

Fish Value Chain Analysis Report



Eyl District, Nugal, Puntland - Somalia

KAALO Aid and Development

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Executive Summary

The study was conducted in Eyl District, Nugal Region in the months of August and September, 2018. And it was financed by KAALO Aid and Development under its fishing enterprise development project for coastal communities in Eyl district Puntland Somalia.

The objectives under this study were; to identify key market chain actors with their margins and profits in the marketing value chain, identification of production and marketing constraints, mode of transportation and the techniques used in processing and/or preservation fish and the challenges and opportunities related to transportation and processing of fresh fish in Eyl districts. Identifying and quantifying the fisher folks (by number and gender), their organization, outputs and the opportunities and challenges that they face and Assess enterprises involved the fish subsector input and output businesses, their different margins, challenges and opportunities.

The study used quantitative, qualitative and participatory methods to capture issues within the fishery value chain. The data collection and field visits was carried out between 11th of Sept and 16th of Sept, 2018. 60 participants were involved in the exercise. 60 respondents participated KIIs, FGDs and individual questionnaire as 26 out of the 60 were the fisher folks which participated all the three tools, while the rest participated only KIIs and FGDs. Demographic characteristics of the participants were identified and categorised as per their gender, age, marital status, household size, occupation and the years of experience.

The major foods mainly are from pastoralists and agro-pastoralists, unfortunately drought become more frequent, and there is a growing interest to develop alternative livelihoods. One such livelihood is fish production. The trend sector under goes starts from the colonial era; The colonial era and Said Bare regime undertaken investments in the sector. In 1990s, collapse of the government; Small-scale fishers also suffered from the cessation of government support and their catches. Later in the 1990s, the absence of government control of the fishing industry resulted in increased influence of the private sector and entrepreneurs which was the main force behind the gradual revival of the fishing trade. In 2000s, change in consumption habits of Somalis, seem to have resulted in an expansion of the small-scale fisheries sector, also piracy started. 2004 Tsunami, though seriously affected the sector, and it also drew a renewed attention from the Government and donor agencies to the sector. As a result, donor agencies started implementing several emergency projects with a view to rehabilitating the sector.

Employment

The sector offers direct employment for about 30,000 fulltime and 60,000 part-time, and 500,000 additional jobs through ancillary activities (Somalia). The Somali fishing sector has high potential for growth and job creation. Number of registered fishers in Eyl – 619 fishers - FAO report (2004) Majority of fishers are Men, women are only involved in fish retailing but before the collapse of the sector, women were involved at many points along the fish value chain including in fish processing, net repair, fish packaging, restaurants and food kiosks businesses.

Production

Currently Somalia fish industry is mainly artisanal. Fish catch per day is very small and ranges from 161kg for small scale, 510 kg for medium scale and 3072 kg for large scale fishermen. The

annual production of fisheries ranges between 25,000-30,000 MT/Year. More could be achieved but production constraints hinder progress and these include **lack of investment in encouraging fishing** hence generating quantities to economies of scale. Large-scale production can only be realized through the introduction of **decent technologies** for fish catch, fish processing, and an improved storage system.

Consumption

The cultural attitude **towards eating fish is changing and consumption**, though it is still low compared to global levels of consumption. Fish consumption at the household level in Somalia is one of the lowest in Africa, with **only 0.3% of the entire Somali** population dependent on fishing as their principal livelihood. However, during the past two to three decades, per caput-fishery product consumption has **increased 10 fold at least (from 0.16 to 1.6 kg/year)**. Over 90% of the fish catches are used for local consumption only. Domestic fresh fish consumption is **limited to coastal areas** because of poor infrastructure, the lack of familiarity with fish, seasonality of supply and a tradition of meat-eating among the Somali communities.

Description of Fisher folks in Eyl district; Primary Markets to sell fish; from the survey, it was realised that the largest primary market is the Yemenis, followed by personal consumers, ordinary consumers and then traders. Close to 13% were not identified or the respondents did not know. Boat Ownership; A majority of fishermen in Eyl (81%) do not own the boats they work on. Only 4% of the 26 interviewed fishermen stated that they fully own their own boats, with the same 4% being of the category of partial ownership. Type of Vessels; With respect to types of vessels the fishers use, we discovered that majority are Leyla Calaawi (77%), second being Afdheer at 19% and other types are only 4%. Use of Ice on Board; Our findings are that of 26 sampled, 3.9% are not aware of the practice, 7.7% always carry ice, while 73 % never carry ice on board and those who sometimes carry ice are 15.4%. Gender of the Boat Owner; The 2018 data also shows large inequality in terms of boat ownership where only 4% of the boats were owned by women. The 2018 data showed a decrease in women ownership in Eyl from 6% in the FAO data to our 2018 data of 4% . We found out that men own 96% of all boats in Eyl. Fish Marketing Locations; We found out that of the 26 respondents, 23% stated that fish marketing locations were restaurants and hotels, 2.9% were in own homes and working places. Landing areas scored 46.2% while storage facilities were considered to have 26.9 of the marketing locations. Women Involvement; Not many women are involved in the fish value chain in Somalia and by extension in Eyl. However they do get involved in the terminal end of the chain that is when the fish has already landed ready for primary and secondary markets. Of the 26 respondents, 3.8% get involved in transport , 23% of the respondents consider women to be involved as fishers and 73% are involved in trading as small traders. Credit Sources; Our Eyl fishers survey also found out that women get their source of funds from NGOs (19.2%), Informal groups (11.5%) and personal savings form only 3.8% of the source of credit. Seasonality of the catch; Our survey found out that more catch(54%) is achieved in January to April season, followed by May-August season with a catch reaching 38% and lowest catch is recorded in September to December at a level of 8%. Fisher which consume or sell their fish; Our survey discovered that majority of the fishers' harvest (73.1%)is consumed as well as sold by the fishers. Those who prefer to sell are 15.4 % while a small number of fishers (11.6%) prefer to consume the fish.

Findings, the fish value chain actors identified were; Fishermen (producers) , Processors - Ice plants and cold storages, Traders, Fish retailers, Reefer trucks, Exporters (fresh fish, lobsters, shark products), Distributers and Wholesalers and Service providers. The major bottlenecks identified; A large number of challenges that hinder the performance of the fishery sector in in the study area. The challenges include poor infrastructure, lack of skills, lack of cooperatives and associations, illegal fishing, high costs of operation, lack of markets, and lack of marketing and promotion of fish and sector as a whole. Low profit margins due to high cost of running the fishing business compared to the revenue that is current obtained from the business. High business cost arises from many areas including high energy cost, high transportation cost, high labor costs and among others. Lack of specialized knowledge as operators do everything from catching the fish to processing and packaging, to transportation and marketing thereby hindering creation of diversified employment opportunities in the sector. Very low catch compared to the standard catch mainly because of use of inefficiency gear and lack of skills and other foreign fishers. This also means fish supply in the markets is unstable thereby hindering adoption of fish as a main source of food. Lack of investment by the government and partner agencies in developing the infrastructure (roads, landing sites, cold storage, processing sites and energy), policy framework and institutions need to support the growth of the sector. Market is the major bottleneck facing fisheries in the district, the value chain actors are few as there not market or they had challenges reaching the potential targets.

The study recommended intervention designed in the following areas; establishment of fishing cooperatives, the fishing cooperatives and association of the fishers should be re-established and re-organized, and enhance their capacity of management and operations. Promoting fish consumption is extremely crucial , it is important for the community to be made more aware of the benefits of fish consumption, fishing techniques and preservation and preparation methods so as to improve the supply and overall consumption of fish. Construct physical market for fishers in Eyl town. Provision of permanent fish markets will increase accessibility of fish by the consumers, traders and among others. And also build landing and jet facilities for the fishing equipped with sufficient support services (gear, ice, transport and safety equipment) or infrastructure for chilling, storing, and transporting fish. Provision of equipment and gears to fishers at low cost or shared approach in order to utilize and sustain their use, provide training for the skills to maintain and repair. Provision of cold storage facilities equipped with solar panels would improve the preservation and availability of fish in the district, and hence reduce the electricity cost burden. Provision of proper and relevant skills on harvesting, postharvest and quality would help the fishers to improve their catch and sales. And equip with modern fishing techniques including fish handling and preservation. Support youth and women on entrepreneurship skills on fisheries value chain igniting level of innovations that are fundamental for employment. Facilitate investment of fishing facilities among the fishers and commercial banks in the main cities using sharing approach through educating on financing models of the banks. And enable fishers to access the credit facilities of the banks. As the fish from Eyl Is expensive compared to others in Garowe market, there should be establishment of strong fishers cooperative in the district which advocates competitive price for their fish. Fishers need to be linked to main cities like Garowe, there is demand of fish. The availability of ice and refrigerated trucks would allow transporting fish to main cities. Provision of training and financial support for women is necessary to reduce their vulnerability and get engaged into the different levels of the value chain. Infrastructure and Facilities associated with Cooperative or Association Aspect, As cooperative could boost the sector if they are supported with infrastructure and facilities under their use and operationalization. Provision of sanitary awareness to fishers in fish handling and preservation is highly important, as well the support of facilities needed. Advocate on the capacity and commitment of relevant state and federal

agencies for the need of efforts to tackle the weak environment within the fishing sector. And Also support the Eyl district authority for the collection of fishing sector information within the district. Actors need to be trained on the use of proper costing and pricing methods in their business operations and record management, and as well promote a savings culture and provide financial literacy.

Party 1 - Introduction and Background

KAALO

KAALO Aid and Development (KAALO) is a community based non-profit, humanitarian and development organization, headquartered in Garowe, Puntland in Somalia. The organization was established in October, 1991 just after the collapse of the Somali central government. KAALO is one of the humanitarian and development NGO in Somalia. The organization has been in existence for 27 years with a successful record in implementing more than 200 programs and projects in both the emergency and the development sector in 9 regions of Puntland. Considering the need and the prevailing development issues in other parts of Somalia, KAALO has expanded the geographic areas of its operation and now includes South and Central Somalia. Kaalo has more than 20 donors and partners, including UN agencies and international humanitarian agencies.

The project

KAALO is currently implementing fishing enterprise development project for coastal communities in Eyl district Puntland Somalia. the primary aim of the project is to establish sustainable livelihoods by building the Capacity of the target community through improved skills in fish handling, infrastructure, Reduction in post-harvest losses and increase in job opportunities and income generating Activities for the communities living in target locations. This intervention therefore seeks to contribute to building a more robust fisheries sector in Puntland that is supposed to enhance e the wellbeing of the vulnerable communities in the coastal areas.

Fishing Sector Background

Over the past 27 years, Somalia has continued to endure violence, political and social instability, as well as environmental and economic shocks affecting food security, employment and livelihoods. From the 1990s, most state services tapered off, affecting key Government's sectors such as education, health, and agriculture. Food production activities such as pastoralism, agriculture and fishing were similarly affected, resulting in reduced food availability and access to the millions of vulnerable Somalis.

The major foods mainly are from pastoralists and agro-pastoralists, unfortunately drought become more frequent in Somalia, and there is a growing interest to develop alternative livelihoods that are not readily susceptible to drought. One such livelihood is fish production. Fish are abundant in Somali coastal waters. If the fish sector can be developed and sustained, it can become an important source of livelihood and employment for millions of vulnerable Somalis. This would also improve resilience for pastoralists and agro-pastoralists who are currently highly vulnerable to drought induced shocks.

