**Draft**

**OSRO/SOM/505/CHA**

# FAO Post Tsunami Assessment Mission to Central and South Coast of Somalia

**FIELD REPORT**

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Assessment carried out by:

Daahir Mohamed Burale
FAO Somalia Consultant

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**Executive Summary**

The survey which took 44 days indicated a heavy reliance on fishing as an economic activity in the 31 villages visited. These villages have a total of 15164 permanent fishermen and 4437 seasonal fishermen. Adverse effects of Tsunami wave forced 1125 to emigrate.

There lacks organized groups to assist the fishermen. Co-operatives existed in all the areas before the eruption of civil war. They then collapsed due to mismanagement and lack of support. As a result of this, the individual fishermen suffer the effects of high operational overheads; do not have common pool of resources, lack market information and other benefits that normally accrue associations. The willingness to create and strengthen such associations is however overwhelming in all the areas. They also showed readiness to contribute money towards the same with the goal of establishing a revolving fund.

The fishing community indicated they use nets of mesh sizes ranging from 4.5" to 7.2" to catch sharks. But measurements taken on the nets indicated an actual size of 6". This specification results in random capture of small, medium and large sharks. There is urgent need to control the type of nets used. Mesh size of 10" is recommended in order to save baby sharks. Similar steps need to be taken on nets used to catch other types of fish.

A reduction in yields has been recorded across all the catch types. The community attributes this to over fishing, pollution and lack of control where foreign ships gain access to the waters. Yields are estimated to be more than 30% down as compared to 10 years ago Even with this general decline, fish catches could be higher were it not for lack of reliable market, storage and preservation techniques

Lobster resource, which is the main provider of income in the areas as well as shark and demersal fish in less extend, have suffered severe diminution of approximately 80% in the last 10 years which made think fishermen that they are being depleted by over fishing. The consultant considers there is a serious constraint on this which has to be endorsed with detailed surveys and management measures, before the situation get worst.

Most of the fishermen use home storage in their residences, which hygienically is not acceptable. The only storage facility retained after the war existed in Mareeg area in Eldher district until Tsunami waves hit and damaged it in December 2004. Processing facilities are available in a small number in the main towns such as Adale, Merka, Barawe, & Kismayu. Poor handling of the catches, processing methods and storage results in poor quality products and huge losses: 57% of demersal, 62% of pelagic, 72% of shark caught end up being wasted for these reasons. Fishing is primarily done for the market but the market is unreliable as middlemen control the trade. The locals lack well managed institutions, financial support and information that would greatly contribute to market access.

The community has suffered big losses of boats, engines, nets, traps and other fishing equipment. In total, 229 fiber glass boats, 257 wooden boats and 162 engines were totally lost while 224 fiber glass boats, 232 wooden boats and 143 engines urgently need repair to reverse further losses. 24912 nets, 3730 traps and 587 diving sets were destroyed.

Fishermen identified fishing techniques, engine and boat operations, boat building and repairing, marketing and management, emergency response and first aid, communication, processing and preservation techniques and ocean pollution control as some of the areas they need to be trained on.

This report suggests strict control to prevent depletion of fishery resources, an environmental conservation and management Strategy and access to market as areas requiring tangible action if livelihoods of the community is to be secured.

**Background information**

The Food and Agriculture Organization of the United Nations, Somalia Office, under the project OSRO/SOM/505/CHA sought to get reliable information on the damages suffered by the fishing villages and fishermen of the Central and South Coast of Somalia through an assessment mission referred to losses on fishing boats and gears as well as and timely data on existing, fishery resources available, fishing technology used, socio-economic situations, markets, level of developments and management of the artisanal fishery on the tsunami affected Somalia Coastline, involving also identifying potentials and constraints in the fisheries sector.

This assessment is part of the wider project aimed at reviving the fishing operations and involve the community in managing the same after the disruption by the Tsunami wave of December 2004.

**Mission Objectives**

1. Interview local authorities and fisheries related organization to introduce the project

2. Gather information about previous post Tsunami assessment done in Central and South Coastline of Somalia

3. Visit NGOs working in the area and collect updated information about present or possible Tsunami related intervention in fisheries sector, identify those organizations interested and suitable for partnership.

