



POLICY BRIEF

INCREASING THE CONTRIBUTION OF FISH MAWS TO NATIONAL DEVELOPMENT AND LIVELIHOODS OF LVFO MEMBER STATES

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This policy brief is aimed to:

- Highlight the main features of Nile perch maw value chain focusing on operations during extraction, trading and processing and linkages to development
- Describe the contribution of Nile perch maw trade to the economy and peoples' livelihoods
- Identify major issues affecting the extraction, trading and processing of Nile Perch maws and their potential impact
- Offer recommendations to enhance the contribution of Nile perch maws to the national development and livelihoods

1.0 Context and Scope (Fish maws and development)

Nile perch maw is one of the major internationally traded fish-derived products. The swim bladder which used to be thrown away as waste now anchors lucrative maw businesses in the region with prime markets in China and Far East countries. The Nile perch maw makes a large proportion of maw products traded in the Asian markets. In 2005-2018 between 3144-3882 metric tons of fish maws worth USD 264-394 million were imported in Hong Kong, a major market for fish maws in the world, of which more than 50% came from the East Africa, Brazil, India and Vietnam (De Mitcheson et al, 2019). The total maw exports from the region in 2018 were 1,747 metric tons worth USD 124 million indicating region's contribution of 31% to the worlds' largest fish maw market. Available data for 2017 and 2018 indicate high growth in maw exports for the LVFO member states (Table 1)



Table 1: Maw exports from Uganda, Kenya and Tanzania

Country		2014	2015	2016	2017	2018	2019
Uganda	Quantity (tons)	507.82	491.55	352.24	488.33	531.56	740.00
	Value (USD)	35,499,150	27,441,000	31,573,230	48,832,490	52,904,360	76,300,000
Kenya	Quantity (tons)	-	-	63	111.3	-	62.00
	Value (USD)	-	-	5,600,000	8,500,000	-	3,720,841
Tanzania	Quantity (tons)	-	-	-	403.7	831.26	838.19
	Value (USD)				27,274,132.52	86,834,574.86	77,971,835.11

Fish maw exports can strengthen the incomes of value chain actors involved in extraction, trading and processing; and employment of local people involved in fish and maw supply chains. There are several opportunities that can be tapped by the regional governments and maw business actors to increase maw exports (Box 1).

However, the policy and regulatory frameworks to support extraction, trading and processing of maws in the region are very weak and not streamlined to keep pace with the rapidly growing and evolving

maw trade at national, regional and international levels, which undermines the contribution of fish maws to national development and livelihoods. Trade in Nile perch maws like other fish and **fishery** products is affected by stringent food safety and quality requirements. Also weak governance of the value chain for fish maws amidst expanding trade could lead to overexploitation of Nile perch stocks which will diminish the raw material fish needed to sustain the equally important fish processing industry.

Box 1: The opportunities the LVFO Member Countries have to expand and benefit Nile perch maw trade

1. Unsustainable supply of “sea treasures “and delicacies in the cuisines of Chinese and those of communities of East Asian Countries (i.e. Abalone – such as mollusk, clams and Oysters; sea cucumber; shark fins; and fish maws) where fish maws are now ranked number four of the sea treasures; is driving upwards the demand for the fish maws
2. The depletion of fish maw source-species such as Tataoba in the Gulf of California, Chinese Bahaba from the South East China Coast, and other traditional Asian Species like the Croaker and Sturgeon has increased demand for large- sized maw substitutes such as Nile Perch Maw
3. International demand for maw from fish species such as Nile perch and Catfishes offers opportunity to the regional countries to massively produce such species in aquaculture to increase and sustain maw exports
4. The international prices for Nile perch maw quoted at USD 1000-5000 are good compared to international average prices for fish maws quoted at USD 450-1000 which is key to attracting investments
5. The many uses of fish maws which range from being used in production of traditional cuisines, to being used in producing health and nutritional products, and serving as raw materials in several industries (including Pharmaceutical and bio packaging industries, breweries and wineries, manufacturing of surgical stitches/threads, and manufacturing of certain car and aircraft parts) raises the possibility of attracting investors to manufacture fish maw derived products in the region, which would contribute to increased incomes and employment leading to enhanced peoples’ livelihoods
6. Before Nile perch maw gained international demand, there were no traditional uses of the swim bladder in the region and therefore they were discarded as waste by the fish processors sometimes resulting in environmental and public health challenges; the current maw demand is an opportunity to optimize the incomes from Nile perch resource and safe-guarding the environment
7. There are several maw processing companies that have establish factories in the regional countries that process and export maw to China and the Far East Destinations
8. There is already an existing quality infrastructure supporting the fish exports to prime markets such as the European Union which meets the stringent international food safety and quality standards. This can be utilized to develop an equally complying maw industry and exports.

