



**Town Hall Baraza**  
**on**  
**Enhancing Agro-industrial Value Chains for Productive and Decent**  
**Work for Youth and Women in Uganda: A case of Fish**



**February, 2021**

## Background

Agriculture in Uganda holds tremendous prospects for creating employment opportunities for youth and women. For instance, the importance of the sector as an employer is likely to grow with continued transformation of food systems and growth in domestic demand for food (largely driven by urbanisation) and population. In the quest to create more employment opportunities, the Government of Uganda is strategically linking agriculture to industry through what is now termed as Agro-Industrialisation (AGI) programme in the National Development Plan 3. This has presented government and private sector players to retrofit its employment interventions for youth and women toward a successful AGI implementation programme in Uganda.

Fish has been identified as one of the key agricultural commodities to drive AGI value chain investment areas. This is because fish presents clear avenues for Uganda to have a positive trade balance, add value along its value chain and has clear backward and forward linkages with other chains such as the pharmaceutical industries. The lucrative fish value chain if well-developed will among others create productive and decent employment for Ugandan youth and women whose unemployment and underemployment dilemmas are well known and are on the rise, a sector that already employs about 5.3 million people directly and indirectly.

Against this background, it is important to have evidence and open discussions with actors to identify opportunities, sources of productive and decent employment and the form of strategies that promote job creation and decent incomes along the fish value chain. In this regard, **the Economic Policy Research Centre (EPRC)** organised a half-day town hall Baraza for actors in the fishing sector to discuss, share evidence and ideas on how to productively engage and encourage youth and women to invest in the fish value chain. The output from the dialogue was part of the **African Policy Dialogues (APD) under the Inclusive Development (INCLUDE)** project on “*Creating Productive and decent work for youth and women in Uganda through Agro Industrialisation*”

Therefore, the specific objectives of the Town Hall Baraza were to: promote and create awareness on the use of the AGI approach as a means of creating productive and decent jobs; explore the type of enterprises that should be prioritised in the fish value chain. How many jobs are they capable of creating? What skills are required? Are they available or not? Get ideas on what specifically the government and private sector should do to effectively operationalize the fish value chain for AGI as a means for creating productive and decent work for youth and women; and create a knowledge sharing platform of sharing what works and does not work among fishing communities and technocrats.

The Baraza was attended by 31 different participants and stakeholders in the fishing industry. Participants comprised of the fishing communities and associations from Jinja, Buikwe, Mayuge and Namayingo districts; private sector (fish processing factories; Nyanza Perch Ltd), and MDAs such as NAFFIRI and Local Governments (Fisheries Departments from Jinja and Buikwe). The Baraza occurred on 14 December, 2020 at Source of the Nile Hotel, Jinja District

## Welcoming and Opening Remarks

**Mrs. Elizabeth Birabwa Aliro: Programmes Manager, Event Moderator**

Ms. Elizabeth Birabwa Aliro, the event moderator introduced herself as the Programmes Manager at the Economic Policy Research Centre (EPRC) and then welcomed everyone to the dialogue. All the participants introduced themselves thereafter. While opening the dialogue, Ms. Birabwa emphasised that the reason for the Baraza was to share ideas on the fish value chains and identify potential job opportunities around therein as well as challenges prevailing. She also recapped the day's program (see Annex 1). She then invited Dr. Swaibu Mbowe a Senior Research Fellow at the Economic Policy Research Centre (EPRC) to officially open the dialogue on behalf of EPRC'S Executive Director.



In his opening remarks, Dr. Swaibu Mbowe said that he was representing the Executive Director of EPRC and urged all participants to be free as the session was to be an interactive one. He further said that EPRC is an independent research centre located within Makerere University that has researched the fish value chain extensively among the AGI prioritized sectors. He then officially opened the dialogue.

## Open discussion

**Moderators: Dr Swaibu Mbowe and Ms. Elizabeth Birabwa Aliro**

Participants suggested that due to the peculiarities unique to fish species the discussion would be best conducted by fish type, which was agreed upon by consensus. Below is a synthesis of the Town Hall discussions and deliberations by value chain.



