51**	**67,580,000**	**3.3**	**3,960**
December 2002	Tilapia	Fresh	36.9	47,970,000		
		Smoked	5.1	8,670,000	2.4	
	Mukene	Sundried	11.8	15,340,000	0.5	
	Monthly Total		**53.8**	**71,980,000**	**2.9**	**3,480**
January 2003	Tilapia	Fresh	35.3	45,890,000		
		Smoked	9.2	15,640,000	3.5	
	Mukene	Sundried	15.3	19,890,000	0.5	
	Monthly Total		**59.8**	**81,420,000**	**4**	**7,200**
February 2003	Tilapia	Fresh	32.4	42,120,000		
		Smoked	7.6	12,920,000	8.3	
	Mukene	Sundried	10.5	13,650,000	0.7	
	Monthly Total		**50.5**	**68,690,000**	**9**	**16,200**
Monthly Average			**75.55**	**91,080,513**	**6.6**	**8,591**
Estimated Annual Total			**906.6**	**1,092,966,150**	**79.2**	**103,095**

Source: DFR records, Busia District, 2003

Note: Records on direct exports by trucks mainly from beaches on Lake Kyoga were obtained from the Customs office and values were in US. Dollars. An exchange rate of Ug.Shs. 1800 for a dollar has been used for the period. Exports from Busia Central Market are recorded by the AFO on every market day

The estimated annual quantity and value of fish exported to Kenya via Busia Border Post was 985.8 tons and U. Shs 1.3 billion respectively.

4.3 ORGANISATION OF THE TRADE

4.3.1 At Fish Supply Districts

Key informants revealed that the trade had been in existence for a long time especially among the border communities. Around Lake Victoria the trade became more vibrant during the Magendo period of the 1970s. It was reported that traders were organized in groups and registered companies.

Formal groups were mainly common among mukene traders. The group membership ranged from 20 – 50 traders. At Kiyindi landing site, discussions were conducted with 3 groups of traders (Table 4.10). In the discussions, traders revealed that because of the following factors below, they had found it necessary to organize themselves in groups and companies.

i) High transport and license costs for individual traders.

ii) Need for collective response in case of any problems confronting traders.

iii) Need to control prices.

iv) Fish quality concerns that could easily be tracked by group identification other than individual traders.

Most mukene traders had one trade trip in a month. This was largely because it involved waiting for mukene for some time from fishers in the islands of mainly Buvuma in Mukono district and Kalangala. At certain instances, it was reported that there were middlemen for mukene traders between either fishermen or local processors. During seasons of fish scarcity regional traders got directly involved in looking for fish other than waiting at beach markets.

Table 4.10: Mukene trader groups at Kiyindi Landing Site

Trader Group	Membership	Destination of fish
Kabale Bakene Fish Mongers group	50	Kabale & Bunagana
Koboko women's group	40	Koboko
Arua women's group	45	Arua

Note: All traders claimed that they were not taking fish to any regional country. This was disputed by most Fisheries Officials at beaches.

There was noted presence of stores for mukene at most beach markets from where traders accumulated the targeted quantities for a trade trip. They then organize transportation of fish respective destinations. Most mukene traders hired transport in groups. There were no reported cases of individual mukene traders who owned tracks.

Traders who transacted in Tilapia were mainly working for registered companies. Discussions conducted with traders for Kinoni Fish Exporters and Importers Company, at Bwondha Landing Site in Mayuge District revealed that the company had 6 vehicles, which alternate between Rwanda markets and supply beaches on Lake Victoria. Fish was loaded in trucks with ice for preservation (Figure 4.3).

The company transacted in fresh tilapia. That it took an average of 3 days to have a 6 tonne truck filled. Fish was directly bought from fishermen with whom they some times had arrangements. Fishermen were given nets on credit, which they could pay for, by supplying fish to the respective trader.