2.0 Policy Alternatives (Making maw Trade contribute to National Development)

There are three levels of interventions needed in the region to enhance the contribution of Nile perch maw trade to national development and minimize negative impacts. They cover: Interventions to comply with international trade requirements, regional harmonization of regulations and standards, improving the policy and regulatory interventions at national level.

These interventions would lead to tangible benefits to the respective regional economies in form of wealth, employment, incomes and food security. However, there is also need for policy moderation to avoid vulnerability of marginalized groups (Fig 1).

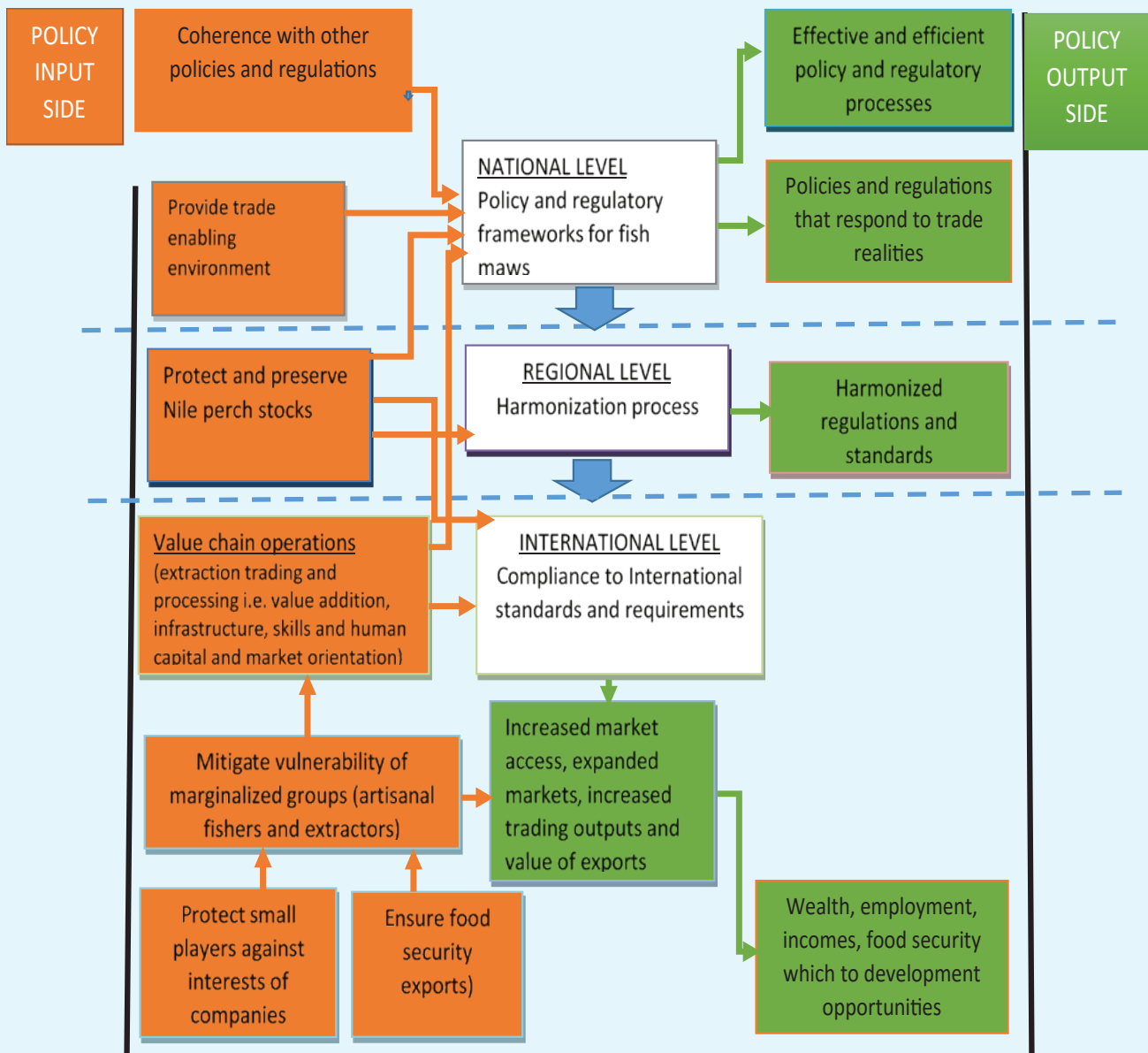


Figure 1: Policy framework for making maw trade contribute to national development and livelihoods

2.1 Nile perch maw trade in East Africa

In East Africa, maws are obtained by drying swim bladders extracted from Nile perch. The maws have attracted investors mainly from China, who have set up factories to process and export maw to Hong Kong. The investors work with local traders and agents to procure fresh swim bladders extracted by artisanal fish handlers operating at landing sites, markets and other fish handling areas. They also purchase most of the swim bladders from fish processing factories which receive most of the Nile perch (fish) landed.

2.2 Existing regulatory framework relating to extraction, processing and trading in maw

Although there is growing maw trade in East Africa, the existing physical and quality infrastructure is still very weak to support sustainable production and trade in quality maw products. The fishing regulations and those related to handling, processing and trade of fish and fishery products are the main requirements enforced by the competent authorities in the region. The three LVFO member states implement these regulations in different scopes and scale which affects the manner in which the maw is extracted, processed