With a coastline of over 3,898km long, Somalia has one of the largest maritime zones in the western Indian Ocean that embrace a very important large marine ecosystem (LME) known as the Somali Current Marine Ecosystem.

Therefore, in this assignment KAALO and its partner assigned a consultant to conduct value chain analysis on fish, focusing EYL district, Puntland Somalia. The consultant was undertaken fishery value chain study.

Objectives of the Study

1. To Assess the current status of the sector in terms of employment, production, local consumption and export
2. Describe the existing domestic and international market channels
3. Identify key market chain actors and analyze the cost, margins and profits of different stakeholders in the marketing chain
4. Identify production and marketing constraints and recommend possible interventions to mitigate the observed constraints
5. Assess mode of transporting fish from landing sites to end markets, the various techniques used in processing and/or preservation fish and the challenges and opportunities related to transportation and processing of fresh fish in Eyl districts
6. Identifying and quantifying the fisher folks (by number and gender), their organization, outputs and the opportunities and challenges that they face.
7. Assess enterprises involved the fish subsector input and output businesses, their different margins, challenges and opportunities, and to identify critical areas within the marine/ artisanal fish value chain where interventions by KAALIO and other stakeholders could have the maximum benefit for the fisher folks and fish traders/ or find answer to What are the most suitable assistances services and support required for the different types of fisheries livelihood/business opportunities(fishermen, traders and cooperatives) in Eyl Districts.

Methodology of the Study

The study was conducted in Eyl District, Nugal Region in the months of August and September, 2018. The study used quantitative, qualitative and participatory methods to capture issues within the fishery value chain.

Literature review

Literature review was used as a key exercise in this study. Different secondary sources like fish value chain reports, articles, project reports, research publications, surveys, assessment reports, newsletters on fish was studied to have a preliminary understanding on key issues related to the objectives under this assessment. Besides, the key informants for the fish value chain, different sector actors, regulatory and development stakeholders were identified through the literature review. The key-informants were included stakeholders at different levels of the value chains like government institutions, private sectors, researchers, NGOs, and projects who are working directly in this sector.

Qualitative and Quantitative Study

The tools to be used for both qualitative and quantitative were Stakeholder Participatory Workshop (SPW), Key Informant interviews and Focus Group Discussions of the different value chain actors. The aim was to explore and help generate data on the study objectives.

Key informant Interview and Focus Group Discussions

Key Informant Interviews (KII) and Focus Group Discussions (FGDs) will be employed. Set of checklist of questions related to different actors will be provided to facilitate in collecting both quantitative and qualitative data from the targeted actors in the study. 5 Key Informant Interviews and 6 focus group discussions will be conducted during this exercise.

Individual Interviews (Questionnaire)

The study target was 30 respondents, but 26 fishers were reached and collected data successfully. Checklist questions/questionnaire with face to face interviews was used. The aim was to acquire more information from the individuals targeted. Two enumerators were engaged to conduct the interviews and reached respondents through snowballing sampling method.

Transect walks

The researcher used informal way of interaction, such as transect walks and spend unstructured time with the members of Eyl community. Such method helped the consultant to build contextual knowledge, and build a picture and views from such interactions.

Stakeholder Participatory Workshop (SPW)

This is a proven methodology for collecting qualitative information on value chains. The researcher provided a set of checklist for the different fish value chain actors to facilitate the face to face in discussions, and the aim of such workshop was to verify the field data, and enable participants to make inputs into the process and the assessment on the fish value chain analysis.

The Assignment Process



The Fishing Sector - Trend

The history of artisanal fishing in Somalia is a short one for a country with such a long coastline and abundant marine resources. The Somali people have traditionally been a pastoral nomadic society that depended on herding animals and seasonal agriculture for subsistence and as the basis of their economy¹.

The fishery sector has been small scale in nature. The colonial era and Said Bare regime undertaken investments in the sector. Development programs for small-scale fisheries and the formation of fishing co-operatives were instituted during the Siad Barre era (1969–1991), and were supported by the former Soviet Union and other countries through foreign aid. However, the desired growth of the sector failed to materialize. Marketing of fish from co-operatives was centralized during the 1970s and early 1980s, diminishing incentives for increased production. Fishing activities increased when the Siad Barre government started to liberalize the sector during the 1980s (Fisheries in Somali water), instability in the country since then has inhibited progress.

After the collapse of the central Siad Barre government in 1991, and during the ensuing civil war, the already existing shortage of spare parts and infrastructure was amplified and much of the existing small-scale fishing sector was reduced. Small-scale fishers also suffered from the cessation of government support and their catches declined in the early 1990s. However, later in the 1990s, the absence of government control of the fishing industry resulted in increased influence of the private sector and entrepreneurs which was the main force behind the gradual revival of the fishing trade. Since 2000, investment from the private sector together with foreign aid, and also the change in consumption habits of Somalis, seem to have resulted in an expansion of the small-scale fisheries sector and substantially increased small-scale catches in the post-war period beginning in 1996.

Small-scale fisheries have also been affected by anti-piracy actions that sometimes mistook small-scale fishers for pirates. Most of the fish from Somali waters has been taken illegally by foreign fleets, which means that Somalia losses millions of dollars every year (Sea Around Us Project)

The December 2004 Tsunami, though seriously affected the sector, was in a way a blessing in disguise because it drew a renewed attention from the Government and donor agencies to the sector. As a result, donor agencies started implementing several emergency projects with a view to rehabilitating the sector. Development and humanitarian actors provided post-harvest fisheries facilities in the form of ice plants and chill rooms in 7 sites along the Indian Ocean coastline. These facilities have been handed over to local businessmen under Public Private Partnership agreement and are now operational providing valuable services to beneficiary communities².

The lack of infrastructure for hygienically storing, processing, and transporting fish products is one of the major impediments to the development of the Somali domestic fishing industry. Though there was early investment in canning factories, processing facilities, and cold storage

¹ Glaser SM, Roberts PM, Mazurek RH, Hurlburt KJ, and Kane-Hartnett L (2015) Securing Somali Fisheries. Denver, CO: One Earth Future Foundation

² Assessment Of The Status Of The Artisanal Fisheries In Puntland Through Value Chain Analysis Prepared For VSF Suisse And UNDP Somalia -By A. J. Kulmiyei

during the colonial era and the Siad Barre regime, instability in the country since then has inhibited progress³.

Description of the Fishing Sector of Somalia- in terms of employment, production, and consumption

Employment

The small-scale artisanal fishery is a significant source of employment and rural income in Somalia. The sector offers direct employment for about 30,000 fulltime and 60,000 part-time, and 500,000 additional jobs through ancillary activities like traditional fish processing, drying and marketing and boat-building/ repairs.

The Somali fishing sector has high potential for growth and job creation⁴. Though it is not among the top three contributors to the country’s GDP, the Somali coast line is the longest in Africa and among the most blessed waters. According to the latest survey, some of the only fish stocks in the world that are actually “underfished” are in the deep waters off the Somali coast

The main fishery areas are divided into seven main zones, based on major cities and towns: Kismayo, Mogadishu, Eyl, Bargal, Bolimog, Las Korey and Berbera⁵.

1. Number of Fishermen Registered by District

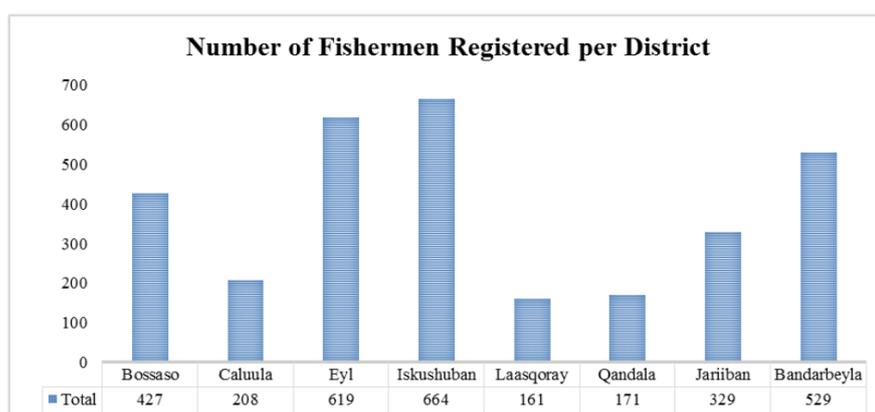


Figure 1: Number of Fishermen Registered per District

A total of 3108 fishermen were registered from an estimated total of 6500 (approximately 48 %).

FAO Survey Report 2014

Fishermen communities are largely made up of traditional fishermen, living in about 50 fishing villages and towns all along the coast from the Kenyan border to Djibouti.

Women

Majority of fishers who venture into the Red Sea and Indian Ocean are Men; ladies are mainly involved in side street hawking and in some places whole sale or retail selling of fish.

³ Glaser SM, Roberts PM, Mazurek RH, Hurlburt KJ, and Kane-Hartnett L (2015) Securing Somali Fisheries. Denver, CO: One Earth Future Foundation.

⁴ The Somali Fisheries Industry, a Potential Gold-Mine- By Nimo Jirdeh, Policy and Advocacy Adviser – Oxfam Somalia- and Alexandra Chege September 30, 2015

⁵ (FAO September 2013- January 2014)

Women are only involved in fish retailing. Before the collapse of the sector, women were involved at many points along the fish value chain including in fish processing, net repair, fish packaging, restaurants and food kiosks businesses among others⁶.

Therefore, fishery sector and its value chain provides viable employment opportunities for the coastal communities including catching fish, processing, preserving, packaging, and trading among others. Also, Piracy and illegal fishing increased security risks for coastal community fishers and forced them to abandon fishery as a livelihood⁷.

PRODUCTION

Currently Somalia fish industry is mainly artisanal. The majority of the fishermen practice subsistence fishing using traditional crafts. Fish catch per day is very small and ranges from 161kg for small scale, 510 kg for medium scale and 3072 kg for large scale fishermen. Currently, the fisheries sector in Somalia has yet to be capitalized to its full potential.

The fishing industry has contributed an average of 2% of the country's total GDP . At present, the annual production of fisheries ranges between 25,000-30,000 MT/Year.

More could be achieved but production constraints hinder progress and these include lack of investment in encouraging fishing hence generating quantities to economies of scale. It is pull strategy that will create production at industrial level where new factories may encourage more mass fishing. The government has started to develop rules, laws, policies, regulations but the government lack prerequisite mechanisms, tools, lacks personnel, lack muscle to enforce such systems .

Large-scale production can only be realized through the introduction of decent technologies for fish catch, fish processing, and an improved storage system.

Major fish Species in Somali Waters

In general, the pelagic fish stocks in the Somali EEZ are estimated to be capable of providing sustainable annual catches of the order of 200 000 t, based on several fish surveys conducted in the 1970s and 1980s. Because of the known pelagic fish resources, which are large, and tuna and mackerel species, which have high unit values, the long-term development of these resources could be of vast importance to the economy. These main groups are considered below.