Key informants further revealed that traders who dealt in juvenile fish of Nile perch and Tilapia although had reduced in number, due to the recent operation by the Entebbe Fisheries Department, were still organized at certain beaches especially in the islands.

At the landing sites, all the traders were wholesalers getting fish from fishermen (55% of respondents), from wholesalers at the beach (25% of respondents) and from processors at the beach (20% of respondents) (Table 4.11).

Table 4.11: Sources of fish for traders at the beaches

Categories of fish suppliers	Frequency	Percentage
Processors at beaches	13	20.0
Fishermen	22	55.0
Wholesale trader at beaches	15	25.0
Total	50	100.0

Source: FIRRI Survey Data, 2003

Most traders (53%) did not have any arrangements with their suppliers, 47% said that they could at certain times extended credit to their suppliers. In the discussions with fish traders and key informants, a fish flow diagram for regional fish trade was developed (Figure 4.3).

It was found out that the number of channels which fish moves through to the regional countries were dependent on two main channels that began at the beaches with the fishermen - recorded and regulated channel and the unrecorded and unregulated channel. The former channel, from the beach, fish goes either through the customs border post or border market and finally to the regional inner markets. At times from the border markets, fish just moves straight to inner markets of regional countries or to border districts without going through the CBP. The channel constitutes mainly Tilapia and mukene. Tilapia both fresh and processed (salted and sun dried) and mukene processed by sun drying.

The unrecorded and unregulated channel on the other hand, involves movement of fish from the fishermen straight to inner markets of regional countries or through the border markets without going through the border posts to the inner markets and border districts of regional countries.

The major species transacted in the channel are mainly processed juvenile Nile perch and Tilapia. This trade is purely illegal. In all cases, the market intermediaries were wholesalers with the exception of retailers who bought fish at the border markets to the border districts of both Uganda and neighbouring countries.

It was noted that most fishers were not clear about where they mostly sold their fish. The biggest proportion (65%) reported that they sold their fish at the Uganda – Rwanda border, 25% to Uganda – Congo border and 10% to the inner markets of Kenya.

The majority (65%) preferred to sell fish to regional countries because of the presence of ready markets while 35% attributed it to better prices offered in these markets. Most traders (65%) did not have any supply arrangements with their buyers a part from a few who could offer fish on credit to the buyers.

During the distribution of fish, traders reported a number of problems encountered. The most out standing problem was the presence of many regulatory points for both revenue collection and size/quality assurance. Traders considered it a problem because of the inconveniences of the processes involved.

