

Fish Value Chain in Somalia:

Project for the Icelandic Foreign Ministry (IFM) and the World Bank (WB)

in Support of the Somali Sustainable Fisheries Development Project Badmaal



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Contents

Introduction	3
Training course (workshop).....	3
The data collection	4
Main findings	5
Authorities and Cooperatives	5
Fisherfolks	6
Markets	7
Traders.....	9
Consumers	9
Producers	10
Conclusion and recommendations	11

Introduction

Agreement was signed between the Ministry for Foreign Affairs in Iceland and the company Matis to conduct a value chain assessment for the fisheries in Somalia. The agreement is part of a MoU between the Ministry for Foreign Affairs in Iceland and the World Bank for technical assistance for Fisheries.

Due to security constraints in Somalia, the World Bank (WB) furthermore signed an agreement with a Somali company, the *Resilient Fisheries Initiative (RFI)*, to collect data at selected locations across 5 states and Banaadir.

The WB in cooperation with the Federal and State governments selected six locations for value chain assessment with recommendation for improvements based on value chain screening. Locations for data collection were Mogadishu (BANA), Barawa (SW), Kismayo (JL), Elma'an/Ceel Macaan (HSH) Hobyo (GM), and Garaad (PL) with RFI to collect data at each location.

Training course (workshop)

To prepare for the data collection, RFI selected 6 data collectors to participate in a workshop that was conducted at the Giraffe Beach Hotel, in Dar es Salaam, Tanzania under the supervision of Matis specialists, Gunnar Thordarson and Margeir Gissurarson. The workshop was held from 1st of December to 5th of December 2024. The main goal of the workshop was to train the data collector and to finalize the questionnaire for the project.

From Somali employees of RFI and additionally government officials attended:

Trainees of data collectors in Dar es Salaam:

- Abdullahi Ahmed Mohamud
- Abdinasir Abdulle Mohamed
- Ismail Omar Weheliye
- Hamdi Mahamed Hussein
- Daud Mohamed Hassan
- Abdiwali Nur Farah

Additionally, from authority of Somalia:

- Mr. James Kamenju Wakiru, technical advisor
- Jama Mohamed, MFBE

- Abdirizak Abdurahim, MFBE
- Khadija Abdisalar, MFBE

The data collection

Data was collected from each landing site, where Authorities and Cooperatives, Marketing personnel, fishers, consumers and producers within the fish industry were interviewed using standardized questions.

Each group of beneficiaries has their own questionnaire.

1. Fisherfolk

At least 10 fisherfolk questioned at each landing side

2. Traders

At least 3 fishmongers, 3 traders and 3 wholesalers operating in or near the landing site were questioned.

- Fish mongers
- Small trader
- Wholesaler

3. Market

One focus group discussion with five participants (market manager/admin, Leader of traders, leader of beach management unit, etc.) from the local market.

- Local market

4. Production

Question 4 artisanal processing personnel. If possible, from different processing method (salting/drying – smoking) were surveyed.

The questionnaire was applied to the manager and 3 people working at the commercial processing facility. More people were surveyed If there are more than one commercial processing at the landing side.

- Traditional or artisanal processing
- Commercial Processing

5. Government Authorities, institutions, business, and worker membership organization, NGO

Two forms: 1 for local government representatives and 1 for state-level authorities overseeing fisheries operations were used. At least one from Cooperatives and one from NGO.

- legislature (making the rules),
- the executive (implementing the rules)
- the judiciary (monitoring the conformance to rules)
- Cooperatives
- NGO

6. Consumer

7. Five forms targeted at buyers (Household, restaurants or key consumer outlets) located in the area were used.

Main findings

Authorities and Cooperatives

The local authorities are operating half of the markets under this study and the other half are operated by the cooperatives, except one market that is operated by a private entity. Both local authorities and cooperatives are charging operating fees from trader to use the market. This fee is meant to cover the running cost of the market. Fish safety control and some fish inspections were only observed at one of the markets. One market provides drinking water, toilets, ice supply, electricity and weather warnings, Less than half are providing potable water, one is providing toilet and five are providing weather warnings.

Regulatory framework for fisheries, fishing activities and sector development is set by the Federal Government, but the implementation is arranged between the Federal and State governments. Most interviewers saw opportunities in improved training, new technology, better handling of fish, better chilling and better hygiene. Interviewers see the role of government as: Setting regulations - Law enforcement - Applying programs for fisheries - providing market information.

There is a general belief that there should be collaboration between public and private sectors in regard to electricity, communication, networks, weather warning and landing sites. All landing sites had Cooperatives, from 20 to 290 members, and from 10 to 500 boats each. Cooperatives are supporting fishers by conducting search and rescue operation when fishers get lost at sea. They furthermore provide compensation to families of lost fishers. The cooperatives also provide information from other markets and traders to inform prices, provide social support and advocate for fishers.