Large pelagic stocks

The large pelagic species are tuna and big mackerels. They are usually caught in inshore waters; their seasonal variations in abundance are considerable, confirming the oceanic migratory pattern of these species. There are two peaks in the landings: in November and in March. However, during the southwest monsoon, their abundance is assumed to be low. They also make important contributions to artisanal fishery production. The primary season for Spanish mackerel is March–June, and for tunas it is October–November. These stocks are lightly exploited by the artisanal fishery sector, but are heavily exploited by the industrial fishery sector, mainly by foreign-flag distant-water fishing fleets, and it is possible that they are overexploited. The foreign vessels compete with the artisanal fishermen, by coming close

⁶ Assessment Of The Status Of The Artisanal Fisheries In Puntland Through Value Chain Analysis Prepared For VSF Suisse And UNDP Somalia -By A. J. Kulmiyei

⁷ Somali Fisheries Sector: Examining Alternative Livelihoods for Coastal communities

inshore and inflicting losses, including physical confrontation between the two sides which has led to gear losses and at times to loss of life.

Small pelagic stocks

The small pelagic fish species of interest are Indian oil sardinella (*Sardinella longiceps*), rainbow sardine (*Dussumieria acuta*), scads (*Decapturus ruselli*, *D. macrosoma*) and, to a less extent, anchovies (*Engraulis japonicus*, *Stolephorus indicus*). Their main distribution areas are off the northeast coast, and part of these stocks make seasonal migrations into the regions between Ras Maber and Ras Asseir. Outside these two regions they are scattered and do not form a basis for any fishery. They are also exploited by a great number of foreign-flag vessels from distant-water fishing fleets, as well as by national deep-water vessels. The states of the stocks are unknown, and catch reports are unreliable. Their seasonal abundance is estimated at between 120 000 and 200 000 t.

Demersal species

There are several hundred demersal fish species taken by the artisanal fisheries. Diversity is highest in the coral reef region from Adale to the Kenyan border. The main commercial species groups are scavengers (*Lethrinidae*), groupers (*Serranidae*), snappers (*Lutjanidae*), grunts (*Pomadasidae*) and seabreams (*Sparidae*). Of less importance are threadfin breams (*Nemipteridae*), lizard fish (*Synodontidae*), and goatfish (*Mullidae*). These commercial demersal species make important contributions to the artisanal fishing sector all along the coast. Accessible stocks are estimated at about 40 000 t of large demersal species, and 30 000 t of sharks and rays. Except for sharks, demersal stocks have been lightly exploited by the artisanal fishery sector. Owing to their very limited migration, these species can support a year-round fishery. Also, sharks and rays (*Elasmobranchs*) play an important role in Somali traditional fishery. They often represent 40% of total artisanal fishery production.

Sharks

The shark species of interest are hammerheads (*Sphyrnidae*), grey sharks (*Carcharhinidae*) and mako (*Lamnidae*). They are heavily exploited by both the artisanal and the industrial fishery sectors, with associated competition. The current fishery status of these species is unknown, but they are considered to be overexploited, as catches have declined over the past few years. No research has been conducted on this matter, which deserves utmost attention, to avoid a sudden and unexpected collapse in stocks of these valuable species.

Lobsters

Spiny lobsters of the genus *Panulirus* are exploited all along the coastline. They are mainly caught by divers in shallow waters, and occasionally by fishermen using large-mesh nets. The highest densities are found among the coral reefs of the southeast coast. Two species of deep-sea lobsters are also exploited by the industrial fishery sector, *Puerulus swelli*, and *P. carrinatus*, which are mainly found at depths between 150 m and 400 m along the east coast. Exploitation of *Panulirus* species by the artisanal fishery sector is light, while exploitation of the deep-sea lobsters by the industrial sector is unknown, but stocks are thought to have been heavily exploited.

Artisanal fishing gear used in the Puntland waters

Fishing gear	Technical specification	Operating depth	Operated by	Fishery type
Gill net	PA monofilament transparent gauge 16; 50 m long x 50 MD mesh size 3.5"	Bottom	Foot fishermen	Lobster
Gill net	PA multifilament dark green 210D/18; 60 m long x 50 MD mesh size 3 to 4.5"	Bottom	Foot fishermen Embarked fishermen	Lobster Fish (demersal)
Gill net	PA multifilament dark green 210D/24; 55m long x 50 MD mesh size 5"	Bottom	Foot fishermen Embarked fishermen	Lobster Fish (demersal)
Gill net	PA multifilament dark green 210D/36; 55m long x 50 MD mesh size 6"	Bottom	Embarked fishermen	Fish (demersal) Shark
Drift net	PA Multifilament dark green 210D/54 -72; 55m long x 50 MD mesh size 6.5" -9"	Surface	Embarked fishermen	Fish (pelagic) Shark
Traps	Wire mesh semicircular (<i>Gorgoor</i>) 60 cm x60 cm; mesh size 2mm,	Bottom	Foot fishermen Embarked fishermen	Lobster
Hook & Line	Line: PA monofilament diameter 1.5 mm; Hook n.6 round ringed MUSTAD	Bottom	Embarked fishermen	Fish (demersal)
Long line	Main rope PP diameter 4 mm; Auxiliary ropes diameter 3 mm; Hooks	Surface	Embarked fishermen	Fish (pelagic mostly tuna) Shark

	Japan wired tuna type			
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Source: G. Tello *et al.* (2005). Second tsunami assessment mission – Mission Report.

CONSUMPTION

The cultural attitude towards eating fish is changing and consumption, though it is still low compared to global levels of consumption. From an economic and business perspective, Somalis see a great future for growth in the fishing industry, though the continued lack of infrastructure and support may hamper that potential⁸.

Fish consumption at the household level in Somalia is one of the lowest in Africa, with only 0.3% of the entire Somali population dependent on fishing as their principal livelihood. There are no or little pull strategy to encourage Somalis to consume fish hence production remain less than 2 kg per household. In Somalia, fish is traditionally eaten fresh, and until only a few decades ago, consumption was limited to the fishing families and those living close to the coastal landing places. However, during the past two to three decades, per caput- fishery product consumption has increased 10 fold at least (from 0.16 to 1.6 kg/year). Also, in the past, unsold fish was dried and salted for the dhow trade, mainly to eastern African countries, and prices were usually low due to the poor processing methods and resultant poor product quality. There was considerable destruction during the civil war, but plants are being rehabilitated slowly by the private sector.

The population is less inclined to buy and consume fish-the pull philosophy does not apply where it is the consumer who should ask for fish. Unlike Coca Cola where consumers demand and have and they build a habit and appetite and addiction to drink Coca Cola, Somalis have no big appetite and urge to consume fish. However, over 90% of the fish catches are used for local consumption only.

Domestic fresh fish consumption is limited to coastal areas because of poor infrastructure, which has restricted access to fish for a large portion of the population⁹. This is also coupled with the lack of familiarity with fish, seasonality of supply and a tradition of meat-eating among the Somali communities. While traditional tastes and lack of consumer education programs to promote fish consumption have confined the market to certain coastal areas, the shortage of meat experienced particularly during the recurring droughts has diverted some demand towards fish, especially among low income groups like internally displaced people (IDP).

There is a great scope for a possible growth in per caput consumption of fish in Somalia in the near future¹⁰, especially in bigger cities, towns and inland communities if the fishery sector is developed adequately with advanced marketing infrastructure (as in 1998, when per caput fish consumption peaked at 2.4 kg/year). Also, fish demand in the country seems very high most of the time, especially in inland regions, while in urban areas, demand always exceeds supply, since fish consumption is estimated at over 9 t per day.”

⁸ Glaser SM, Roberts PM, Mazurek RH, Hurlburt KJ, and Kane-Hartnett L (2015) Securing Somali Fisheries. Denver, CO: One Earth Future Foundation

⁹ FAO Report

¹⁰ FAO Report

Party 3 – Demographic Characteristics of the FDGs, KIIs, and Individual Interviews Participants

We carried out study in Eyl District of Puntland, Somalia between 11th of Sept and 16th of Spet, 2018. 60 participants were involved in the exercise. The 60 respondents participated KIIs, FDGs and individual questionnaire. 26 out of the 60 were the fisher folks which participated all the three tools, while the rest participated only KIIs and FDGs.

Socio-economic Characteristics of the participants

No	Item	Category	Frequency	Percentage
	Gender	Male	36	60%
		Female	24	40%
1	Age	<20	3	5%
		21 – 30	9	15%
		31 – 40	33	55%
		41 – Above	15	25%
		Total	60	100%
2	Marital Status	Single	3	5%
		Married	39	65%
		Divorced	11	18%
		Widowed	7	12%
		Total	60	100%
3	Household Size	1-5	7	12%
		6-10	41	68%
		11 -15	12	20%
		Total	60	100%
4	Occupation	Fisher folks	35	58%
		Trader	13	22%
		Farming	6	10%
		Driver	1	2%
		Others	5	8%
		Total	60	100%
5	Year of experience	1 – 10	5	8%
		11 – 20	22	37%
		21 – Above	33	55%
		Total	60	100%

The number of respondents in this study was 60. The respondents were categorised as per their gender, age, marital status, household size, occupation and the years of experience. For the gender, age categorization, among the 60 respondents, 60% were male, and 40% female as 55% were in the age group of 31-40 years old, 25% were in the age group of 41-above years old, 15% were in the age group of 21-30 years old and 5% were in the age group of less than 21 years old. This indicates that the majority of the respondents in this study are 31 and above years old (80%) and the number of young respondents was less. As per the marital status, 65% of the respondents were married, 18% were divorced, 12% were widows and 5% were single. And for the household size, 68% of the respondents had 6-10 persons in their households, 20% of them had 11-15 persons in their households and the other 12% had 1-5 persons in their households while for their occupations, 58% of the respondents in this study are fisher folks, 22% of them

are traders, 10% of them are farmers, 2% of them are drivers and the remaining 8% had other occupations. And with their experience, 55% of the respondents had 21 and above years of experience, 37% of them had 11-12 years of experience and the other 8% had 1-10 years of experience.

Party 4 - Findings on fisher folk individual questionnaire analysis

We carried out a survey on 26 fishers of Eyl district of Puntland between 11th of Sept, 2018 and 16th of Sept, 2018. We covered 26 respondents of fishers in ten key areas namely;

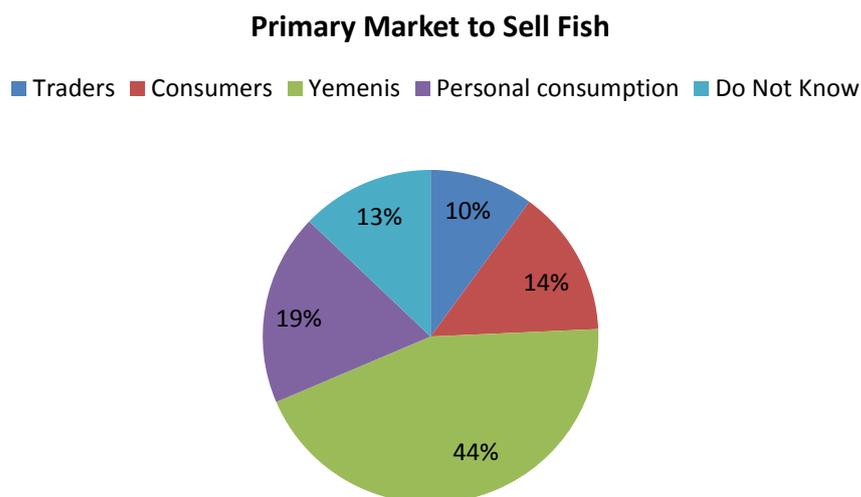
1. Primary Markets to sell fish
2. Boat Ownership
3. Type of Vessels
4. Ice on Board
5. Gender of the Boat Owner
6. Fish Marketing Locations
7. Women Involvement
8. Credit Sources
9. Seasonality of the catch
10. Fisher which consume or sell their fish

The results were mainly different from statistics which were earlier obtained by FAO in 2014 in their study “A Rapid Analysis Of The Fisher Folk Registration Data In Puntland State Of Somalia”-reference OSRO/SOM/303/CPF which was implemented by Ministry Of Fisheries & Marine Resources Of Puntland State Of Somalia (MOFMR) & carried out by Food And Agriculture Organization Of The United Nations (FAO).