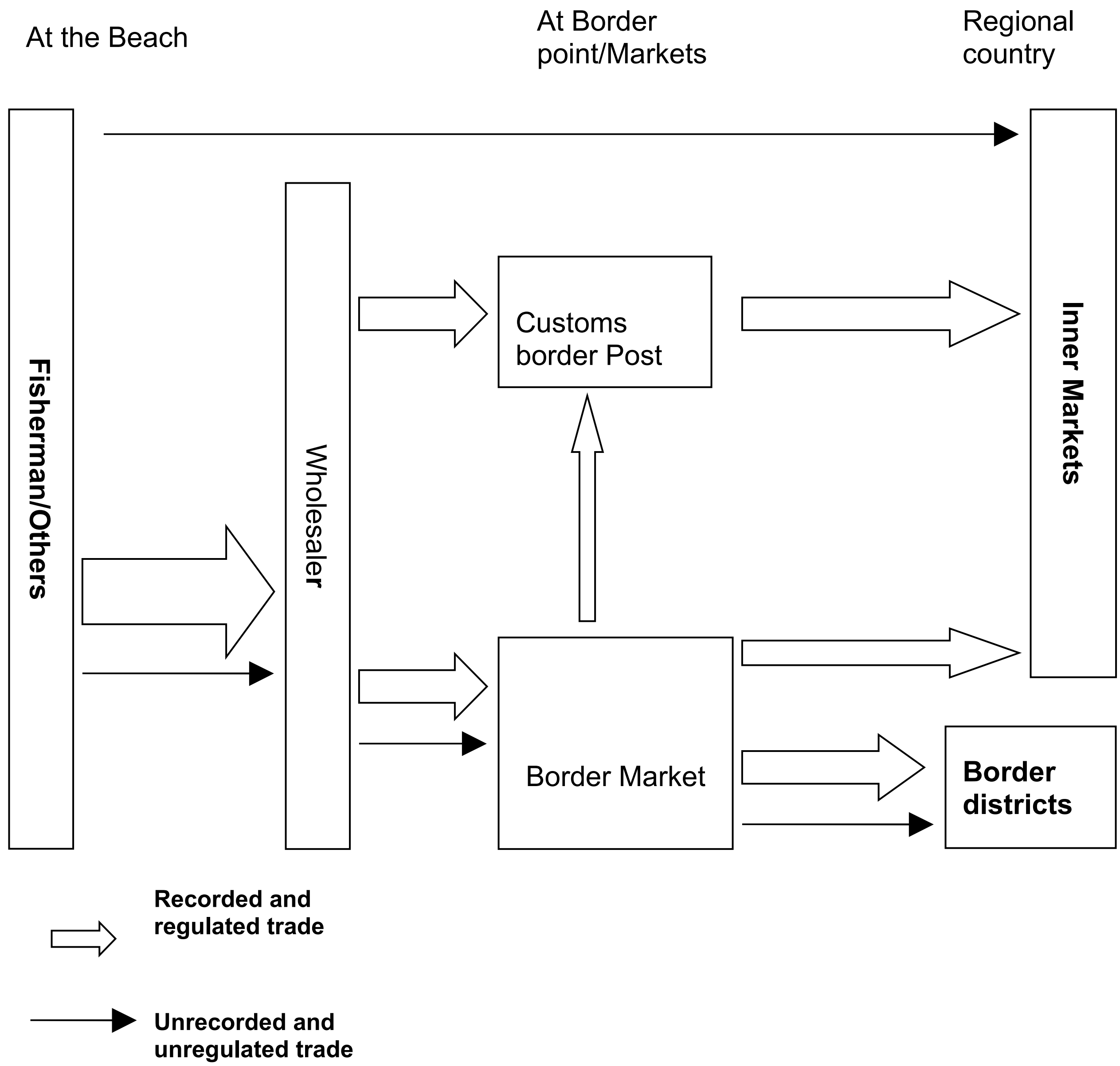


Figure 4.3: Regional fish trade flow.

Source: FIRRI Survey Data, 2003

4.3.2 At Border Markets/Customs Border Posts

4.3.2.1 West Nile Region

The DFR staff and Custom officials reported that fish was exported through Padea and Vurra Custom Border Post to DRC and are destined for DRC towns like Kudikoka, Aruu, Ariwala and sometimes Kinshasha. There was no fish exported through Goli. Panyimur was the nodal market for all fish exported to DRC. However, other regional fish market outlets also operated on specific days, Table 4.12.

Table 4.12: Regional Fish Markets and their operational days

Markets	Operation days	District
Panyimur	Monday/Tuesday	Nebbi
Paidha	Wednesday/ Saturday	Nebbi
Alangi	Monday/Friday	Nebbi
Arua Town Market	Daily	Arua
Ondurpaka	Wednesday	Arua
Odramchako	Monday/Wednesday/Friday	Arua

Source: FIRRI Survey data, 2003

Most respondents (92.3%) in the West Nile region mentioned Lake Albert as the main source of supply of fish products they traded in followed by Lake Victoria (7.7%) from the Ugandan part but some fish also came from DRC Congo – Mahagi Port through Panyimur due to poor infrastructure and insecurity in Congo. Lake Victoria mainly supplies mukene, which is a delicacy in the West Nile region and part of Southern Sudan. The traders were broadly categorized into two main groups: whole sellers (76.9%) and retailers (15.4%). The respondents reported that they bought fish mainly in bundles (73.1%) and per head/troughs (11.5%) respectively.