4. Visit each of the fishermen villages along Central and South Coastline of Somalia

5. Meet fishermen/women and village elders and collect most updated, reliable, detailed information and register the names of the elders and authorities

6. Identify and collect names of possible future project focal points among the fishermen of each village (desirable good leadership and education)

7. To mark geographical positions of each village on the Somalia map.

## Methodology

The assessment entailed visiting 35 villages/areas. 31 of these were visited during the 44 days of the mission as from 26 June up to 8 August 2005. Table 10 shows the name and GPS position of the visited villages.

The following methods were applied in data collection:

a) Direct interviews- structured questionnaires were used to guide the interview
b) Observations
c) Measurements of defined parameters
d) Photo capturing

Data captured is analyzed and produced in this report in the following forms:

a) Narrations
b) Tables
c) Graphs
d) Photos (All photos by D. Burale)

## FINDINGS

Before the Tsunami wave, the situation of fishing in Somalia was devastating and very poor due to lack of equipment, modern fishing techniques and trained manpower. The Tsunami waves dealt a major blow to the already bad situation in the coastal regions of Somalia, hence the situation deteriorated considerably. The destruction of the property caused by the tsunami is high and visible;

### Fishermen Population

The survey indicated a heavy reliance on fishing as economic activity. This is shown by the high fishermen population in the areas surveyed. See Table 1

**Table 1:** Present distribution of active fishermen in Central and South Coast

| Ser. # | Village/Area | District | Emigrated after Tsunami | Seasonal Fishermen | Permanent fishermen |
|---|---|---|---|---|---|
| 1 | Mogadishu | Banadir | 120 | 520 | 600 |
| 2 | Jaziira | Afgoi | 10 | 50 | 150 |
| 3 | El Ma'an | Warsheikh | 10 | 0 | 200 |
| 4 | Warsheikh | Warsheikh | 350 | 1000 | 3940 |

| | | | | | |
|---|---|---|---|---|---|
| 5 | Adale | Adale | 200 | 510 | 894 |
| 6 | Ega | Gal'ad | 30 | 360 | 932 |
| 7 | Mareeg | Eldher | 22 | 0 | 1080 |
| 8 | Hara Dhere | **Conflict area with movement restrictions** | | | |
| 9 | Hobyo | **Conflict area with movement restrictions** | | | |
| 10 | Dhanaane | Merka | 0 | 0 | 70 |
| 11 | Gendershe | Merka | 3 | 10 | 120 |
| 12 | Jilib Merka | Merka | 0 | 40 | 400 |
| 13 | Merka | Merka | 340 | 812 | 1588 |
| 14 | Lihmooro | Merka | 0 | 0 | 180 |
| 15 | El Ahmed | Merka | 0 | 0 | 0 |
| 16 | Mungiye | Merka | 40 | 30 | 640 |
| 17 | Barawe | Barawe | 0 | 200 | 1900 |
| 18 | Kismayu | Kismayu | 0 | 20 | 340 |
| 19 | Goobweyn | Kismayu | 0 | 0 | 225 |
| 20 | Qandal | Kismayu | 0 | 25 | 0 |
| 21 | Ilisi | Kismayu | 0 | 18 | 0 |
| 22 | Fuuma | Kismayu | 0 | 45 | 0 |
| 23 | Koyama | Kismayu | 0 | 200 | 15 |
| 24 | Koyamani | Kismayu | 0 | 0 | 0 |
| 25 | Usiwangumi | Kismayu | 0 | 57 | 0 |
| 26 | Jama Araale | Kismayu | 0 | 0 | 0 |
| 27 | Jovay | Kismayu | 0 | 0 | 210 |
| 28 | Ganbalayu | Kismayu | 0 | 190 | 94 |
| 29 | Istanbuuli | Badhaadhe | 0 | 50 | 174 |
| 30 | Yamani | Badhaadhe | **Migrated area** | | |

| | | | | | |
|---|---|---|---|---|---|
| 31 | Juula | Badhaadhe | 0 | 0 | 242 |
| 32 | Madowa | Badhaadhe | 0 | 100 | 700 |
| 33 | Kudhaa | Badhaadhe | 0 | 200 | 470 |
| 34 | Burgabo | **Fundamentalist controlled & restricted area** | | | |
| 35 | Raskiyanboni | **Fundamentalist controlled & restricted area** | | | |
| | | **Total** | **1125** | **4437** | **15164** |

**Institutional structures**

The Central and South Coast areas' fishing operations are characterized by lack of organized groups. Of all the 31 areas visited, only three have some existing form of associations.