Our findings are summarised in the paragraphs below.

Primary Market to sell fish

With respect to primary markets to sell fish, the graph below depicts the data summary very well.



From the survey, it was realised that the largest primary market is the Yemenis, followed by personal consumers , ordinary consumers and then traders. Close to 13% were not identified or the respondents did not know.

It is significant to note that even though the coastal Yemeni is in vicious war period, the Yemenis are the largest market of Eyl fish.

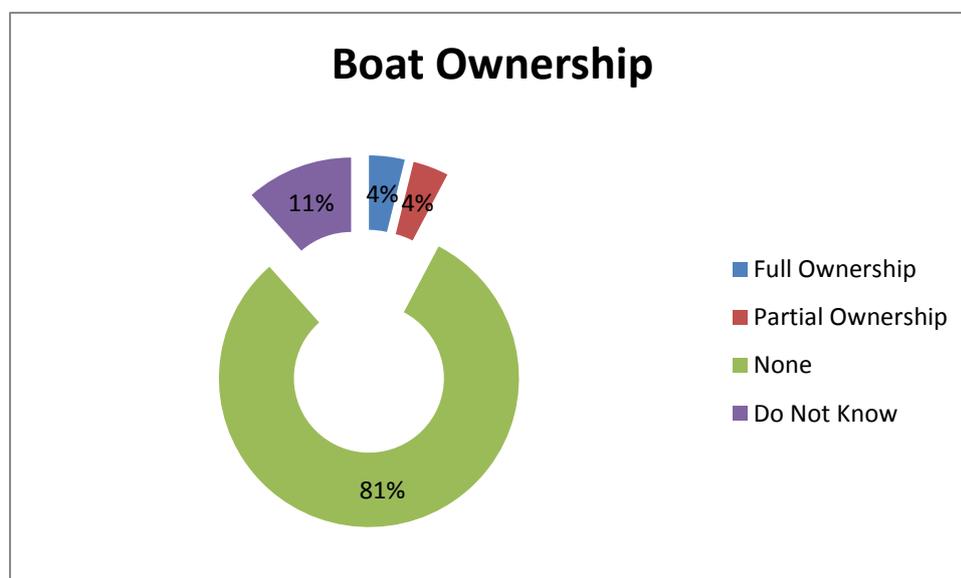
Comparison with FAO study 2014-

Primary Market to sell fish -Eyl	Traders	Consumers	Yemenis	Personal consumers	Others	Not identified
Our findings-primary market -Eyl %	13	14	44	19	-	13
FAO 2014 all Puntland primary market %	43	1	42	0	14 [Fish Market]	0

If we combine the Eyl primary data on Consumers and personal consumers and compare with Primary consumers of the whole Puntland, the findings display a very wide variance. The 2014 FAO Puntland primary data is 1% and our 2018 data is 33%-which is quite incomparable. Only the Yemenis marketing data is almost similar for both 2014 (FAO) and for our own 2018 data. Although one represents Eyl a sub set of the whole Puntland, the findings are mirror images of the whole picture. This proves that the Yemenis are the most prominent primary Markets of fish.

Boat Ownership

A majority of fishermen in Eyl (81%) do not own the boats they work on. Only 4% of the 26 interviewed fishermen stated that they fully own their own boats, with the same 4% being of the category of partial ownership.



Compare to FAO 2014 Eyl data

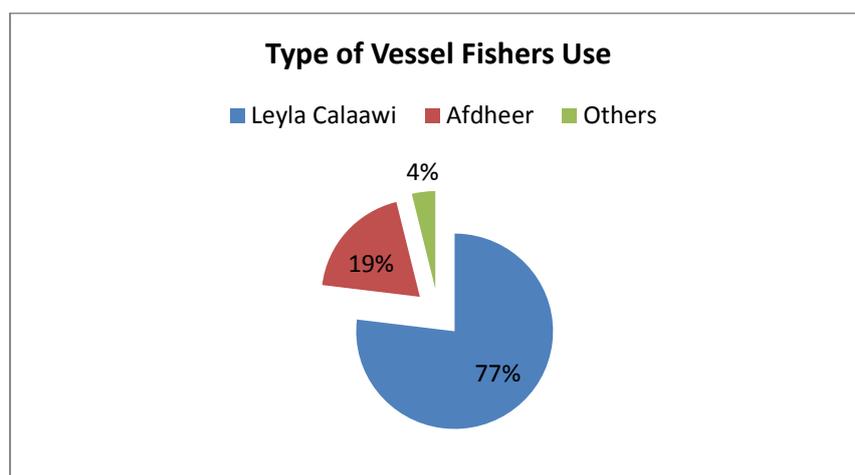
Ownership of boats by fishermen- Eyl as %	Full ownership	Partial ownership	No ownership	Don't know
Our findings-2018	4	4	81	11
FAO 2014 all Puntland ownership findings- %	22	3	75	-

There is similarity in findings where FAO data for partial ownership (3%) and no ownership(75%) appear to be close to our findings in August-September 2018 which is 4% and 81 % respectively.

The data on full ownership is way off the scale where FAO data is 22% while our finding is 4%. One wonders if level of full ownership between 2014 and 2018 has dropped by 18% or has “no ownership category “ increased by 6%? This may require further survey. And the factors of the variance could be the season of the survey data collection, Size of the survey and among others.

Type of Vessels

With respect to types of vessels the fishers use, we discovered that majority are Leyla Calaawi (77%), second being Afdheer at 19% and other types are only 4%.



Leyla Calaawi Vessel

5.8 m fiberglass reinforced plastic (GRP) moulds originally from Oman modified in Somalia with higher freeboard



Afdheer



7 m fiberglass reinforced plastic (GRP) built in Yemen

Compare to 2014 FAO study

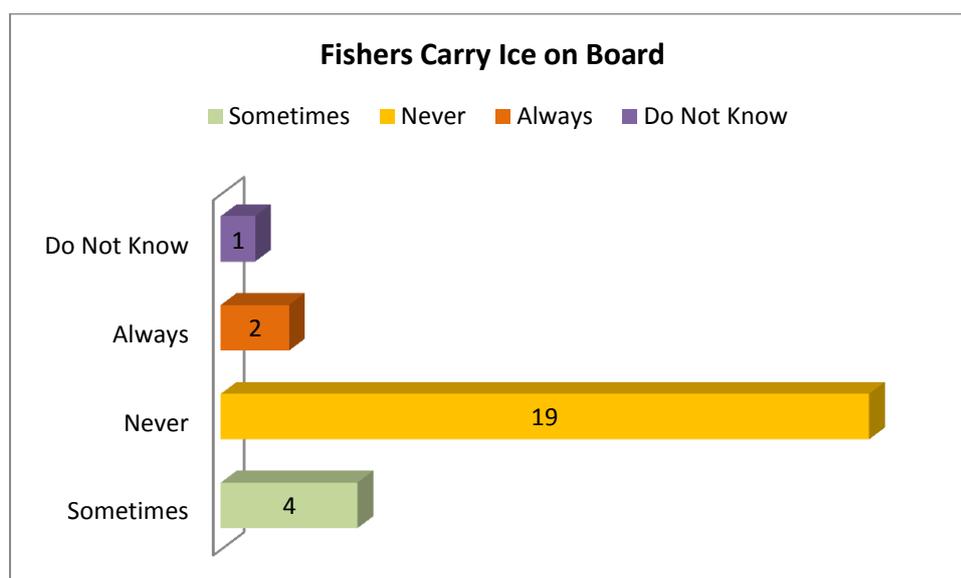
Types of boats by fishermen-Eyl as %	Leyla Calaawi	Afdheer	Others
Our findings-2018	77	19	4
FAO- all Puntland Types of boats %	83	4	11

The Leyla Calaawi type has reduced by 6% from 83 % to 77% taking into account the 2014 FAO data with our 2018 data . However Afdheer data has increased by 15% from 4% (FAO 2014) to 19% data of 2018 while the other types have reduced by 7% from 11% to 4% . The Yemeni boats (Afdheer) have increased maybe due to Yemeni war where boats have been moved or sold from Yemen to Eyl. Afdheer vessel is preferred by the fishermen because of the size, good for night-time fishing.

Ice on Board

The ice on board phenomenon is essential for the distant fishers who venture far off the coast as it increases the chance of keeping fish fresh and reduces spoilages.

Our findings are that of 26 sampled, 3.9% are not aware of the practice, 7.7% always carry ice, while 73 % never carry ice on board and those who sometimes carry ice are 15.4%.



Comparison with 2014 FAO study

Boats carrying ice on boat-Eyl as %	Not aware of practice	Always ice on board	Never ice on board	Sometimes ice on board
Our findings-2018-Eyl	3.9	7.7	73	15.4
FAO- all Puntland boats %	-	-	99.6	0.4
Study in Bandarbayla-closer to Eyl				

Comparing 2014 FAO report with our 2018 data majority of boats do not carry ice on board but the number of boats that never carry ice on board have reduced from 99.6% to 73%-an improvement of 26.6%. Even the practice of “sometimes” carrying ice on board has improved from a mere 0.4 % to 15.4% -an improvement of 15%. It is also encouraging that the practice of always carrying ice on board has jumped from nil% to 7.7%.

This should encourage the development community to upscale education and training so that more fishers carry ice on boat. The practice of “ice-on-board” will enhance quality of fish, more fish will arrive on shore as fresh as possible.