The majority of the respondents reported that they sold their fish in bundles (46.2%), per head (38.3%) while the rest sold both per head and in bundles. The fish is mostly sold to consumers (57.7%) and wholesale buyers (26.9%) who later retail in rural areas. The majority of respondents (92.3%) bought their fish from whole sellers at the market while a few (7.7%) bought their fish from beaches and other sources.

Most traders hired space on vehicle to transport their fish to the various destinations of DRC. The O/Cs of Padea and Vurra Custom border posts reported that they usually saw fish trucks crossing but none of the traders declared their cargo at the custom points. This was attributed to the porous nature of the border post without any natural barriers.

4.3.2.2 Southern/Western Region

There were no regional fish markets in Kabale. Trucks of fish crossed at Katuna and supplies were sold in Kigali, Rwanda.

The only Fish trader interviewed mentioned landing sites of Lambu, Kasenyi, Kiyindi, Katosi and Bwonda on Lake Victoria and Lwampanga, Kikalaganya and Zengebe on Lake Kyoga as the main sources of fish. Traders of mukene and Tilapia bought and sold in wholesale. It took approximately one week for them to secure their supplies and dispose them off. On average, a trader operated twice a month.

Traders buy their supplies in cash and sometimes supply on credit. An average of 5 mukene traders hire one truck (Fuso/Diana/Canter) at an average cost of U.shs 600,000/= to transport fish up to Rwanda.

Mukene is packaged in sacks weighing averagely 40 kilograms and Tilapia is loaded in refrigerated trucks. All exports are tax-free and traders don't pay any fee/dues at the border post. However, for purposes of monitoring the trade traders are encouraged to declare their fish consignments at customs. In course of declaring their consignments, traders are asked to avail the following documents; Loading Certificate/Letter of Inspection at the Fish Landing Site/market of origin specifying date of loading, route to be taken by the truck, species, sizes, quantities and values and Export Licence from Ministry of Trade.

Mpondwe

Mpondwe was the main fish market in the district and operates on Tuesdays and Fridays. It was located in the ‘no-man’s land’ between Uganda and DRC. Kikolongo Market is also developing as a major fish market dealing mainly in by-products and operates on Mondays and Fridays. Most of the fish exports are destined for DRC towns like Beni, Lume, Bulongo and Butembo.

On average, there were four trucks of fish crossing the border post on every market day. There were also other traders using public means and bicycles especially those dealing in fresh fish. The major sources of fish are given in Table 4.13

Table 4.13: Sources of Fish Exported through Mpondwe Custom Border Post

Lake	Beache/Markets	Species
Albert	Ntoroko and Wangara (Bundibugyo) and Muzizi (Hoima)	Bagrus, Hydrocynus, Nile perch and Tilapia
Victoria	Ggaba, Kasenyi	Smoked/salted Immature Nile perch
George	Kayinja and Masioro (Kamwenge)	Proteptorus
Edward	Rwenshama (Rukungiri), Kayinja and Katwe (Kasese)	Tilapia
Markets	Busega and Ggaba Fish Markets (Kampala) and Kalisizo (Rakai)	Smoked fish factory by-products

Source: DFOs records, Kasese

The DFR staff reported most traders are wholesalers. Fish was sold in Kilograms and heads/heaps. An average of 10 traders hired one truck for transportation of their goods. Salted and smoked fish was packaged in bundles and sometimes in boxes. Few of the Traders have the documents that are needed at the Customs post, namely, Loading Certificate/Letter of Inspection and Export Licence.

Bunagana

Originally the fish market was situated in Bunagana-DRC, it moved to Ugandan side in 1997 due to insecurity, however, with improved security it has been relocated to DRC. It operates on Mondays.

The DFO mentioned the fish landing sites of Lambu, Bukakata and Kasenyi, as the main sources of fish. The fish exports were destined for DRC towns like Goma and Bukavu.