**Table 2:** Existence of organized groups

| **Area** | **No. of fishermen** | **Co-operatives/associations** |
|---|---|---|
| Adale | 1604 | Dan Kulmis fishing co-oprative |
| Merka | 2740 | Danwadaag fishing co-operative<br>Kalkaal fishing co-operative<br>Saafi " "<br>Daryeel " "<br>Walaalaha " " |
| Kismayu | 1439 | Union fishing co-operative<br>Kobora " "<br>Ujeeda badan " " |

The respondents acknowledged that co-operatives existed in all the areas before the eruption of civil war. The groups collapsed after support failed to come by from the local authorities. Mismanagement was also a major factor contributing to their collapse. Even the few existing groups lack the capacity in terms of facilities and personnel to effectively

assist the fishermen. As a result, they have failed to attract membership and support of the fishing community.

However, all respondents at village level were unanimous in their readiness to pool resources together to create or strengthen Fishers' Associations. The suggestion of membership with annual subscription is agreed.

If the interviewed fishermen were to receive cooperation from donors for the reconstruction of the fleet they mentioned would accept to return to Fishermen Associations a local contribution of 15% of the value of items to be eventually received to form a common fund for tsunami reconstruction. When asked about ways they think to improve fishing activities they also mentioned to be interested in the eventuality of establishment of a revolving fund system in the fishery sector in the future.

Most of the interviewed agreed that if they were to receive cooperation by Agencies the returning fund to be given by the beneficiaries to the Fisher Associations at the end of the fishing season (15%) should be used for commonly agreed purpose. The table below shows the identified the uses of that money that would be managed by such associations if it is formed a revolving fund.

**Table 3: Preferred uses of money received**

| | Preferred use | No of responses | Percentage |
|---|---|---|---|
| 1 | Modern processing and storage | 20 | 18% |
| 2 | Clinics | 19 | 17% |
| 3 | School | 18 | 16% |
| 4 | Marine Communication | 15 | 13% |
| 5 | Clean water | 11 | 10% |
| 6 | Market | 10 | 9% |
| 7 | Road and transport | 8 | 7% |
| 8 | Training | 4 | 4% |
| 9 | Fishing equipment | 3 | 3% |
| 10 | Emergency kits | 2 | 2% |
| 12 | Power | 2 | 2% |
| | **Total** | **112** | **100%** |

**Fish catches, species, and methods used**

Fish catches are relatively low due to lack of reliable market, storage and preservation techniques. Potential buyers are only interested in few particular species/products such as lobster, shark fins and king fish.

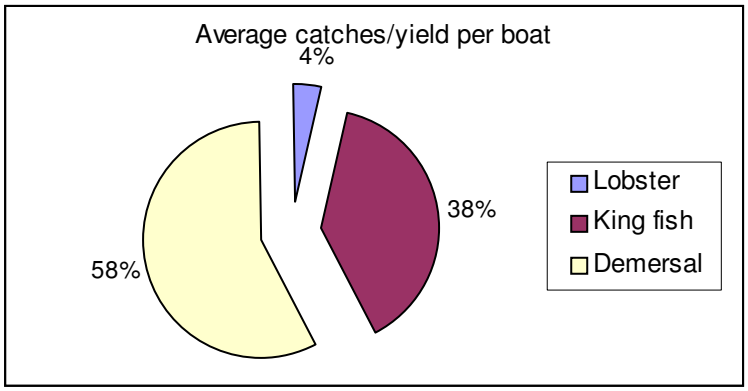
Some boats use more than one method at once. For instance, they spread nets and then engage in lines and hooks in selecting the particular species that they need as per the market demand. Sharks and lobster take the bigger share of the market. The areas stretching from Kismayu to Raskiyanboni also produce sea cucumber and shell nails.