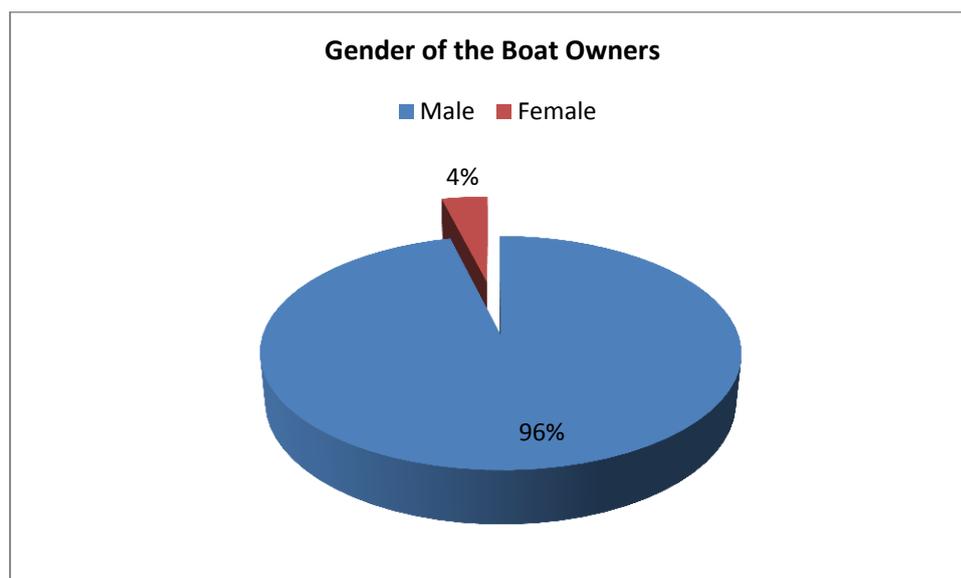
In 2014 FAO report states-“Even with the efforts devoted by the international community for providing availability of ice for the conservation of the catches along the Puntland coast, where several ice plants were constructed between 2003 and 2014 along the Indian Ocean Coast, 95% of the registered fishermen stated that they do not carry ice on board during fishing operations.”

More should be done to improve the habit of carrying ice-on-board as we have observed an improvement -though not scientifically-that within four years the fishers habits have improved by a relative scale of 34%-that is 7.7% plus 26.6%.

Gender of the Boat Owner

The 2018 data also shows large inequality in terms of boat ownership where only 4% of the boats were owned by women. The 2018 data showed a decrease in women ownership in Eyl from 6% in the FAO data to our 2018 data of 4% . We found out that men own 96% of all boats in Eyl.

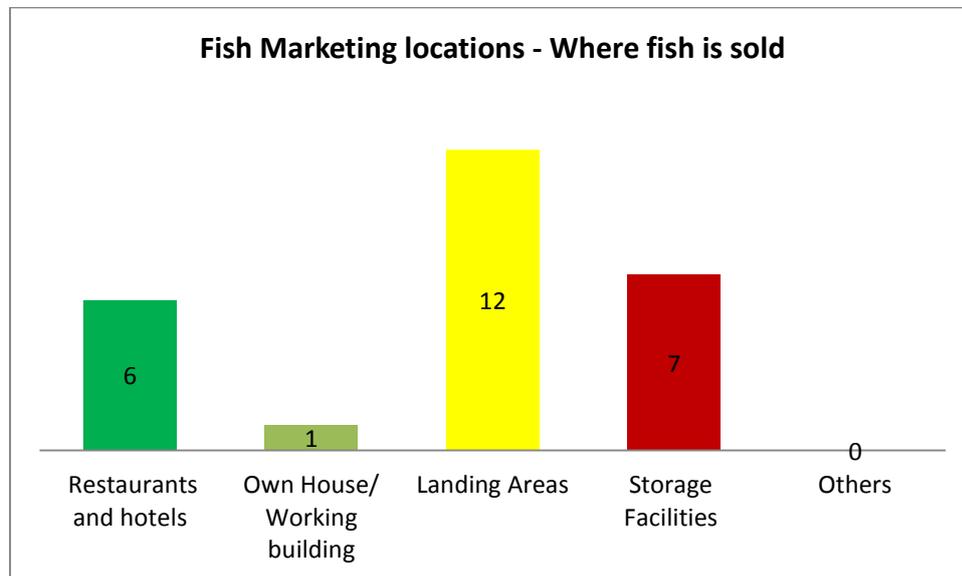
In 2014 -FAO wrote -“This points to the prevalence of gender inequalities in the fisheries sector--such as women’s limited access to resources as capital or credit and these are reinforced by strong cultural barriers.”



Fish Marketing Locations

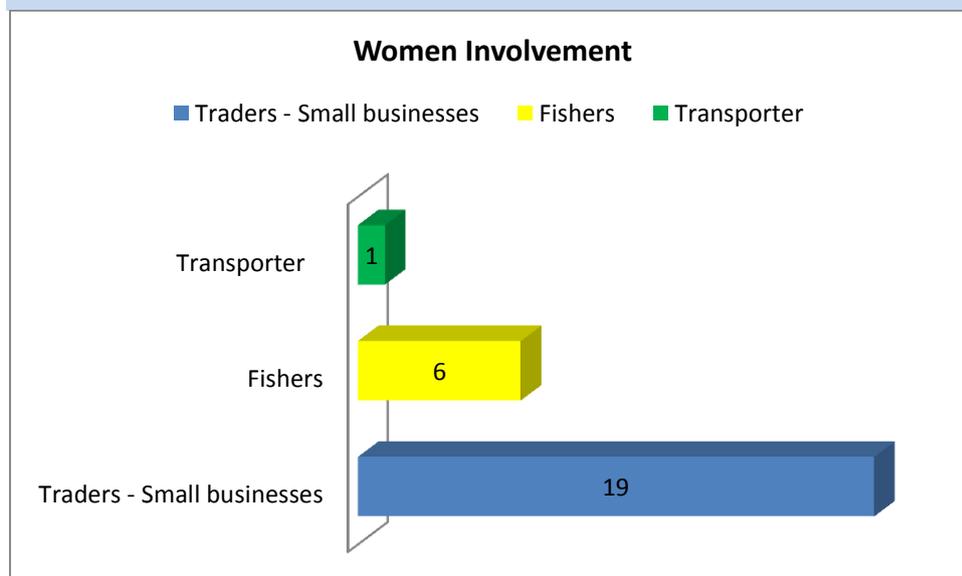
The fish marketing locations will be the terminal ends of the consumer character of Somalia Eyl fish. While going to get the fish can be fundamental to making fish available, getting a place where people can come to buy is also most critical.

We found out that of the 26 respondents, 23% stated that fish marketing locations were restaurants and hotels, 2.9% were in own homes and working places. Landing areas scored 46.2% while storage facilities were considered to have 26.9 of the marketing locations.



It can be said that landing sites and restaurants and hotels are the major areas where fish can be found or sold. More should be done to market the fish on street points and sheltered markets.

Women Involvement

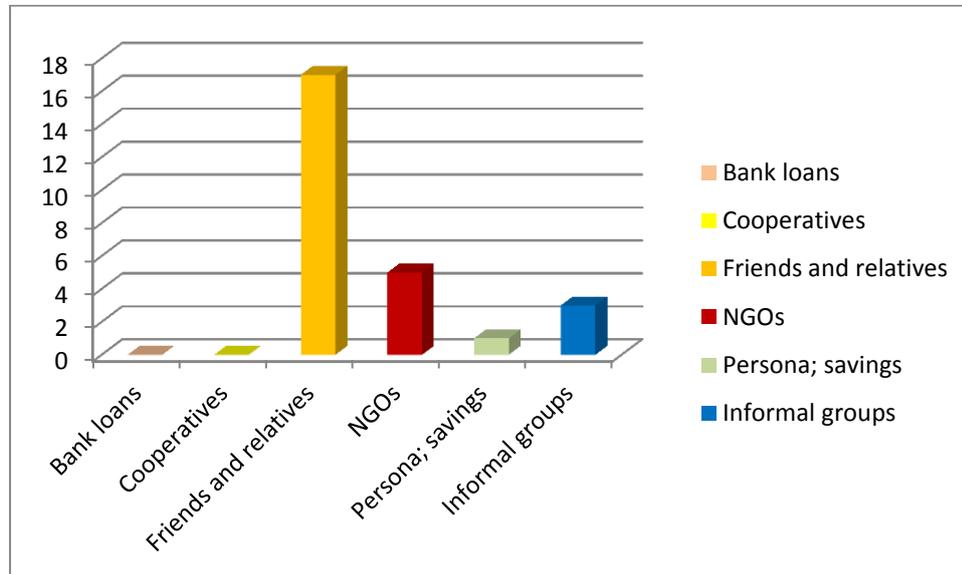


Not many women are involved in the fish value chain in Somalia and by extension in Eyl. However they do get involved in the terminal end of the chain that is when the fish has already landed ready for primary and secondary markets. Of the 26 respondents, 3.8% get involved in transport , 23% of the respondents consider women to be involved as fishers and 73% are involved in trading as small traders.

Traditionally you will spot women on streets pushing fish products or in sheltered structure build by local administration. This is easier for women as it requires little working capital and investment. However, to get involved in Transport or fishing the investment and working capital can be absolutely un-reachable for women in Somalia.

Government and well wishers should give affirmative credit facilities to Women so that they become more involved in the fishing sector.

Credit Sources



Getting working capital and credit for Somali women in Somalia is a challenging and uphill task. Not only in fishing but also in other fields of business. In an article on Somali Women Cashing in on Business¹¹, the writer narrates – “ Somali businesswomen say working as an entrepreneur has its challenges. Firstly, it is nearly impossible to raise capital to start a business.”

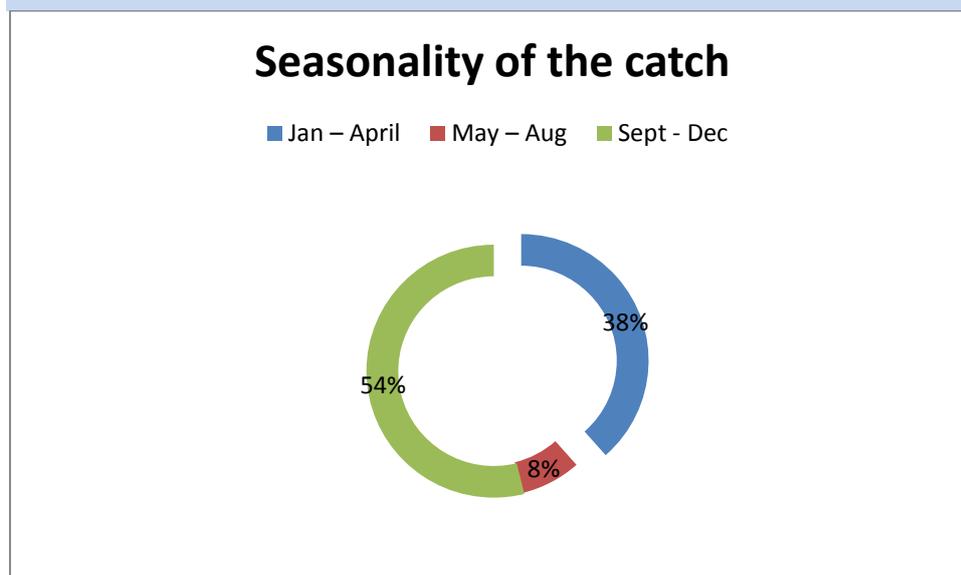
Of the few financial agencies established, they handle only savings and remittances from Somalis in the diaspora; few do offer loans, but only to those who can put up collateral, which few women have.

From our Eyl survey, the situation is the same as seen in Somalia women scenarios. Majority of women (65.4%) get loans and credit from friends and relatives. The relief web report states-” “It is not possible to get money to start up a business – even more so if you are a woman, as Aisha Guled, a khat trader in Mogadishu, told IPS.” Guled stated that she got her start only thanks to support from a relative.