Mukene is mainly sold in sacks and though the market was located in DRC the means of exchange was in Uganda shillings. On average, a trader might operate thrice a month. Two mukene traders hired one truck (fuso/dyana/canter) at an average cost of U.shs 700,000/= to transport fish up to DRC. Mukene was packaged in sacks weighing averagely 80 kilograms.

4.3.2.3 Eastern Region

The trade is mainly conducted in Busia Central Market. Fresh Tilapia is sold every day while processed forms are sold on Mondays and Thursdays. The small-scale trade in fish through Malaba Border post was relatively new and operates daily.

The fish traders and fisheries staff mentioned the beaches of Masese, Walumbe, Namoni, Bukoba, Malindi, Kiyindi, Katosi and Bwondha on Lake Victoria and Bukungu, Namasale and Kawongo on Lake Kyoga as the main sources of fish traded in. Approximately 8 pick-ups delivered fresh Tilapia from Lake Victoria while three trucks deliver to Malaba/Osukuru Fish markets. Two lorries of processed fish owned by two Ugandan large-scale traders mainly from Lake Kyoga crossed the Busia border every Tuesday targeting the Wednesday fish market on the Kenyan side. However, much of the trade is conducted on the Ugandan side where Kenyan traders picked fresh Tilapia everyday and processed products every Monday and Thursday. Both fresh and processed forms are destined for Kenyan border towns such as Malaba and Busia and as far as Kisumu, Eldoret, Kakamega and Nairobi.

The Kenyan traders ferry their merchandise across on carts, locally known as *Mukokoteni* in Basket. Traders destined for distant market such as Nairobi and Eldoret used ice to preserve their fish. The officer in-charge of exports at Malaba Custom border post reported that the trade was not monitored because it was at a small-scale and did not attract any revenue. However, he reported that there were plans to start monitoring the trade especially then that the volume was increasing. At Busia, the AFO took statistics for the small–scale trade destined for the Kenyan market on a daily basis while large-scale trade was monitored at the Customs Post.

Table 4.14: Fish prices at the different markets (Congo, Kenya and Rwanda)

Fish Species	Market	Buying Prices (Ug. Shs)	Selling Prices (Ug. Shs)
Mukene	Congo	700	1200
	Kenya	-	-
	Rwanda	675	1225
Tilapia (Fresh)	Congo	-	-
	Kenya	1100	2400
	Rwanda	875	1275
Nile perch (Salted)	Congo	1255	1620
	Kenya	-	-
	Rwanda	-	-

Source: FIRRI Survey Data, 2003

4.4 Impact of Government Policies

According to key informants, trade policies of Investment promotion and Trade Liberalization had come with both positive and negative impacts to the trade. Positively, they reported that the number of fish traders accessing regional markets, which offer better prices, had increased. This had led to better incomes for traders. However, on a negative note, they argued that in the long run the trade might be affected due to resource depletion especially as a result of over capitalization.

Traders reported a number of Government activities that had affected fish trade. A large proportion of fish traders (13%) from the fish supply districts reported over taxation as one of the activities of Government that had affected their trade. In the West Nile region (47.5%) and Eastern region (35%) attributed scarcity of fish supplies to the strictness of law enforcers against immature fish. Sometimes traders reported loss of merchandise due to confiscation by law enforcers and failure of their customers to afford fish of recommended sizes. These activities according to most traders had affected their incomes as in most cases had led to loss of capital in situation where fish is confiscated.

The DFR staff and Customs officials complained of lack of permanently deployed technical personnel (fisheries staff) at the custom border posts to give guidance on technical issues such as sizes of fish, species identification and quality assurance. The staff also reported that foreign traders were also involved in buying of fish directly at beaches on lakes. That had deprived the country of a good source of revenue in form of licences and dues from foreigners since this was done illegally. The DFR staff (Mpondwe) reported that the continuous exportation of immature fish especially salted and smoked Nile perch and *H. forskhalii* threatened the resource base and food security. He complained that the Mpondwe market was located in the 'no-man's land' and this made it hard to inspect fish and collect fees and dues. He also complained of the poor handling of fish products especially the fish factory by-products.