**Table 4:** Species caught and methods used:

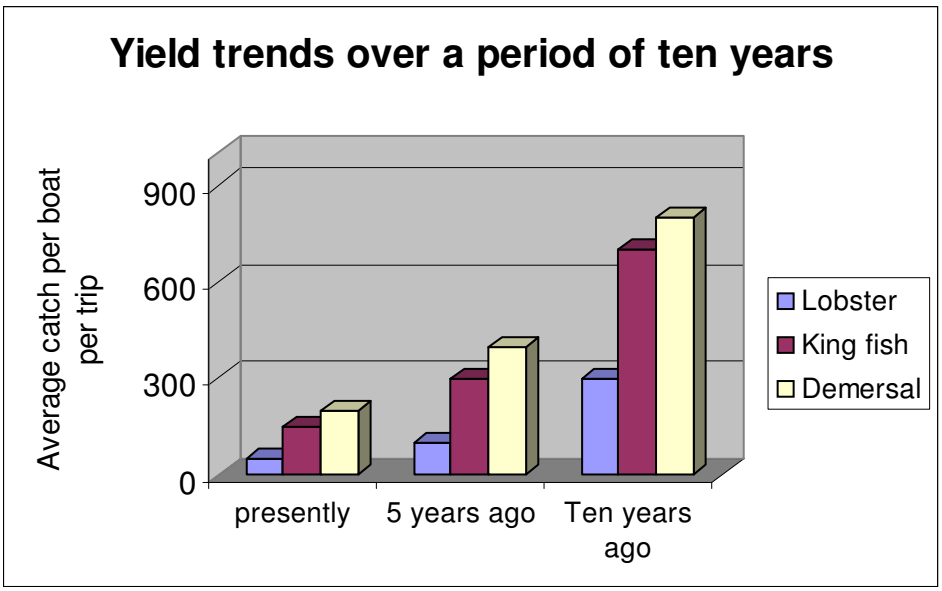
| Species | Used methods | Size of the nets |
|---|---|---|
| Lobster | Nets, diving and traps | 2.4", 3.6" |
| King fish | Nets & lines with hooks | 2.4", 3.6" |
| Demersal | Nets & lines with hooks | 2.4", 3.6" |
| Shark | Nets & lines with hooks | 6.0", 7.2 |
| Sea cucumber | Diving and collection | Manual |

The lifespan of the nets is 2 years. Nets of mesh sizes ranging from 4.5" to 7.2" are used to catch sharks. This results in random capture of small, medium and large sharks. There is an urgent need to control the type of nets used. Mesh size of 10" is recommended in order to save baby sharks.

Similar steps need to be taken on other types of nets. Mesh sizes of up to 3.6" which are used to catch lobster mostly trap the undersized ones, thus representing a threat to this resource. For more sustainable fishing, strong regulations should encourage use of bigger mesh sizes.




A reduction in yields has been recorded across all the catch types. The community attributes this to over fishing, pollution and lack of control where foreign ships gain access to the waters. Yields are estimated to have gone down as shown below:




The community suggests strong government control to curb over fishing and pollution. Decisive action also needs to be taken to control access of illegal foreign ships (IUU) into artisanal fishing grounds who locals claim they have been taking advantage of instability over the last several years. The foreign crew, who lack sense of ownership and care, are also to blame for the pollution of the coastal environment, mainly through dumping.

**Storage and Processing Facilities**

Most of the fishermen are using home storage in their residences, which hygienically is not acceptable for dried and salted fish. At homes, the common practice is to wrap the product (fillet fish and lobster) in plastic bags and then put it in cartons and on the domestic freeze, and sell to any available export companies. Mareeg area in Eldher district was the only point that had retained a storage facility. This was however hit and damaged by the tsunami waves in December 2004.

Processing facilities are available in a small number in the main towns such as Adale, Merka, Barawe, & Kismayu. Adale community has managed to keep a deep freezer container, 2 power generators and a processing center that were built by FAO in the 1980s. The 2 power generators are not in use as they need deep cleaning and maintenance. Two of the walls of the cold storage rooms damaged by the Tsunami waves need major repairing. One side of the generator room hit by the tsunami also needs repairing.

Lack of maintenance and destruction of these cold and processing facilities has greatly impaired their functionality. As a result people mostly use ice, which is available in main towns such as Mogadishu : 2 flake ice making machines, Adale: one block ice making machine, Merka: one block ice maker, Barawe: one block ice maker and Kismayu: 2 block ice making machines. The fishermen always buy the ice those factories.

Smoking and salt-drying methods are used like elsewhere in spite of the existence of processing facilities, thus resulted a bad quality product. The mission established that salt is produced and available in all the regions on the coastline and it has never been a problem, because they produce any time, although some of the areas like Ega and Mareg are not salt producers and buy from Mogadishu or Elma'an.