## Silver fish (Mukene)

Table 1: Summary of Silver fish baraza discussions

Function	Gender participation	Age group	Skills required	Other (Reasons)
Fishing	97% men against 3% women	18 to 35 years	None	Highly labour intensive and hard (physical strength) labour needed. Hence mainly male youth are involved. In addition, it is considered a cultural taboo for women to be out on the lake at night.
Carrying from boat to weighing	Mainly Male youth	18-35 years	None	Always those who carry from the boat do weighing as well.
Trading (fresh)	is 97% women against 3% for men	18 years and above	Grading skills	Skills are gained overtime through practice on the job.
Sun drying	Majorly undertaken by women and young girls	18 years and above but also child labour (girls mainly)	Handling, salting, mixing, and sorting	This takes 1 day with good weather. Lack of modern drying technologies during rainy season compromises the quality leading to enormous losses.
Selling to traders and processors	Men and a few women		Business skills such as marketing and recording keeping	It involves a lot of haggling.
Processing (Value addition)				
<i>Deep frying</i>	90% of women and male youth		Handling and salting as a preservative. Use of jerry cans to store while on the lake comprises the quality	Mukene is deep fried as a snack using only first grade (the best quality) which is very expensive due to low supply. Better technology required to preserve the mukene other than deep frying.
<i>Packaging</i>	Women and youth		Gain packaging skills and engagement in the making of better packaging materials.	
<i>Milling</i>	Women			
<i>Marketing</i>	Women		Marketing	Demand and market for Mukene is high, but the continuous adulteration and mishandling has affected the market. They suggested that a supervisory role for quality assurance is needed. They further urged that demonstrations for local processors in different places in terms of technology are also needed as well as the necessary infrastructure.

According to Ms. Peris Logose from Kiyindi Women Fish Processors Association “a Kilogram pack of Mukene snack goes for UGX15,000 whereas the normal quality fetches between UGX6,000 to UGX7,000”.

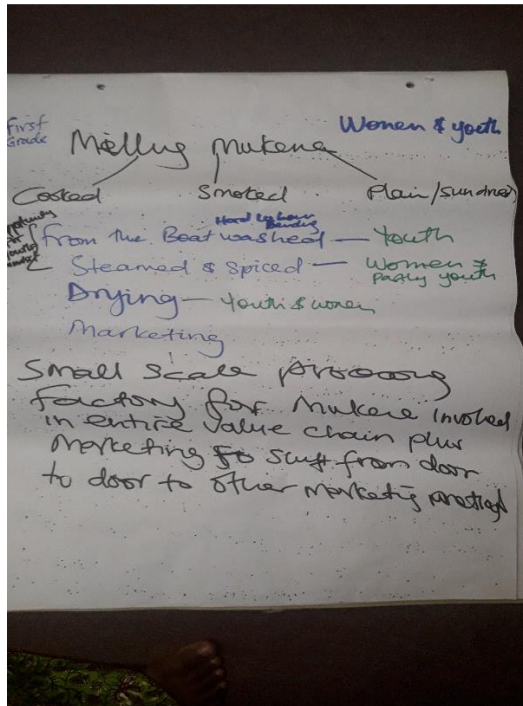


Plate 1: Milling Mukene illustration

More discussions on the milling indicate that this is for first grade Silver fish only. It involves cooked, smoked and plain (sundried Mukene)-Plate 1. From the boat it is washed mainly by the youth, it is then steamed and spiced by mainly women and youth, dried (youth and women) before it is marketed. Small-scale processing factories for Mukene are involved in the entire value chain plus marketing e.g. from door to door and other marketing methods are key at this stage.

### Challenges and opportunities

Participants agreed that there are several opportunities for the youth at this stage but the main problem hindering their full engagement is the negative mindset towards such work that is prevailing among most of them. Those involved in Silver fish value chain have made it a habit to mix sand (soil) with Mukene in a bid to gain more kilograms. Participants agreed that it has greatly affected the quality and created mistrust between sellers and buyers of Mukene. They said that this is due to lack of supervision from quality controllers such as the Uganda National Bureau of Standards (UNBS).