Fisherfolks

Fishing operation

As expected, the majority of the fishers are male, 93% of interviewed, but 7% were female. 57% were owners of vessels and 43% crewmembers. Most of them were fishing on a skiff, 40%, 30% were fishing on canoe, 28% on volve and 1% on other types. The size of these vessels range from 4 to 12 meters long, the canoe is the smallest but volve is the largest, most of the boats were operated with outboard motors. Fishing gears used include gillnets (85%), longline (62%), handline (60%) but only 2% used something else, like trawls.

More than a third of the fishers go fishing every day or 37%, 25% go fishing 6 times a week, 25% go fishing 4-5 times a week, but only 10% go fishing less than that. A normal fishing trip is departing early morning, around 6am, and returning in the afternoon around 2pm. But 18% are fishing overnight, going in the evening and landing in the morning. Most of the fishers say they go out to 11-16 miles (38%), 30% go more than 20 miles, and 23% go 16-20 miles and 5% go less than 10 miles. Tuna is the most common fish caught, 87% of fishers are targeting it, 78% tuna and 38 are targeting lobster. Fishers are going fishing to the high sea, up to 20 miles on small boats with outboard motors. For security they go fishing as a fleet of fishing boats, so if something happens, they can help each other. Phone connection is only available for one or two kilometers from the beach, so there is no communication from the fleet to ashore.

The average catch for a trip is composed of tuna at around 100 kg, 70 kg of demersal and 50 kg of lobster. Most of the fishers are paid by share of catch, but a fifth of the fishers have fixed salary and fifth are owners of the vessel.

Most fishers experience spoiled fish, almost 90%. Main reason is lack of ice, and the fish is exposed to the sun for too long a time. There is no ice on board but over 70 % of the boats are using plastic containers.

Most fishers say they are bleeding and gutting the fish at the landing sites. Only half of them are weighing the fish before selling it to fishmongers. Almost 80 % claim that fishing has been declining for the last five years.

More than half of owners have debt on their boats, owing to service (fuel) banks and coop's.

Many fishers see opportunities in training programs, 60%, but 70% in using new techniques and 60% in better handling and 60% in chilling and handling. Over 90% see opportunities in new markets but need bigger vessels to service them.

Infrastructure

No jetty was noted at the Somalia landing sites surveyed. 60% have access to electricity and same to clean water supply. Only 3% have access to cold storage facilities and 92% have access to all whether roads.

Access to Service

Most fishers (83%) do not have access to fishing gear facilities and 42% have access to a fuel supply, and 35% have access to engine repair services but 90% don't have access to ice-making facilities.

Less than half of fishers surveyed mentioned factories buying fish directly from the landing site for processing.

Social matters

Most of the fishers indicated they are fishing for 12 months (57%). 32% are fishing for 6 – 8 months and 5% less than 6 months. Almost 90% are members of cooperatives and most of them pay membership by providing a share of the fish value landed. Almost half of fishers access training programs from cooperatives, 17% are expecting advocacy and compensation to families if something happened to them. Fewer members are expecting higher prices or social support. Three quarters of them are secure with their employment and the same number are satisfied with their working conditions. More than half of fishers do not have access to weather forecast information.

Markets

Only one of the six markets across the surveyed sites was owned by private traders, but the rest are managed by the community or cooperatives. At most sites processing is available, by filleting and de-scaling the fish. The frames and offal's are discharged or disposed of, but some is used as a bait. The markets normally have a stand and roof but only a few have a drainage system or solid floor.

The staff at the markets are a mix of male and female, but normally more males. Fishers, fishmongers, and cooperatives are selling fish at the market and are paying fee to cover the running cost. Consumer, small traders, local markets, and wholesalers are purchasing fish. Processors are not buying fish at the market but only directly from fishers.

Some markets are providing water, but the norm is no service of fresh water, electricity, or water for cleaning. Most interviewees believe there is an opportunity to increase the value of fish by providing better facilities, new technologies, better handling of fish, chilling, and better hygiene.

Fish handlers sometimes weigh the fish when purchasing it, and when selling it, but some don't. They only use a visual measurement when handling it. Everybody can purchase fish at the fish market. Supply and demand are seasonal.

Most marketing people see an opportunity to sell fish on the domestic market, but some are concentrating on the local market. At two markets the staff believed in the export market. Most of the fish market staff believe investment is an opportunity for the future, but also

better facilities and trained workers are needed. Most of them considered logistics as the main problem for the fish market. They considered hygiene around the market poor but for some it was average!