5. CONCLUSIONS AND RECOMMENDATIONS

The study makes the following recommendations:

i) Survey of markets and customs offices in the Border Districts of Koboko Moyo, Adjumani (West Nile Region), Ishasha Custom Post (Southern/Western Region) and supply beaches on Lakes Albert and Kyoga.

ii) Monitoring of trade through declaration of fish consignments at customs especially in the West Nile region.

iii) Construction of facilities and infrastructure in support of the trade at supply beaches, regional markets and Custom posts.

iv) Relocation of regional markets from ‘no-man’s land’ to mainland before the boundary barriers a case of Mpondwe.

v) Fish inspection at the loading points and checks during transportation to curb trade in immature fish.

vi) Harmonisation of fisheries legislation among the riparian states.

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Appendix 1: PRINCIPAL PERSONS MET

Nyakuni Liverius, District Fisheries Officer, Nebbi

Jalmoro Tonny, Fisheries Officer, Paidha

Rama Charles, Fisheries Officer, Panyimur

Ilatum Faustine, Customs Officer Paidha/Padea Custom Post

Emvi Luke, Customs Officer Goli Custom Post

Andiandu Joackin, District Fisheries Officer, Arua

Afeni James, Fisheries Officer, Arua Town Market

Ocokoru Zena, Chairperson Arua Women Fishmongers' Association

Bwanika, District Fisheries Officer, Rakai

Tumuheirwe B. J, AFO, Kasensero

Twebaze Jenifer, District Fisheries Officer, Kabale

Mulamuzi Denis, Assistant Revenue Officer, Mutukula Custom Border post

Kalanda John, Mukene Fish trader, Katuna Border Post

Luttu James, Tilapia Fish trader, Katuna Border Post

Kaana Mbaga S. K, District Fisheries Officer, Kasese

Nyondo Robert, Acting Officer In-charge, Mpondwe Custom Border post

Getrude Itungu, AFDO, Bwera-Mpondwe/Karambi Sub-counties

Bwambale John, Fish trader, Mpondwe Border Post

Manina, W.R, District Fisheries Officer, Kisoro

Cherop Luke, Acting Officer In-charge, Bunagana Custom Border post

Hamenyimana Philip, Fish trader, Bunagana Border Post

Emong J, AFO, Busia

Nkwanga DFO, Tororo

Etoori Alex, AFO, Tororo

Oqwang George, AFO, Tororo

Wanjala Kenyatta, Chairman Busia Fish market

Mugumya Gordon, Officer In-charge Exports, Malaba Custom Border post

Mulambi Romulus, District Fisheries Officer, Mukono

Lubuulwa Micheal, District Fisheries Officer, Wakiso

Buyinza George, Assistant Fisheries Officer, Mayuge

Matege Habibu, Assistant Fisheries Officer, Lambu Beach

Appendix 2: DATA COLLECTION INSTRUMENTS

2.1 Unit Questionnaire:

Fisheries Resources Research Institute

Lake Victoria Environment Management Project

Socio-economic Sub-component

Study of Regional Fish Export trade

Name of interviewer: ______________________________

Date: ______________________________

Region/Lake: ______________________________

District: ______________________________

Beach/Border Market: ______________________________

A. Personal Data:

1. Name of respondent: ______________________________

2. Age: __________ years

3. Sex: [1] Male [2] Female

4. What is your level of education? (*Tick one*)

[1] No schooling [2] Primary [3] Secondary [4] Tertiary
[5] University [6] Other (specify)____________________

5. Of what nationality are you?

[1] Kenya [2] Tanzania [3] Rwanda [4] DRC [5] Burundi
[6] Sudan [7] Other (Specify) ________________________________