It was noted that skills and expertise is much needed in almost all the value chain stages. Participants said that in fishing, there is a *Jamadaali* or *Madaali*. This is always an experienced man in fishing who is always above 30 years of age. To become a *Jamadaali* one has to have a strong passion for fishing and a strong heart. They sit at the back of the boat to man the whole process in the waters and they are also tasked with the responsibility of gathering fellow fishermen (always those below him) to sail on the waters at night. Some participants believed that anyone can be taught to become a *Jamadaali* whereas others disagreed, opining that it is a natural talent that comes with supernatural powers.

Potential income earner: Ms. Peris Logose from Kiyindi Women Fish Processors Association said that “They do also export their Mukene produce to countries like UAE specifically the city of Dubai; Kenya, and

*Rwanda. She said that the major hindrance is the fact that UNBS has not yet certified their products because they do not have the needed infrastructure."*

## Nile Perch (Mpuuta)

Table 2 below summaries issues from the baraza with regard to the Nile Perch value chain

Table 2: Summary of Nile Perch value chain participation discussions

Function	Gender participation	Age group	Skills required	Other (activities)
Fishing and storage while on water	Male youth (70%) and experienced older men (30%).		Physical strength/hard labour, boat riding, net setting, hooking, ability to identify the fish nest (Kibikiro), net retrieving.	Proper net retrieving saves time and avoids fish spoilage. Most skills do not need to go to school for and are gained overtime through practice.
Weighing and icing	Male youth and men	18 years and above	No special skills required	Sharing of fish catch and proceeds; grading by the fish inspectors to ensure quality. The stage also involves grading by the fish inspectors to ensure quality.
Offloading (from the boat), sorting, weighing and transportation	Male youth	18-35 years	Level grading according to size and weight (in Kgs)	Fish weighing 1kg to 4Kgs is always sorted in one category and that which weighs 5kg and above is also categorized differently.
Selling to traders and processors	Women			Fish not taken to the factory is sold to women processors/groups. dealing in the Fish maw (nnuuni/swim bladder) is also sold here
Processing (Value addition) at the factory			Grading and quality assurance	Fish inspectors to ensure quality assurance
<i>Off-loading from the vans</i>	Male youth		washed, sorted and graded	
<i>Processing section</i>	Mainly male youth (70% males and 30% females)		Filleters, skimmers and packaging	Trimming, shaping and packing is commonly done by females
<i>Packaging, Loading and offloading and transportation</i>	men especially male youth	youth	Nothing special as these can be acquired on the job.	Processed fish is then loaded into trucks for export by men.





Plate2: Moderating session and discussions, Photo by EPRC

Discussions with participants revealed a need for technology to ease the hard labour at the fishing stage of the Nile Perch value chain which would encourage even more women to participate. Fishing equipment such as Ridge boats that ensure proper balance in water were suggested as an alternative that can attract women at this stage. However, it was noted that such boats are quite expensive costing between UGX40m-UGX60m each.

Cultural beliefs (*participants said that Grandpa (Jjajja) Mukasa who is the god of the waters, doesn't allow Women into the waters*) and mindset problems were noted as another hindrance of women participation at the fishing stage. The fact that Nile Perch is always caught at night further makes it hard for most women to engage.

Immediately after securing their catch, the fishermen store the fish in ice as a form of preservation while still on the lake. Some can spend days in the waters before docking back to the landing sites while collecting from different sites whereas others sail daily back to the landing sites. For those that are out on the lake for days, proper preservation of the fish is critical.

In addition to Table 2 narrative, participants noted that there are different modalities of sharing at the weighing phase involved for example, if a fish is priced at UGX20,000 a consensus can be reached between the fisherman and the *boat owner* to share UGX10,000 each on a per fish basis. The fisherman can either be given money or actual fish that is equivalent to that amount.

Owners of fleets of boats always have a big carrier boat that collects the fish catch from the many small boats. The boat can stay in water for 2-3days depending on the harvest before docking back) and later brings it to the landing site to sort for local consumption as well as export. During the weighing phase, whatever remains is always bought by women processors. There is also dealing in the fish maw (*nnuuni/swim bladder*) at this stage.