Our Eyl fishers survey also found out that women get their source of funds from NGOs (19.2%), Informal groups (11.5%) and personal savings form only 3.8% of the source of credit.

¹¹ <https://reliefweb.int/report/somalia/somali-women-cashing-business>

Seasonality of the catch



The approximate harvesting seasons for different fish species caught off the Puntland coastline are presented in the table below. As can be observed -the season also goes hand in hand with the types and species of fish.

Table: Approximate harvesting season for different species caught off the Puntland coastline¹²

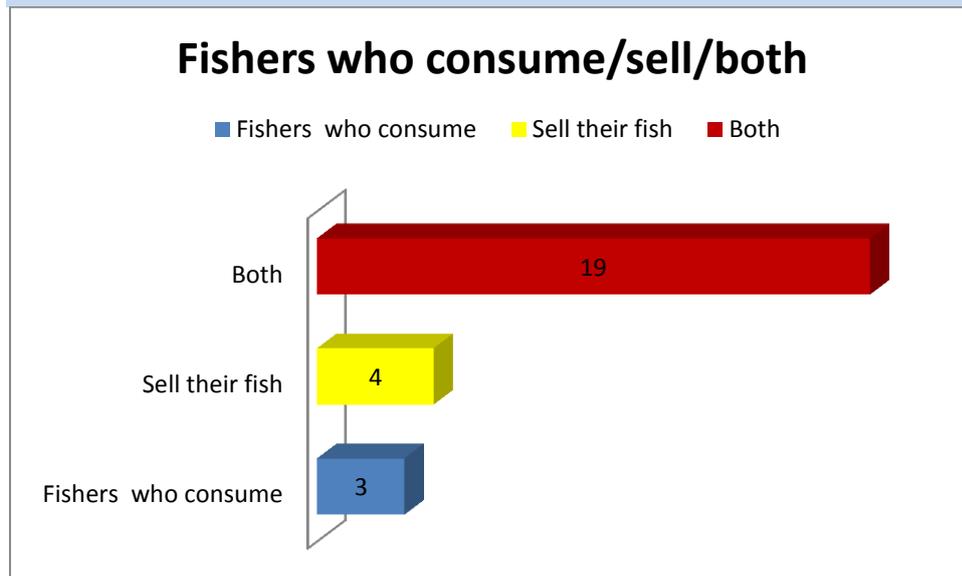
Stocks	Harvesting season	
	Indian Ocean	Gulf of Aden
Large Pelagics	September – May (Peak October – December)	October – May (Peak October – December)
Small Pelagics	September – May (Peak November – January)	October – May (Peak: October – December)
Demersals	All year (Peak: September, March – May)	All year (Peak: September, March – May)
Sharks	May – September (Peak – June)	May – September (Peak – June)
Lobster	October – April (Peak: November, March)	-

Our survey found out that more catch(54%) is achieved in January to April season, followed by May-August season with a catch reaching 38% and lowest catch is recorded in September to December at a level of 8%.

¹² Assessment Of The Status Of The Artisanal Fisheries In Puntland Through Value Chain Analysis Prepared For VSF Suisse And UNDP Somalia -By A. J. Kulmiyei

Our data therefore need to be extrapolated further to find out from the respondents the types and species with respect to the general terminology of "seasonality" of the catch.

Fisher which consume or sell their fish



It is important to assess if the fishers' harvest is consumed by the fishers or is sold or is whether the fisher sell some part and consume the other.

Our survey discovered that majority of the fishers' harvest (73.1%) is consumed as well as sold by the fishers. Those who prefer to sell are 15.4 % while a small number of fishers (11.6%) prefer to consume the fish.

This analysis will require further stratification because apart from personal consumption which is specific and direct measurement, the term "both" may not represent selling and personal consumption accurately because in the measurement of "both", personal consumption is included and selling is also included.

Party 5 - Value Chain Analysis – Activities and Actors

Value chains illustrate the flow of fish products from point of capture to end-customer to provide an appreciation of the nature of trade and utilization of fish products and of the revenue generated from wild-capture fish resources that are consumed in-country or exported to foreign markets¹³. The value chain in the fisheries sector can be defined as the movement of fish from the landing beach, through the supply chain, to the final consumer taking into the consideration the whole range of activities and the subsequent value addition undertaken by different stakeholders at various levels of the chain in lieu of a profit accruing to them from their operations¹⁴. Through FDGs and KIIs, and review of literatures we identified the value chains for three key fish products: finfish, sharks, and lobster. To create value chains, the distribution pathways of fish and fish commodities from fisher to final in-country consumers or exporters were mapped using available information from different sources. Value chain analysis can be a useful analytical tool in understanding the transition process undergone by a product (or service) before it is consumed, the value adding transactions involved and the key actors engaged in the chain.

Fishing Value chain in Eyl district was challenging, as the fishing activities in the district are artisanal and substance. We used information from different sources to identify actors involved in the chain and analyse the current and potential markets, and marketing channels.

Key actors of Fish from Eyl

Actors involved the fishing activities in the district are not in an organized manner, engaged in both domestic and export markets in a very small scale business, and the district fishing is described as artisanal. The actors focus specific products and services, with specific activities they perform and services they provide within the chains. The major actors identified are as follows;

- Fishermen (producers)
- Processors - Ice plants and cold storages
- Traders
- Fish retailers
- Reefer trucks
- Exporters (fresh fish, lobsters, shark products)
- Distributers and Wholesalers
- Service providers

¹³ Glaser SM, Roberts PM, Mazurek RH, Hurlburt KJ, and Kane-Hartnett L '(2015) Securing Somali Fisheries. Denver, CO: One Earth Future Foundation

¹⁴ Assessment Of The Status Of The Artisanal Fisheries In Puntland Through Value Chain Analysis Prepared For VSF Suisse And UNDP Somalia -By A. J. Kulmiyei

The linkage of Upstream inputs and Down Stream Outputs, with actors involved

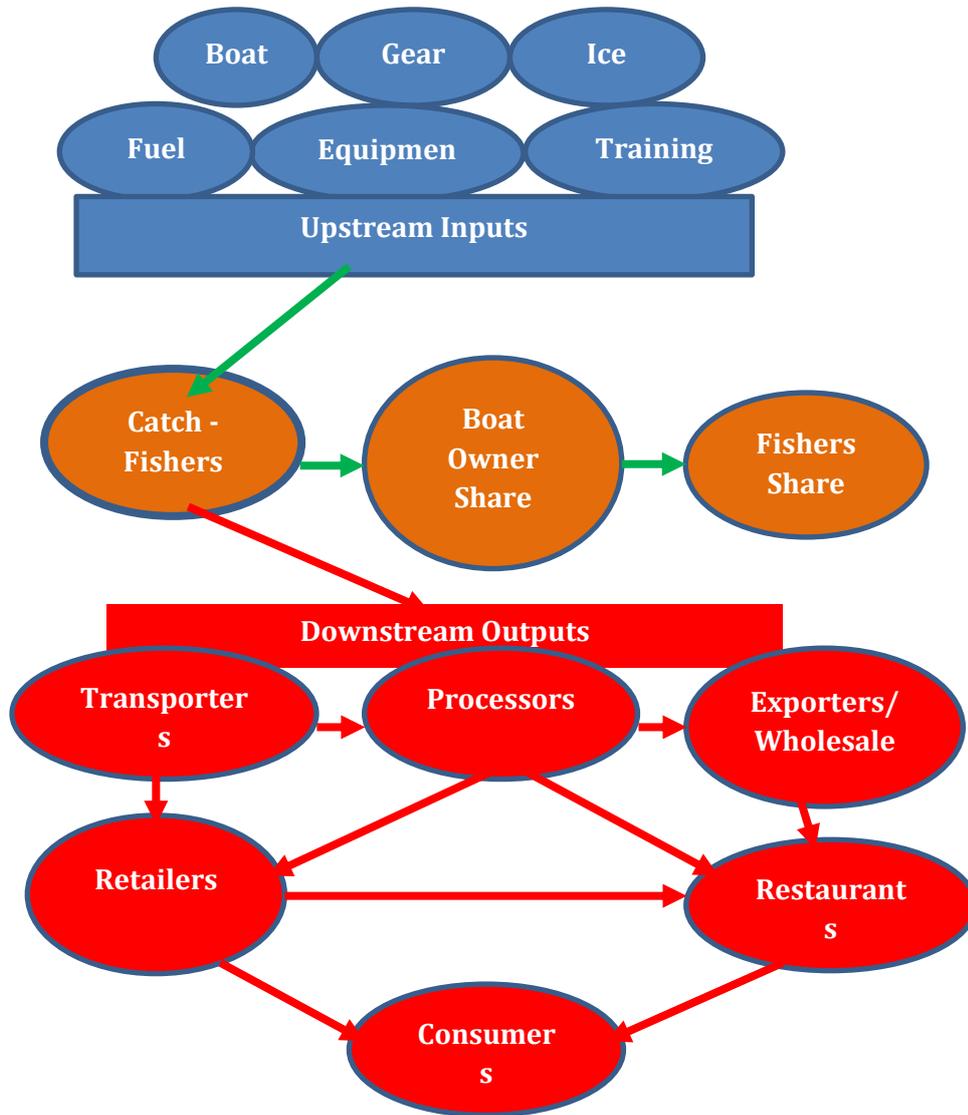


Illustration - Value Chain

Fishers

The artisanal fishing is dominated by male actors. There are 700 fishermen and 500 seasonal fishermen, with 150 motorized boats (Est. 70 non-operational), with 6 persons normal ride and average size of 7 meters. Fishermen main catch and target sharks and lobster and non-shark/lobster are less targeted for fishers in Eyl district. The catches are mainly artisanal and subsistence. The lobster and sharks are mainly commercial endouver.

Fishers participating in the fishing in the district include: (1) fishers who do not own boats but embark as crew on Somali vessels; (2) boat owners who go to sea; and (3) independent fishers who operate on foot (mainly pastoralists, internally displaced persons, or local subsistence fishers). The domestic fisheries of Somalia have always been fairly small scale in nature. Fishing operations are controlled by the prevailing monsoon winds and sea conditions. Fishing activity is seasonal and lasts for 8 months (October – May).

Key fishermen locations identified in Eyl District, Diinkudhac, Arindiirey, Dhagax-laha, Kabaal-waaq, Gabac, Ladaga, Dharin raqas, Maraya, Kabaal, Garmaal, Suud, Badey, Qulule, Illig, Gaalood, Dhanaane, Dibudegad, Jiifle, Buq, Dhinowda.

Eyl Fishermen mostly dump most of their catch at shores and catches get contaminated, since no cold system available on landing sites to keep the surplus for locally or outlet markets.