The market staff believed the reason for fish loss (damaged fish) was fish unsold at the end of the day, and there was no access to ice for preservation. Transport delay is also a problem and is causing fish loss. Most of the marketing people say this fish is sold the day after for a lower price, but some are discharging it or using it for bait or to feed the dogs. No one is measuring temperature in the fish, throughout the value chain.

The most important infrastructure improvements needed in the markets are better roofing, to protect the fish from the sun, sanitation and better stands for the fish being sold. Some mentioned the lack of trained staff as a problem. They believe there is a need for better roads, investment in better (bigger) boats, cold storage and general facilities and infrastructure for the market.

Market people also mention the need for food safety and better handling, like processing skills and technological skills related to the sector. Poor roads are one of the main problems causing delay and fish damage. Also, the pick-up trucks are shared by many traders, causing delays in delivery. Bad weather is also causing delays resulting in spoilage, and security checks also cause delays on the way.

Most marketing personnel consider the auction facilities poor. Electricity is not available in most markets, but some have 24-hour supplies, and some have it sometimes. None of the market operators have a connection to electricity. Most markets must rely on ice from outside the market and consider the supply inadequate. Sanitation is inadequate and, in most markets, workers must use private toilets close to the market.

Price of ice is around \$ 1,5 – 2 pr/kg but can be up to \$ 3 pr/kg. The main reason for the high cost of ice is lack of electricity at the landing side and with a long distance to the ice production.

Some of the market staff believe the government is supporting the market by security, training programs and projects. Some though believe there is no support. They believe regulation enforcement is good, some considered it average but others it is poor. Most believe the cooperation between public and private are average, but others are poor. Most of them believe the cooperative are leading the value chain, but one group mention fishmonger. Half of them considered their job security as good, but the other half it is bad.

The market is determining the price by supply and demand. Most of the markets sell fish locally, but some also sell domestically. Pick-ups cars are most common, but motorbikes and tuk-tuk are also used for transportation of fish.

Traders are the most common sources for market prices knowledge.

Traders

Just under 70% of the traders were males, 90 of them were fishmongers, over half were small traders, over 20% sell in local markets and 20% are wholesalers. Most of them purchase their fish from fishers, over 20% from local markets and 20% from wholesalers.

Around 70% claim they weigh the fish when buying it, fewer when selling it. Most of them, 70%, are selling to consumers, 30% to small traders and over 30% to retailers and 20% to restaurants. All of them are handling tuna, over 60% demersal and third are handling lobster. They all believe quality affects the sale price. Almost 80% are disposing of spoiled fish.

Half of traders are icing the fish, but less than 40% are using mechanical cooling. The traders normally have employees, average two male and one female. Half of them work seven days a week, over 40% six days but only 4% five days a week.

Around 90% have problems with spoiled fish and post-harvest loss. The main cause of spoiling is storing and chilling. Then it is a lack of market and bad planning as well as transport. Most of the leftover products are sold the next day for a lower price. Quarter of the traders donate lower quality fish to the local community or dispose of it. Some significant amounts of fish are left over every day on the market.

Infrastructure

Half of the traders consider access to electricity to be bad, but others it is fair or good. More than half have access to ice. Most of them have no access to toilets. More than half do not have tables or stands for trading the fish. Just under half have no or poor cleaning water. Two thirds don't have a roof to protect the fish from the sun and the same amount do not have a clean floor surface. Almost none have cleaning chemicals for washing.

Social matters

Two thirds of traders are members of cooperatives and paying fees to them. Most benefits are from training programs, some mentions advocacy and representation, and market relationships and only a few finances.

Traders consider government support for ice facilities, roads and cold storage the most important matter. They consider market access and prices unstable. Training and capacity building is considered ok by half the traders, but the other half of them indicate it is poor. Some considers government support for financial assistance ok, but majority it is not available.

Consumers

Half of interviewees were male and half female. Almost 80% purchased their fish on the fish market, but 40% from traders, but only 13% direct from the boats. Almost everybody was looking for tuna, but more than half were also looking for demersal and 40% lobster when

asked about preference. 20% bought daily fish and almost half three times a week and over 30% bought fish twice a week or less. Almost 80% bought for households, 20% for restaurants and fewer for hotels. Most consumers said fish was always available, but thought prices were unstable.

Almost everybody purchased fish because it is healthy, 40% were buying for business and third because it is convenient to cook fish. Only 8% because it is cheap.

Asked about what improvements they would like to see in the fish market and the trading process, this was considered most important:

- Hygiene 80%
- Storage facility 80%
- Price stability 80%
- Use of ice 57%
- Quality control 83%

(possible to mark more than one category)

Producers

Producers interviewed were mostly involved in management but also owners, using traditional methods of processing. Majority of processing factories were privately owned, but one was operated by a cooperative.