Gender participation at the processing stage which takes place at the factory is mixed. While the male youth offload, wash, sort and carry the fish for weighing, women majorly trim, shape and pack due to the level of patience and attention to detail the stage requires. In addition, at this stage has filleters and skimmers mainly performed by male youth (70% males and 30% females). The chilling room for storage is managed by men because the temperatures are always very low and unfavorable for women. Skills in filleting are needed at the factory stage and they are always



acquired on job. Most of the above activities need physical fitness and energy and thus for the high involvement of male youth. Ability to extract the fish maw from the fish is a skill that is also necessary at this stage

### ***Challenges and opportunities***

The participants shared that the fish maw drives the price of Nile Perch fish since a kilogram of the maw fetches a far higher price than a kilogram of the fish itself. This maw is estimated to collect between UGX900,000 to over UGX1 million. It was noted that the fish maw price has affected the social dimensions like education where children have abandoned school to engage in its trade. They highlighted that since the trade in fish maw is new to most Ugandans, there is still no law governing the business. Therefore, there is an opportunity for the youth in the fish maw business, although it needs organization and the youth need to acquire the necessary skills in order to engage fully. Moreover, the full range of products that can be extracted from the fish maw have not been fully explored or understood locally.

They further said that the fish maw does not have a clear market price, therefore, the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF) needs to regulate the price such that fishermen are not cheated by the buyers. The Nile Perch (*Mpuuta*) and fish maw (*nnuuni*) are mainly exported by Chinese residents to China. They use middlemen and do not buy directly from the fishermen.

The women are well engaged in the trade of fish byproducts such as fish skin, fats, the carcass and the red meat from the carcass. There is an opportunity of investing in the fish skin, oil production from the fats, baby food and animal feeds from the red meat from the carcass. In addition, smoking too provides job opportunities among the youth and women. However, there is a challenge of lack of capital, because engaging in the fish byproducts business requires about 10 million Ugandan shillings to acquire a tender with the fish factory that supplies the different byproducts. Participants suggested that a factory for fish maw is needed. They further emphasized that the price of Nile Perch is determined by the grade or size of the fish maw.

### ***Tilapia (Ngege)***

The participants noted that the Tilapia value chain is more similar to that of the Nile Perch, except for the fact that Tilapia is not heavily associated with the fish maw extraction. The Tilapia fish maw is in a membrane form where as that of a Nile Perch attracts the most market because it is big, thick and fatty.

**Marketing:** Marketing of tilapia is different from that of Nile Perch. With the former, customers come from different areas (always urban areas) and fish (Tilapia) is sold through auctions. Women and men are all involved in the selling and buying of tilapia. The highest bidder takes the fish and there is no weighing. Tilapia is also sundried and majorly exported to Bambari and South-

Sudan. Some of it is smoked for the local and regional market i.e. D.R. Congo, Kenya and S. Sudan, whereas fried tilapia is mainly for local consumption.

### ***Various forms of Tilapia farming, challenges and opportunities***

#### **a) Cage farming**

The youth are more engaged in cage farming although they are always working for the cage owners (bosses). The youth offer labour which involves feeding the fish, grading, sampling and harvesting when the fish matures. Skills needed range from ability to interpret manuals, timing of feeding, temperature detection and weather monitoring. Therefore, youth need to be skilled on how to grow fish in a cage.

The challenges for the youth and women include among others; inadequate capital, lack of mentorship and training in the best practices, and lack of book keeping skills. Majority of the participants agreed that there needs to be a cooperative that can mentor youth in order to attract them to join the sector.

The riding of boats hampers most girls and women from engaging in cage fish business. The inputs are also very costly i.e. about UGX3 million for nets and other initial requirements minus the fish stock. The required fingerlings have to weigh about 75 grams, yet fingerlings are scarce. This means that there is potential of investing in fingerlings but a special hatchery and production is also costly for the local fishermen.

It was also noted that it requires high technical skills to manage a fingerling hatchery and cage farming in general. Furthermore, earning from cage fishing requires a lot of patience because it take about 10 months for the fish to mature and yet most youth are very impatient because they want quick money, and thus end up not venturing into cage fish farming. Those working for bosses are always paid a monthly salary that ranges between UGX200,000 to UGX500,000 per month for managing a cage that has about 5,000 fish. One person can manage 10 cages of 5,000 fish capacity per a cage.

Participants agreed that support from fisheries supervisors is key and needed to boost production of cage fish farming as well as investment in a one stop center for feeds, fingerlings and cages. The percentage of cage ownership is 98 percent men against 2 percent for women. Harvesting of fish from the cages happens only when the market has been identified and all price negotiations have been done. Buyers are always exporters to the regional market. A kilo of cage fish goes for UGX7000 to UGX10,000.