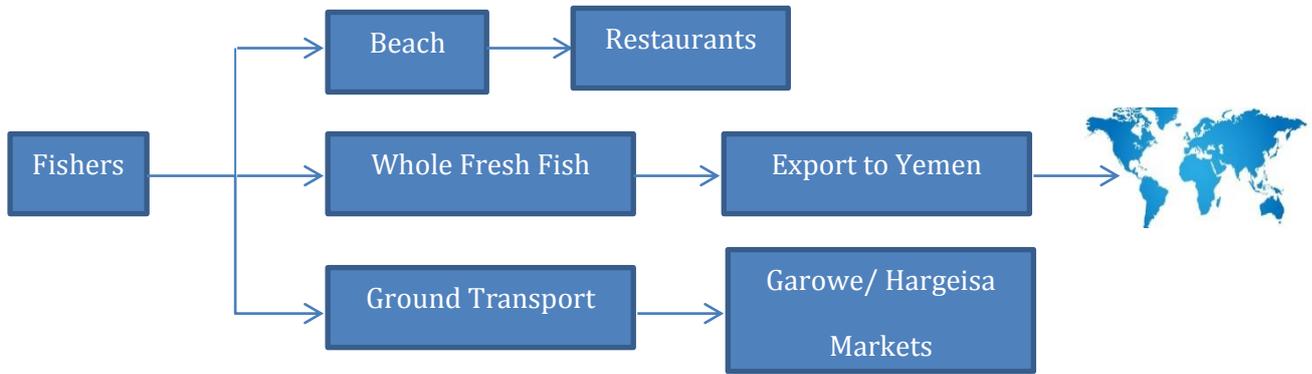


Domestic landing of fish from Eyl are primarily consumed locally, but movement to larger inland cities also occurs, for example Garowe and Hargeisa. Fresh fish is sold either directly on the beach and in restaurants and storage facilities. Lobster is the major target for fishers in Eyl district, and that is why the major season of fishing activities in Eyl occurs between the months of October and April (7 months). Sharks are not the main target but they get as bycatch during fishing for large pelagic.

Key issues Noted;

- Most of the fishers are not organized in terms of Association and cooperatives, Eyl fishers need more re-engagement and mobilization into the fishing sector through awareness.
- Sanitation and hygiene is very poor, fish filleting and chilling are performed on the ground
- Lack of infrastructure for handling and transporting fish products from beach to facilities and inland communities
- Fishermen's lack of modern fishing techniques including fish handling and preservation

Therefore, role of fishermen is a major issue in the chain in ensuring fish quality they are the first persons in the supply chain in which every link must help maintain top quality.



Value chain - Fish

The Story of Omar, a local seasonal fisherman in Eyl District

Omar is a boat owner and fish trader in Eyl District, he employed four skippers. He usually go fishing during the months of May to September, as he fears illegal fishers to destroy his equipment in other peak seasons. The skippers work on daily basis, and bring fish catch using Omar’s vessel and equipment. On average they bring 200 kg of fish at the Badey beach, and sell to restaurants, traders, households at the landing site. Omar usually provide daily running of the vessel, including inputs required for fishing operations (e.g fuel, food, sometimes Ice, he is also responsible for the sale of the catch at the landing beach. The employed fishers of Omar also undertake limited processing activities at the beach. The catch composes usually finfish and sharks. The 200 kg, the usually catch of the Omar’s vessel where divided as follows; the four fishers/crew members of the vessel receive 12 kgs in exchange of their work, 100 kgs were given to people who were at the beach during the landing time of the vessel (Mostly the poor households, who do not able to undertake fishing activities), and the remaining catch where sold at the beach.



Below is the estimated earning of Omar at that particular day;

The Amount of Catch per day

Finfish	200 kgs @ \$ 1 per kg	\$ 200	
Sharks meat (Dried and Salted)	30 kg @ \$ 1.5 per kg	\$ 45	
Dhagaha Sharks	1 kg @ \$ 65 per kg	<u>\$ 65</u>	<u>\$ 310</u>

Less: The operations, gifts,

Gifts	100 kg @ \$ 1 per kg		\$ 100
Labour	12 kg @ 4 members,	48 kg @ \$ 1	\$ 48
Fuel			<u>\$ 20</u>
Omar's Earning	from the catch		<u>\$ 142</u>

Processors – Ice and cooling facilities

There is one public fish processing site, operating under public private partnership, the owners of the processors buy lobster and fish from local fishers and boat owners. Export to external markets like UAE, and supply to local markets like Garowe and Hargeisa. Only 30% of the facilities are utilized as there is no market for fish. The major activities performed as processing is beheading, cleaning, and freezing. Sharks are dried and salted on open land near the beach. Fishermen are not able to access this plant, it is only operational when the managing company is buying fish and lobster, the rest of the time it is shutdown,,, and no other fishermen can use the facility.

There are other privately owned ice plants equipped with ice makers and storage rooms with refrigerators, which can keep fish in two weeks maximum. They are not always operational, One is completely shut-down as the owners said 'No Market for Fish' as he emphasized high operation costs like Power and labour.

In addition to that, ICRC distributed refrigerators with Solar Panels, and these enable restaurants in Eyl town to keep fresh fish and sell to families and visitors, and this reduced the high cost of electricity burden on the restaurants.

Major Issues;

1. A fish is perishable product, there are no fully operational facilities in the district, and the fishers cannot keep their surplus.
2. Electricity as major challenge to facilities, use of Solar as potential solution for energy challenge.

Traders

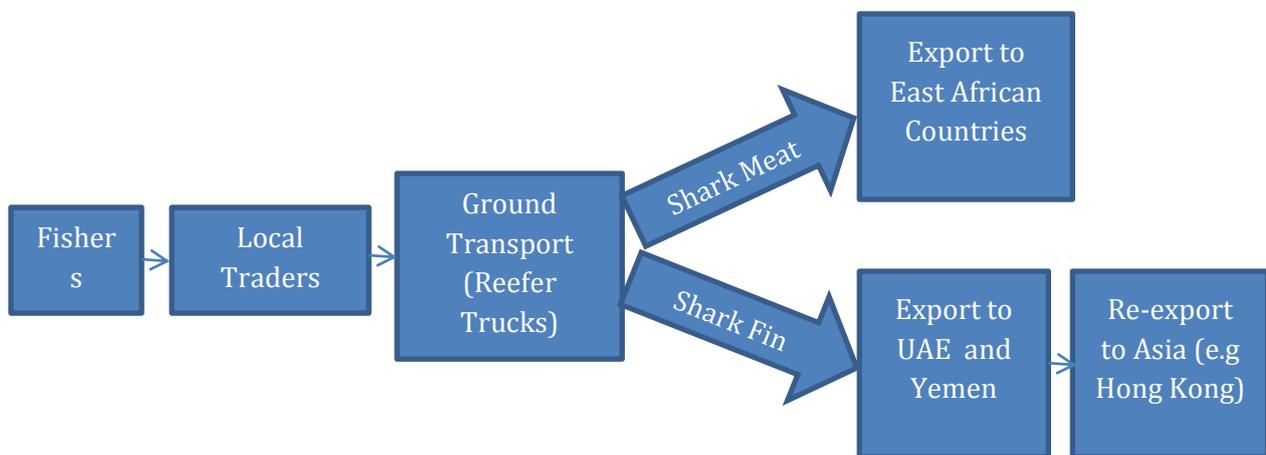
Traders of fish in the district mostly are small-scale in trading. There are several actors performing the role of trading in the district, exporters, wholesalers, retailers, restaurants and hotels. Traders are involved in both local and export businesses. Lobster and sharks traders are engaged in export fishers, which are mainly a seasonal.

Monthly Trading Statement			
Shaweel Company			
Sales	1000 kg @ \$ 6		\$ 6000
Less: Costs			
Fish at cost price	1000 kg @ \$ 3.5		<u>\$ 3,500</u>
Gross Profit			\$ 2,500

Less Operating expenses		
Electricity	\$ 300	
Rent	\$ 250	
Salary	\$ 600	
Other expenses	<u>\$ 50</u>	<u>\$ 1,200</u>
Net Profit		<u>\$ 1,300</u>

Shark traders

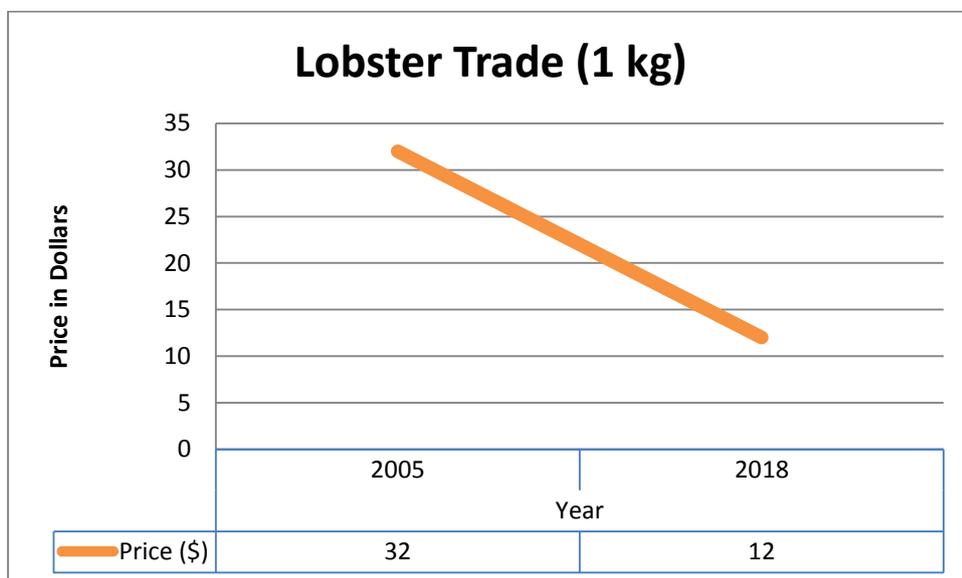
Shark traders buy fins and dried shark meat from fishers and sell to business people in Bosaso, who in turn export the fins and dried shark meat to the respective markets particularly Kismaayo then East African Countries.



Value chain - Shark

Lobster traders

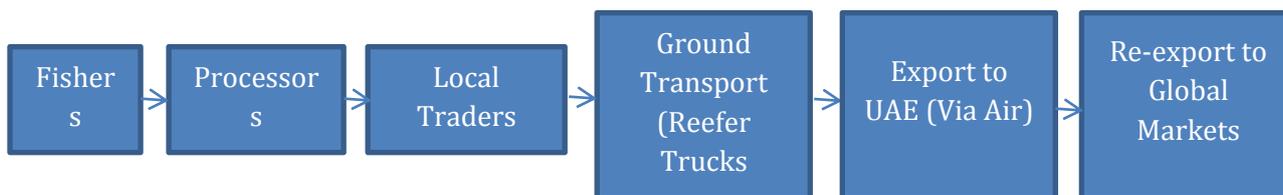
Lobster is a major fishing in Eyl, and it is involved by both permanent and part time fishers in Eyl District. The lobster trade used to be a booming trade, 1kg of lobster was USD 32 in a decade ago, and the price of kile declined to USD 12. Interviewed fishers and traders agreed that the major causes of the decline were due to; Illegal fishing practices, poor quality of the products which led declined demand of the exporters, risks of the trade and high operation costs.



Catches are processed into tails at the beach mostly by the fishermen themselves and it is sold to local traders. Traders use reefer trucks to freeze and store the tails which they later transport by road to Garowe and other big towns. Frozen lobster tails are a major export commodity to the United Arab Emirates (UAE) and then on to other international markets.