This traditional salt drying and smoking processing and the storage methods give as a result fishing products of poor quality. On average, the fishing community reported huge wastage of resources due the above mentioned and also due bad post harvest handling procedures. More than 50% of fish catches ends up being waste as indicated in the following table:

**Table 5:** percentage of post harvest loses:

| Product | Percentage loses |
|---|---|
| Demersal | 57% |
| Pelagic | 62% |
| Shark | 71% |
| Lobster | 0 |
| Sea cucumber | 2% |
| Shrimps* | 50% |

* Caught at sea close to Juba river mouth and Bourgabo, and people don't know how to handle this resource, and by lack of ice to take it to market.

Destroyed storage facilities.

**Fish trade:**

Local people consume very small amount of fish due to the traditional habit of preferring red meat although this has been improving over the years. Fishermen therefore produce primarily for the external market.

Fish market is unreliable as the buyers control the product according to the very selective demand from the external market for only few products/species. The locals are in this case helpless, as they do not have access to the international market. The international market for all the different products is known to exist and is actually within reach (East Asia, China, Japan, East and Central Africa, etc). The fishermen who would want to explore the neighbouring country markets such as East Africa still find it difficult to access the market. Factors attributed to this include:

- Absence of well structured and managed institutions
- Lack of financial support
- Lack of market information and marketing services

Once these are addressed, the other factors that would have to come in to facilitate such trade include:

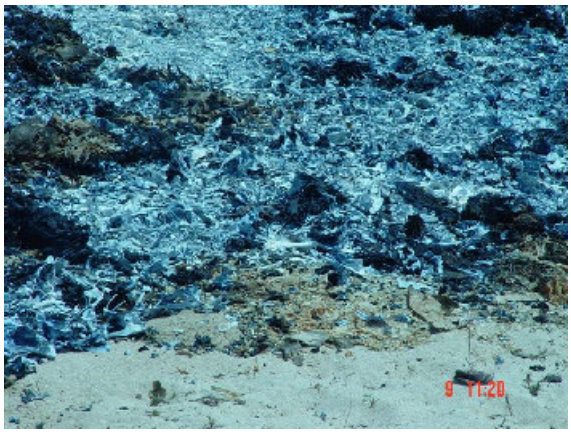
- Modern storage and processing methods accessible to all the fishermen
- Direct flights/shipment
- Road network

All these were used to be provided by the government in conjunction with fishermen's associations which have since collapsed. Presently, buyers obtain the products from the fishermen and transport it to United Arab Emirates by air and Kenya by boat. In these destination countries, the products are packaged for re-export.

**Table 6:** Fish and lobster prices in Central and South Somali coastline 2005

| Species | Average Prices/kg in USD | Main destination & means |
|---|---|---|
| Lobster | 6 | To UAE by air |
| King fish | 0.90 | To Kenya by boat |
| Demersal | 0.60 | To Kenya by boat |
| Shark fins | 100 | To UAE by air |
| Shark meat | 0.40 | To Kenya by boat |
| Sea cucumber | 40 | To UAE by air |
| Snails | 12.50 | To UAE by air |

About 90% of all products are exported. The market is generally unreliable and this leads to further wastage, while the local consumption is very low and there are no cold storage facilities.



Shark meat being salt-dried for export and burnt products after failure to get a market.

**Boats**

Wooden boats are the most widely used. They are built in major costal towns along sea shores and maintained by the local repairers. Woods nails and sailing material which are used wooden boat building is always imported from Kenya and Dubai.

There are also fiberglass boats built mainly in the following factories:

- Jazira Marine Manufacturer of GRP products and boats in Mogadishu

- Al-Furqaan Fiberglass Tanks and Boats Industry, Kaaran, Mogadishu
- Saabir Company LTD in Merka

Al-Furqaan factory products are widely used in Central/South Somalia.

Minor repairing is done by the same fishermen or by some boats repairers in the villages. Mayor repairs are done at the mentioned factories.

However, the local repairer's work is greatly hampered by lack of tools, spare parts and proper training. Well-stocked workshops with well-trained personnel are a necessary feature to support fishing operations. A number of boats were observed on the seashore having been abandoned with no signs of repair efforts. The mission was however able to get the names of a number of people trained or able to repair boats or engines in each area visited. Names of the people are on table 8.

Wooden boat repair and building by the seashore.

Fiber glass building.