and traded across the regional borders. Whereas Tanzania and Uganda enforce regulations relating to trading of maw through issuance of a specific maw trade license, in Kenya, fish maw trade is licensed under one general license for fish and fishery products (Bagumire et al, 2018). The ambiguity in regulations and enforcement mechanisms coupled with porous nature of the regional borders encourage smuggling of maws.

The differences in approach to regulate maw value chain, and poor physical and quality infrastructure affect growth, revenues and sustainability of maw businesses in the region.

2.3 State of Extraction and handling of Nile perch maw in East Africa

Basing on the findings of recent study by Bagumire et al, (2018), apart from maws that are extracted from the licensed factories and a few licensed fish-gutting areas which are inspected by the competent authorities, a significant portion of the maws is extracted in un-gazetted places that do not meet requirements for producing safe and quality products. In some areas, the conditions under which maws are extracted do not allow observance of good hygiene and food safety practices.

2.4 State of Processing and Handling of Nile perch maw in East Africa

The fish maws are processed by both artisanal and factory processors. However, most artisanal maw processors are not licensed and operate illegally. The artisanal maw extraction and processing is still rudimentary as most of the actors are not using the basic hygiene and food safety principles, or use of the appropriate equipment and recommended techniques. The staff are not trained in hygiene, food safety or the appropriate processing techniques. There are no proper facilities for handling, drying, storage and packaging of the dried maw (Bagumire et al, 2018). The inappropriate processing, poor handling, drying, storage, packing and packaging techniques and practices taint the maw with chemical, microbial and physical contaminants that affect safety and quality of maw.