**Feed:** Concerning feeds for the fish cages, it was agreed that there is need for import substitution for feeds, because most feeds are still imported from abroad. Local capacity needs to be built in

making of fish feeds. There is an investment opportunity in feed manufacturing given that feeds are 70% of the input in the cage fish farming.

### **b) Fish Ponds**

Participants said that the difference between cage fish farming and fish ponds is that fish ponds are dug on the mainland where as fish cages are located in the lake. In cases where one does not own land, there are opportunities to rent this land. However, the cost of renting might be too high hence deterring the youth and women.

### **Priority areas as suggested by the Baraza Participants**

Following the discussion, it was suggested that the following areas among others be priorities in order to enhance the fish value chain and create decent work for youth and women in Uganda:

- i) Training of the youth and women in group dynamics.
- ii) Training the youth and women in fish farming techniques using local raw materials such as Mukene.
- iii) Promoting fish value addition using different techniques that support participation of women and youth. For example, cancer free smoke machines, solar tent driers for Mukene during bad weather.
- iv) Marketing skills. Training in communication skills plus practical exposure to marketing.
- v) Fish handling skills right from fishing on the waters to ensure quality fish that can fetch a high price on the market.
- vi) Licensing and organizing the fish maw traders into associations. In such clear associations an appropriate market for the fish maw should be set.
- vii) There is need to prioritize the fish byproducts that are always wasted. If well managed and value is added through factories, more jobs will be created.
- viii) There is need to segregate and understand each value chain for each fish species and lay emphasis on where gaps and opportunities are.
- ix) The fact that majority of the youth are interested in quick money, there is need for sensitization in order to change their mindset.
- x) To streamline the fish maw business, emphasis should be put on value addition. Generally, agro-industrialization should be embraced since it increases incomes and creates more jobs.
- xi) And finally, there is need to map all fish products to the market.

### **Final Comments from Panelists**

Panelist	Comments
Ms. Namulondo Sarah, the Principal Fisheries Officer, Jinja	Noted that cage farming is the way to go. She reiterated the fact that at each stage of cage farming there is a special skill required. She said that these skills are acquired through different

	ways like manuals and the youth need literacy skills to interpret and put them in practice. She further noted that the Department of Fisheries Resources (DFR) has embarked on drafting manuals to help in this regard.
Ms. Peris Logose, Founder, Kiyindi Women's Fish Processors Association	She suggested that new smoking technologies such as cancer free smoking kiln, solar tent driers for drying fish (Mukene) in bad weather should be availed by government. She further said that female youth should be trained in marketing of fish at all stages.
Mr. John Okello, HR Officer of Nyanza Perch Limited	He advised that fish handlers need to be organized to get market instead of using middlemen.

## Closing Remarks

**Dr. Winnie Nkalubo, Director, National Fisheries Resources Research Institute (NaFIRRI)**

The Director of NaFIRRI was invited to make her final remarks and to officially close the baraza. She noted that it is very crucial to look at fish value chains separately according to the fish type because each fish type has its uniqueness right from the preparation stage to the final marketing stage. In addition to the much needed value addition in order to earn more from fish, she hinted on the issue of mindset among the youth that needs to be dealt with amicably.



She thanked the organizers of the dialogue and urged all participants to share the information they had acquired from the discussions about the three fish value chains. She further thanked the participants for their active participation and contribution and urged the EPRC team to push the ideas discussed to policy makers.

## Annex

### Annex 1: Programme for the Baraza

#### Town Hall Baraza

**Theme:** Enhancing agro-industrial value chains for productive and decent work for youth and women in Uganda: A case of fish