**Losses and damages due the tsunami**

The tsunami wave produced loss of boats, engines, nets, traps and other fishing equipment. The damage magnitude of the Central regions is much higher than the South coast regions. From the mission's observation and judgment, some boats recovered need major repairs while others are completely beyond repair. Table 7 shows the amount of items lost by impact of the tsunami:

**Table 7:** Loses and repairable items damaged by the tsunami

| Village/ Area | Fiber boats | | Wooden boats | | Engines | | Nets | Traps | Diving Sets |
|---|---|---|---|---|---|---|---|---|---|
| | Lost | Need Repair | Lost | Need Repair | Lost | Repair | Lost | Lost | Lost |
| Mogadishu | 24 | 58 | - | 32 | 24 | - | 5,400 | - | - |
| Jaziira | 30 | 7 | - | 30 | 30 | 7 | 320 | 120 | - |
| El Ma'an | 6 | 26 | 17 | 4 | 6 | - | 1,645 | - | - |
| Warsheikh | - | 10 | - | 20 | - | 10 | 700 | - | - |
| Adale | 97 | 10 | 75 | - | 61 | 10 | 1,678 | - | - |
| Ega | 20 | 6 | 14 | - | 6 | 6 | 673 | - | - |
| Mareeg | 11 | 40 | - | 10 | 11 | 40 | 2,760 | 3,000 | - |
| Dhanaane | - | - | 10 | 3 | - | - | 240 | 280 | - |
| Gendershe | 7 | - | 5 | 3 | 2 | - | 50 | - | 11 |
| Jilib Merka | - | - | 18 | 15 | - | - | 70 | - | - |
| Merka | 7 | 33 | 6 | 30 | 1 | 33 | 2,200 | - | - |
| Lihmooro | - | - | 1 | - | - | - | 450 | 30 | - |
| El Ahmed | - | - | - | - | - | - | - | - | - |
| Mungiye | 10 | - | 30 | 4 | 10 | - | 600 | 300 | 150 |
| Barawe | 8 | 29 | 40 | 17 | 8 | 29 | 3,428 | - | - |
| Kismayu | 1 | 4 | - | 7 | 1 | 2 | 530 | - | - |
| Goobweyn | 2 | - | 40 | 3 | 2 | 1 | 504 | - | - |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Qandal | - | - | - | - | - | - | - | - | - |
| Ilisi | - | - | - | - | - | - | - | - | - |
| Fuuma | - | - | - | - | - | - | - | - | - |
| Koyama | - | - | - | 3 | - | - | 50 | - | 10 |
| Koyamani | - | - | - | - | - | - | - | - | - |
| Usiwangumi | - | - | - | - | - | - | - | - | - |
| Jovay | - | - | - | 7 | - | - | 1,250 | - | 50 |
| Ganbalayu | - | - | - | 4 | - | 1 | 24 | - | 10 |
| Istanbuuli | - | - | - | 2 | - | - | - | - | - |
| Juula | - | - | 1 | 24 | - | - | 1,200 | - | 6 |
| Madowa | - | 1 | - | 7 | - | 4 | 750 | - | 350 |
| Kudhaa | - | - | - | 7 | - | - | 660 | - | - |
| **Total** | **223** | **224** | **257** | **232** | **162** | **143** | **24912** | **3730** | **587** |

Boats abandoned on shore. Many of them are beyond repair.

More damaged boats.

**Preferred boats**

Most of the fishermen interviewed gave the following in order of preference:

a) 8.5 m fiberglass boats
b) 6.5 m fiber glass boats
c) 6 m wooden boat with engine
d) 13 m fiberglass boats (Sri Lanka)

**Preferred engines**

Fishermen interviewed gave the following engines in order of preference:

a) Sabb 3-4 pistons
b) Yanmar 4-6 pistons
c) Volvo 3-6 pistons
d) Yamaha 15-40 hp

**Preferred nets**

Fishermen interviewed gave preference of nets with mesh sizes 12", 4", 3" and 2" for shark, fish and lobster respectively on 210D/ 72, /18, /12 and /9.