Unlike the artisanal maw processors, the maw factory processors are registered by the Ministries responsible for Fisheries Management and pay operating licenses and taxes in accordance to the National Legislations. However, the factory maw processing is undertaken in small cottage-like industry basically made of open yards designated for receiving, processing by drying and packing maws. Most of the operating

yards are located in compounds with no basic infrastructure and facilities for handling and processing large quantities of maw. Some of the staff employed by the factories are not trained in hygiene and food safety practices. In addition to the weaknesses in the extraction and processing operations, maw trade is faced with a number of challenges which could undermine the potential of regional countries to enjoy the associated economic benefits **(Box 2)**

2.5 Increasing the contribution of fish maws to national development and livelihoods

There are six policy areas where interventions are required to streamline the extraction, trading and processing to comply with the international requirements and promote equitable maw businesses for increased wealth creation, employment, incomes and food security leading

Box 2: The main challenges affecting maw trade and industry

1. Lack of direct access to the market in the mainland China leading to exporters selling maw through middle men in Hong Kong at low prices
2. Inequitable distribution of proceeds from maw among the value chain actors, where extraction and processing factories which handle larger volumes of maws are dominated by foreign investors
3. Poor handling of fish from which maw is extracted which affects quality and prices
4. Ineffective facilities and poor handling practices for extraction, handling and processing of maw which render maw product unsafe for human consumption and lower quality hence affecting the prices
5. Lack of harmonization of official controls among the three riparian states which promotes smuggling and illegal trade in maw hence resulting in illegal, unreported and unregulated (IUU) maw, which could encourage unsustainable fishing practices
6. Limited investments in extraction, trading and processing of maws for export
7. Lack of reliable data regarding the extraction, trading and processing operations

to more development opportunities. They include:

- Strengthening official controls (inspection, sampling, testing and certification) of fish maws and ensure compliance to the regulations and standards for processing and placing on market of Nile Perch maw
- Providing technical guidance to maw business operators on best practices for handling, processing, marketing and trade of fish maws required to ensure minimal contamination and or loss of quality
- Streamlining the flow of activities and providing direct support to value chain actors to comply with minimum standards for the facilities and the required measures during extraction, processing or handling maws in the supply chain
- Support interventions aimed to ensure rationalization and distribution of benefits from fish maws to trickle down to all actors;

including tapping any available opportunities to expand benefits from fish and fishery products

- Ensure exports of fish maws are guaranteed by the competent authorities and therefore minimize and/or eliminate food safety and quality risks that may endanger the whole export industry with undesirable socio-economic consequences, in case the products are rejected by the prime market
- Streamlining the trading of fish maw for nationally, regionally and internationally marketed products through registration, licensing and monitoring of all operators

3.0 Key Recommendations

In order to streamline the extraction, trading and processing of maws it is therefore necessary to develop regional guidelines to guide the national

competent authorities and other players on establishing adequate systems for ensuring proper governance and streamlining the extraction, trading and processing of fish maws. The guidelines will also help to harmonize legislations and streamlining activities in the fish maw chain at national level in the three riparian states. The guidelines should give guidance on the following specific areas:

- a) Developing specific customized national regulations to control the extraction, trading and processing of maws and to spell out the requirements for proper practices
- b) Requiring all artisanal maw extractors, collectors and traders to sell fresh maw to approved maw processing establishments
- c) Strengthening inspection and certification systems for maw extraction, trading and processing establishments by among others; legally empowering mandated institutions and giving them adequate technical, administrative and financial capacity to undertake inspection and certification
- d) Negotiating a maw export protocol with the Peoples Republic of China to allow direct export of maws from the region to mainland China
- e) Sensitization and awareness creation of maw value chain actors on best practices related to safety, quality and techniques for extraction, handling and processing of maws

- f) Establishing and implementing effective traceability systems for maws
- g) Providing technical and financial assistance to local entrepreneurs who are interested to invest in maw processing and export businesses
- h) Attracting foreign direct investments in the manufacturing of intermediate and final products from maw and other value-added products of fish in the region
- i) Conducting research on maws of fish species available in the region to explore their commercial and industrial potential; and further research to confirm the right sizes of tradeable maws
- j) Harmonization of maw standards, documentation and approval requirements for maw trade at regional level; and standardizing applicable fees, levies and other charges paid by maw actors at national level
- k) Coordination of collection, storage and sharing of data on extraction, trading and processing of maws by the central government Competent Authorities and legally requiring maw value chain actors to provide data regularly to local / county/municipal government fisheries office.

Already a draft of the guidelines has been produced by the consultant with the participation of stakeholders and maw value chain actors in the three countries and is hereby included as Appendix 1 of this Policy brief.

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