Infrastructure

The majority of the interviewed experienced their factory facilities were acceptable. Only one had freezing facilities, no one had cold storage but two had chiller and four managers of them had neither. All but one had access to electricity and two to ice production, but four did not. Most experienced a lack of fresh water or did not have access to it, and no one had access to toilets. All experienced a need for improvements in cold storage, electricity, and sanitation and to modernize production facilities.

Production

Only two are filleting the fish and a few freezing it, but mostly icing is the production method. One is salting the fish.

Most producers process tuna, demersal and lobster. One is only processing lobster and one only demersal fish. One processor had 50 people working and processing 5.000 kg/day, but normal size is 5 to 15 workers doing less than 1000 kg/day.

All of the producers are buying fish from fishers but not purchasing from fishmongers or the markets. Fresh fish is the most important factor, but some mention cleanliness. They are disposing the by-products (heads, bones etc..), but some are giving them away. Their main concern is the quality of raw materials and production, but they claim to have their own quality standards.

Only a few are measuring temperature in the fish, when buying it or processing it. Some are exporting the product, and few are selling it domestically and one locally. Exporters are selling the product to Jordan, UAE and Yemen, and shipping it by air or cargo ships, but one is using a pick-up truck. They believe there are opportunities for export markets and domestic markets. To get better prices, they see upgrading in the quality of raw materials and products is the main concern, as well as a lack of trained workforce. This is needed to access new markets.

The majority consider the need for automation in the processing of fish as well as training and better handling and better chilling. Their main concern is quality, lack of government support and lack of capital.

Processors believe that hygiene is deficient, only two considered it as adequate. General trust seems to be with fishers, selling markets and customers.

Social matters

There is no government support. Most processors are members of an organization, their own or cooperatives, one mentioned an NGO. None of the processors are insured. Most of them have training but some processors have none. They rate enforcement and application of regulations poorly, with poor outcomes. They rate the public services badly. Trust within the value chain is acceptable. On average processors consider their business as doing badly.

Conclusion and recommendations

Discard or devaluation of fish

All throughout the value chain there is a challenge with spoiled and discarded fish. This is the main concern. Fisherfolks experience fish spoilage, mostly due to lack of ice and the fish is allowed to stand for too long time in the sun. Traders are experiencing fish spoilage, and that affects the selling price. This is mainly because of storage and chilling problems and lack of market. Chilling would solve that problem. Chilled fish would be 100% acceptable the day after if it were iced. Research on Nile perch from Lake Victoria has shown that the fish from warm water can be fresh for over 20 days if properly chilled and kept in ice. Therefore proper icing can open up access to higher paying markets.

Insufficient chilling is furthermore a food safety concern and especially for the tuna fisheries, as tuna produces the toxin histamine if bacteria is allowed to multiply. Histamine is a heat tolerant toxin, meaning that it will not even be deactivated by high heat like canning.

Infrastructure is also inadequate, there is a need for protection from the sun and stands, floors and toilets need to be upgraded for sanitation. Market people consider unsold fish and lack of ice or chilling their main challenge, and reason for spoilage and devaluation of fish. Consumers experience lack of hygiene, storage and facilities as a major concern.

Majority of traders are experiencing fish spoilage.

Cooperatives

Cooperatives are common throughout the value chain in Somalia. Strengthening and structuring them to increase value within the value chain is recommended. This could provide opportunities to achieve great success and value creation for their members. Cooperatives give opportunities to join forces to drive changes through maximizing value creation.

Training is a common concern throughout the VC. Cooperatives are the best entity to plan and execute training programs and to find the right person with knowledge to support trainings.

Infrastructure

The most important improvements in the fish markets are access to affordable ice, better facilities and general hygiene where fish is handled and sold. Poor roads are also a problem, causing delay and fish damage.

Producers experienced a lack of potable water or did not have access to it, and no one had access to toilets. All respondents experienced the need for improvements in cold storage, electricity, and sanitation and to modernize production facilities. Traders experienced a need for improvements in cold storage, electricity, sanitation and to modernize production facilities.

It should be considered that improving the facilities and upgrading them is only the first step. Maintaining the facilities and icemaking equipment in a sustainable manner can be a challenge and need to be considered from the very beginning.

Social matters

More than half of fisherfolks claim they don't have access to weather forecasts. Considering the small vessels, they use and go out to deep sea, this is dangerous. Most fishers are members of cooperatives and pay fees to them and benefiting from training programs and advocacy and representation. Fishers say cooperatives are providing search and rescue operation when they get lost at sea. Cooperatives also support families by providing compensation for lost fishers at sea. They provide information from other markets and traders to determine their prices, they also provide social support and advocate to fishers.

Reykjavik, 15th of April 2025