Key issues noted

1. Traders involved in the lobster trade are more, then the other fish species, finfish trade.
2. Lobster trade declined due to demand of the external markets as result of poor quality



Value Chain - Lobster

Retailers

There are shoppers in Eyl district, they have small refrigerators equipped with solar panels, and such outlets sell fresh or frozen finfish and lobster to restaurants and households in the town. There are also fishmongers who buy fish from the fishermen at the landing beach and then sell it as either fresh or fried to the public at a small profit to support their families. Such retailers also work as wholesalers and sell and transport fish to villages and Garowe.

Key Issues Noted;

1. Retailers earn small profit, due to limited investment and small-scale market
2. High operation cost, as the cost of electricity is high, and this led many retailers to lost their stock.
3. Sanitation and hygiene issues, unhygienic conditions were observed, and this indicates a danger of contamination, limited sanitary awareness.
4. The role of the retailers in the chain is very minor
5. High losses due to poor storage facilities.
6. Limited access to capital to start and finance fish business.

7. Negative perception of consumers on the quality of fish.

Consumers in Eyl and Garowe

The fish from Eyl are transported into different routes, in this section we focus to local markets; the fish is transported to Garowe in a small scale by mostly 7 to 10 traders. The interviewed traders argue that fish from Eyl is not interested in Garowe Market due to two reasons, the main species from Eyl is Kalluun Qareed, the one with white meat and bones, and consumers believe such fish meat is not good, and also the kilo of fish from Eyl is more expensive than the fish from Bosaso, and Bendarbayla

Key Issues noted

1. Negative perception by fish consumers on the quality of fish
2. Consumers in Garowe prefer fish from Bosaso, the one with no bones
3. Limited know-how on fish dish preparation

Transporters

Fishers in Eyl mainly use two means of transport. Lobster traders use reefer trucks to freeze and store the tails which they later transport by road to Garowe, the later air freighted to Dubai, UAE. While other fishers use public transport using mobile cold storage and refrigerators to transport fish to inland communities like villages surrounding Eyl and Garowe. Transporters charge rates between \$ 0.3 – 0.6 per kilo of fish transported from Eyl to Garowe.

Key Issues Noted

1. Transportation is a major challenge to fisheries
2. The owners of the reefer trucks target only the collection of lobster tails
3. Fishers need reefer trucks with cooling system, which enable them to transport fish from the district

Party 6 - Results of KIIs and FGDs

We conducted Key informant interviews and Focus group discussions, checklist question were used to guide the process in their different settings. And after collecting the information, analysis of the information was performed and the findings of the most repeated and key issues are presented and summarized in this party.

Fishing Business Challenge

Participants were asked about the issues hindering the businesses related to the fishing value chain in the district; they mentioned issues as summarized below;

1. **Lack marketing and promotion** - Limited knowledge on business know-how, there is no consistent marketing and promotion of the fisheries.
2. **Capacity and Skill** –the available infrastructure are under-utilization, not always operational, and also the traders involved have limited business and marketing capacity. The fisher folks lack the technical skills required to maintain and repair fishing gear, catch fish, and preserve. Most of the challenges experienced in the sector are perpetuated by limited investments in the sector
3. **Lack of fishing cooperatives** – There is no operational and performing fishing cooperatives in Eyl District. Cooperatives were established under the Said Bare, but

collapsed during the civil war, such cooperatives helped grow the domestic fishery sector.

4. **High business costs** - High cost of energy for cooling, labour and fish losses due to poor cold storage further minimize profits.
5. **Accesses to Finance** – Participants vowed financial sector (banks, micro-finance institutions) do not invest in the fisheries sector. Short loan repayment, low profit margins, and high seasonality make it difficult for fishers and banks to trade.
6. **Poor performance** – respondents argued the sector is not attractive, professional fisher folks leave the sector and joined other services, like security, construction, and livestock. Profits from the catch are shared among the fisher folk and boat owners, and this lead reduced margin for the fishers.

Supply and Demand Challenge

Responses and discussions from the respondents reveal the following key constraints in the sector particularly the supply and demand of fish in Eyl district and at general;

- **Supply Factor:** fisheries in Eyl are mainly seasonal, mainly driven by availability of Yemen boats and lobster traders. This led the supply to be unstable due to limited fishing activities in the district.
- **Low catch:** key informants vowed compared the Yemeni fleets, local fishers catch about one third of the foreign fleets catch. And this is mainly due to the fishing methods and the use of inefficient fishing gear by local fishers in Eyl district.
- **Demand factor ;** As the consumption of fish is generally low in Puntland and Somalia at large, the species of finfish from Eyl (Indian Ocean) is less preferred in the main inland markets, for example Garowe market. And the other major factor stressed by the key informants is lack of market for their catches, and this led fish from Eyl stay more days in Garowe Market, a led high cost of storage for the trader, and this reduces the profit of the trader.
- **Illegal Fishing:** All participants of KIIs and FDGs agreed illegal fishing as a major challenge facing fisheries of the district and all coastal areas. This caused loss of life to fishers and destruction of fishing equipment.

Fishing infrastructure and Faculties challenge;

The data collected from the KIIs and FDGs indicated the following factors concerning the fishing infrastructure in the district;

- **Lack of sufficient Infrastructures;** The fisheries vowed the key needed infrastructure as follows; Cold storage and ice making facility, reefer trucks, landing sites and jets. The absence of such accessible facilities caused fisheries to heavy losses of their catch. The existing facilities under the PPP need to be regulated effectively and accessible for the fisheries of the district.
- **Infrastructure associated to individuals but not cooperatives,** the model of associating the facilities with cooperatives in previous regimes boosted the sector activities in the days before 1990, but the current FAO funded project under the PPP associated with individuals and companies are not effectively supporting the fisheries in the district.

- **Infrastructure investment needs:** the sector is potential and abundant; it requires investment and the attention of development partners, private investors and government support.

Capacity and Skill Challenge

- Lack of qualified technicians with skills required to repair and maintain fishing gears, storage facilities and other fishing equipment.
- Lack of technical skills to undertake maintenance and repair of fishing gear and storage facilities has greatly affected the performance and profitability of the fisheries sector in the district. The sector is constrained by lack of skills among the youth in fishing and preservation, fishing technologies and effective information and communication. The fishers observe that the youth from the rural areas join the fishing industry without any fishing skills.

Market Challenge

- The KIIs and FGDs respondents both raised and repeated the issue of market. Current facilities are not operational in their capacity due to limited market for the fish. The access is not in existence due to lack of reliable and consistent market for fish both locally and outside Somalia.

As the study looked into different issues raised by the participants, and the understanding from the documents reviewed, we highlighted the major bottlenecks to the potentiality and the opportunities of the fishing sector of the district and the entire region as follows;

1. A large number of challenges that hinder the performance of the fishery sector in the study area. The challenges include poor infrastructure, lack of skills, lack of cooperatives and associations, illegal fishing, high costs of operation, lack of markets, and lack of marketing and promotion of fish and sector as a whole.
2. Low profit margins due to high cost of running the fishing business compared to the revenue that is current obtained from the business. High business cost arises from many areas including high energy cost, high transportation cost, high labor costs and among others.
3. Lack of specialized knowledge as operators do everything from catching the fish to processing and packaging, to transportation and marketing thereby hindering creation of diversified employment opportunities in the sector.
4. Very low catch compared to the standard catch mainly because of use of inefficiency gear and lack of skills and other foreign fishers. This also means fish supply in the markets is unstable thereby hindering adoption of fish as a main source of food.
5. Lack of investment by the government and partner agencies in developing the infrastructure (roads, landing sites, cold storage, processing sites and energy), policy framework and institutions need to support the growth of the sector.
6. Market is the major bottleneck facing fisheries in the district, the value chain actors are few as there not market or they had challenges reaching the potential targets.

Party 7 - Recommendations and Conclusion

Recommendations

Cooperative and Association

The fishing association of the fishers should be re-established and re-organized, and enhance their capacity of management and operations.

Consumption Aspect

Promoting fish consumption is extremely crucial, it is important for the community to be made more aware of the benefits of fish consumption, fishing techniques and preservation and preparation methods so as to improve the supply and overall consumption of fish.

Infrastructure Aspect

Construct physical market for fishers in Eyl town. Provision of permanent fish markets will increase accessibility of fish by the consumers, traders and among others. And also build landing facilities for the fishing equipped with sufficient support services (gear, ice, transport and safety equipment) or infrastructure for chilling, storing, and transporting fish.

Equipment Aspect

Provision of equipment and gears to fishers at low cost or shared approach in order to utilize and sustain their use, provide training for the skills to maintain and repair.

Facility Aspect

Provision of cold storage facilities equipped with solar panels would improve the preservation and availability of fish in the district, and hence reduce the electricity cost burden.

Skill Aspect

Provision of proper and relevant skills on harvesting, postharvest and quality would help the fishers to improve their catch and sales. And equip with modern fishing techniques including fish handling and preservation.

Entrepreneurship Aspect

Support youth and women on entrepreneurship skills on fisheries value chain igniting level of innovations that are fundamental for employment

Financing Aspect

Facilitate investment of fishing facilities among the fishers and commercial banks in the main cities using sharing approach through educating on financing models of the banks. And enable fishers to access the credit facilities of the banks.

Cost Aspect

As the fish from Eyl Is expensive compared to others in Garowe market, there should be establishment of strong fishers cooperative in the district which advocates competitive price for their fish.

Regulatory Aspect

Monitoring and protection of the national water sources and formulation of policies to regulate the processes and operations related to fishing in the country.

Market Aspect

Fishers need to be linked to main cities like Garowe, there is demand of fish. The availability of ice and refrigerated trucks would allow transporting fish to main cities.

Women Aspect

Provision of training and financial support for women is necessary to reduce their vulnerability and get engaged into the different levels of the value chain.

Infrastructure and Facilities associated with Cooperative or Association Aspect

As cooperative could boost the sector if they are supported with infrastructure and facilities under their use and operationalization.

Sanitary Awareness and Facilities

Provision of sanitary awareness to fishers in fish handling and preservation is highly important, as well the support of facilities needed.

Governance and Laws Aspect

Advocate on the capacity and commitment of relevant state and federal agencies for the need of efforts to tackle the weak environment within the fishing sector. And Also support the Eyl district authority for the collection of fishing sector information within the district.

Business management skills and financial literacy Aspect

Actors need to be trained on the use of proper costing and pricing methods in their business operations and record management, and as well promote a savings culture and provide financial literacy.

Conclusion

Finally, the fishing sector has the potentiality to boost food and income security for the district population and the entire region of Puntland. A more operating fishery sector would increase the jobs of the residents of the district. Addressing the key challenges facing the sector would help the sector to attract investors. We summarized the major challenges as; poor infrastructure, lack of skills, lack of cooperatives and associations, illegal fishing, high costs of operation, lack of markets, and lack of marketing and promotion of fish and sector as a whole, Lack of specialized knowledge, Very low catch compared to the standard catch, market for the fish, and Lack of investment by the government in developing the infrastructure (roads, landing sites, cold storage, processing sites and energy), policy framework and institutions need to support the growth of the sector.