6. How long have you been trading? ___________ Years

B. Organization of trade

7. What type of trader are you?

[1] Wholesaler [2] Retailer [3] Other (Specify) ____________________

8. Where do you mainly buy your fish?

[1] Beach [2] Market [3] Other __________________________

9. From whom do you mainly buy your fish?

[1] Processors at beaches [2] fishermen [3] Wholesaler at the market
[4] Other (Specify) ____

10. Where do you mainly sell your fish?

[1] Rwanda [2] Congo [3] Tanzania [4] Rwanda [5] Sudan
[6] Other (Specify) ______________________________________

11. Why do sell your fish outside Uganda?

[1] Better prices offered [2] No restrictions [3] Ready market
[4] Other (Specify) _______________________________________

12. What arrangements do you have with your suppliers?

[1] Extends credit [2] No arrangement [3] Other (Specify) ___________

13. What arrangements do you have with your buyer?

[1] Extends loan [2] Provides transport [3] No arrangement
[4] Other (Specify) ____

14. What is the major problem you face with distribution of your fish?

[1] Transport costs [2] Competition [3] Regulatory points many
[4] Other (Specify) ____

C. Costs and Incomes

15. Provide information on the following:

Trading Assets	Quantity	Cost price	Year of Acquisition	Salvage Value

Operational Costs:

16. Provide information on your labour costs:

Source of Labour	Number	Unit cost/day/wk/month
[1] Self labour		
[2] Family labour		
[3] Hired labour		

17. Provide information on your other costs:

Input	Quantity	Unit cost

18. What means of transport do you use to your destination market?

[1] Boat [2] Bicycle [3] Pick up [4] Lorry [5] Public means
[6] Other (Specify) ____

19. How many trips do you make? ________ per week/month

20. Income:

Fish species	Form	Size	Quantities		Price/kg	
			Good day	Bad day	Buying	Selling
[1] Nile perch						
[2] Tilapia						
[3] R. argentea						

D. Policies

21. What Government activities/actions affect your fish trade?

____

22. How have they affected your trade?

____

____

2.2 Key Informant Questionnaire with Fisheries Personnel

Fisheries Resources Research Institute
Lake Victoria Environment Management Project

Socio-economic Sub-component

Study of Regional Fish Export trade

1. Name of interviewer: ________________________
2. Region: ________________________
3. Exit point/Market: ________________________
4. Name of respondent: ________________________
5. Status of respondent: ________________________

A. Species, Forms, Sizes, Quantities

6. Briefly describe the different types of fish and fish products exported to the neighbouring countries through your district (species, forms and sizes)

____
____

Provide information about statistics of fish exported:

Species	Kgs/tons	Destination
Nile perch		
Tilapia		
Mukene		
H. forskhalii		
B. baremose		
B. nurse		
Bagrus		
Proteptorus		
Other		

7. Please tell us about the regional trade in fish and fish products (when the activities started, beaches/markets where they exist)

____

8. Is there staff deployed to take statistics and ensure compliance with fish rules for fish and fish products destined for the regional markets? [1] Yes [2] No

9. If yes, give and account of incidences when traders have been arrested breaking fish rules

____

B. Costs

10. Provide information on licences/fees/dues:

Item	Cost
Trading permit	
Other fees	

C. Organization of the Trade

12. Describe the organisation of the trade and distribution of the products (supply arrangements, transportation, packaging)

____

____

13. Mention the sources from within and outside the district and destination markets of the fish and fish products

____

____

14. Mention the number of people involved in this trade ____________________

D. POLICY

15. What is the district policy on the regional fish trade?

____

____

16. How have the following policies affected regional fish trade:

Policy	Effect	
	Positive	Negative
1. Investment promotion		
2. Trade liberalization		
3. Privatisation		
4. Decentralization		

17. What other policy recommendations need to be put in place in order for the trade to flourish?