**Date:** Monday 14<sup>th</sup>, December, 2020

**Venue:** Source of the Nile Hotel, Jinja

#### Program

Time	Activity	Responsible Person(s)
9:30-10:00am	Arrival and registration of participants	<b>Ms. Aida K. Nattabi and Ms. Rehema Kahunde</b>
10:00-10:20am	<b>Welcome remarks</b> (Purpose of the event and introductions)	<b>Ms. Elizabeth Birabwa Aliro</b> <b>Dr. Swaibu Mbowa</b> EPRC Session Moderators
10:20-10:50am	<b>Remarks:</b> Government intervention such as skilling, production (R & D) and marketing training in the fisheries sector; and other types of support to actors in the sector	<b>Ms. Namulondo Sarah</b> Principal Fisheries Officer, Jinja DLG
	<b>Remarks:</b> skills and qualifications required to join an association, training/skilling opportunities, and the age and gender dimensions	<b>Ms. Peris Logose,</b> Kiyindi Women's Fish Processors Association
	<b>Remarks:</b> issues related to skills, qualifications and training required for the value chain in industrial fish processing	<b>Mr. John Okello</b> HR Officer Nyanza Perch Limited
10:50-11:10am	<b>Tea break</b>	
11:10am-12:00pm	Open Discussion	Participants
	Theme: " <b>Supporting youth and women associations/groups to understand at what stage they are contributing to the fish value chains and what more is needed to be done reap higher benefits.</b> "  Women and youth in the fisheries sector will share real life experiences about working in the fish value chain	<b>Dr. Swaibu Mbowa</b> <b>Dr Madina M. Guloba</b> <b>Ms. Elizabeth Birabwa Aliro</b> Moderators
12:00-12:05pm	Wrap up and Closing remarks	
12:05-12:15pm	Group picture (SOPs will be observed)	<b>Mr. Alon Mwesigye</b> EPRC
12:15-12:45pm	Creating video content: video clips with participants	
12:45pm	<b>Lunch break, Networking and Departure</b>	

## Annex 2: List of participants

### List of participants

S/No	NAME	Institution	Contact Details
1.	Isabirye Solomon	Mafubira Youth Cage Farming	0783509076
2.	Katali James	DFO -Buikwe District	0772587760
3.	Athieno Deborah	Kilembe Fish Farmers	0754528468
4.	Okurut Ronald	Kilembe Fish Farmers	0753198753
5.	Caroline Night	Kisanja Women's Group	0752576254
6.	Swaibu Mbowe	EPRC	0773196544
7.	Auma Topista	Namayingo	0787751318
8.	Bwire Emmanuel	Kilembe Fish Farmers	0757463775
9.	Mudondo Justine	Kilembe Fish Farmers	0700703005
10.	Katongole Friday	Kilembe Fish Farmers	0753234931
11.	Ekoju Patrick	Kilembe Fish Farmers	0755126080/0784521714
12.	Muwaya Isaac	Kilembe Fish Farmers	0705795963
13.	Bahatu Ekizabeth	Kisangi Women's Group	0756484349
14.	Okello John	Nyanza Perch	0752557751
15.	Ssetuba Hamisi	Buikwe DLG	0752860763
16.	Naisobi Robina	Kiyindi	-
17.	Winnie Nkalubo	NaFIRRI	0772671216
18.	Namulondo Sarah	Jinja DLG	0704462701
19.	Logose Perus	Kiyindi	07852551623
20.	Natseba Nathan	Kiyindi	0753377161
21.	Mwanika Serio	Kiyindi	0752527135
22.	Nangobi Martha	Katosi	0772420480
23.	Namahonje Winnie N	Women of Hope Katosi	0787946689
24.	Kwebiiha Deborah	Masese	0708073173
25.	Nekesa Winfred	Bugembe	0774427039
26.	Mwendeze Margret	Bugembe	0751945464
27.	Alon Mwesiwa	EPRC	0784010803
28.	Dablin Mpuuga	EPRC	0784330745
29.	Rehema Kahunde	EPRC	0773285495
30.	Birabwa Elizabeth	EPRC	0772589002
31.	Mayende Steven	Buhemba S/C Fish Cages	0773853322/0701431519
32.	Nabwire Josephine	Buhemba S/C Fish Cages	0757331523
33.	Kwagala Madina	Buhemba S/C Fish Cages	0784080775
34.	Aida K. Nattabi	EPRC	0788444841
35.	Philip Wafula	Daily Monitor	0782787199
36.	Bikala Moses	New Vision	0776416852
37.	Reacheal Wambuzi	Uganda Radio Network (URN)	0781807518



*Photo by EPRC, December 14, 2020 at Nile Resort Hotel, Jinja District*