**Training Needs:**

The interviewed fishermen and the local leaders expressed need for training in the following areas:

- Fishing techniques
- Seasonal fishing and weather forecast
- Diving in shallow water and deep sea
- Swimming
- Engine and boat operations
- Mechanics & electricals
- Boat building and repairing
- Communication (sea & land)
- Marketing and management
- Writing and reading
- Emergency response and first aid
- Net making and mending
- Processing and preservation techniques
- Ocean pollution control

**Gender Issue:**

In general there has been gender imbalance in all spheres of work. In fishing sector of Somalia women's participation level is almost zero. They need physical integration which has to go hand in hand with removal of hindrances such as attitudes and stereotyping which present women as backbenchers in economic undertakings and block them from taking part in fishing sector. There is need to deliberately extend training that will enhance women participation in the following areas: -

- Net sewing and mending
- Swimming and diving
- Processing and preservation techniques
- Communication
- First Aid emergency
- Writing and reading
- Marketing and management

The local leaders, women and the fishermen interviewed welcomed the women's involvement and integration in fisheries sector.

**FAO Trained People:**

FAO spent important amount of funds on the fishery sector development including training in Somalia before the civil war. During the visit, the mission met a number of FAO trained people in Merka, Kismayu, Jovay, Modowa, and Kudhaa. These people only need to undergo a refresher course to become future tutors of the project.

**NGO's:**

The mission visited different offices of NGO's and had discussions with a number of their members, who are working in Central and South Somalia, such as:

1. Peace Action Organization for Somalia (PASOS), based in Mogadishu
2. Aaran Relief Rehabilitation & Developmennt Org. based in Mogadishu
3. Ayuub NGO, based in Merka
4. Samawada Rehabilitation & Development Org. based in Merka
5. Afrec Organization based in Kismayu
6. Himilo Foundation based in Kismayu
7. Mother & Child care development Org. based in Kismayu
8. Somali Integrated fishing Organization (SIFO) based in Kismayu
9. Kisima Peace & Development Organization, based in Kismayu
10. Kudhaa Youth Organization, based in Kudhaa.

**Water availability and Quality:**

Water is salty and dirty from shallow wells in all the visited areas except Adale district which has bore funded by EU. Some of the villages have water harvesting provisions and only wait for the rainy season. This means FAO should consider exploring possibilities of getting clean salt-free water in order to help these communities. Most of the fishermen interviewed reported having suffered from stomachaches and malaria effects, which are major health challenges in the area. Ill health was identified as a major hindrance to production. This is what drove the community to call for establishment of clinics alongside other installations in their areas

**Roads and Transport. Impact of tsunami:**

Mode of transport in Somalia remains traditional. All roads close to sea shore are rough; driving is very bad while some of the coastal roads have been forgotten completely and others are not passable especially during the rainy season. The road between El-ma'an and Warsheikh was hit and damaged by the Tsunami.

People cannot rely on sea transport as means of transport as boats available are primarily used for ferrying products.

**Security Situation:**

The security situation in Mogadishu and surrounding areas such as Jaziira, Dhanaane, Gendershe, Jilib Merka and El-Ma'an is not good because nationals and expatriates can't work freely and they will need presence of heavy armed security guards.

Hobyo and Haradhere areas are also conflict area because there are clashes between two sub-clans of Habar Gidir clan (Sa'ad and Saleebaan) and there is a big tension and their militias are still confronting. Mareeg and Ega fishermen and Eldher district administration informed us that the main road between Hobyo and Haradhere is mined and it's not passable, most of the fishermen from Hobyo and Haradhere are in Mareeg and Ega, while others are emigrated to the area between Hobyo and Gara'ad.

Burgabo and Raskiyanboni area is not also accessible and the expatriates can't work as well.

**Future Focal Points of the Project:**

Considering security situation, existence of administrative structures, road network, fishermen population, seashore suitability and communication the following locations are recommended as future focal and installation points for major project activities and facilities: -

- Adale district of Middle Shabelle region
- El Ahmed, Merka district of Lower Shabelle region
- Usiwangumi village of Kismayu district, Lower Jubba region.

**Table 8: GPS information of main fishing areas/location in Central & South Somalia visited during the mission:**

| Ser. # | Area/location | Latitude | Longitude | Sea level | Date |
|---|---|---|---|---|---|
| 1. | Mogadishu | N 2deg 1' 26.574" | E 45deg 20' 0.600" | Alt -25m | 29/06/2005 |
| 2. | Jaziira | N 1deg 56' 59.0774" | E 45deg 10' 46.424" | Alt -23m | 30/06/2005 |
| 3. | Dhanaane | N 1deg 52' 23.463 | E 45deg 1' 38.349 | Alt 2m | 02/07/2005 |
| 4. | El Ma'an | N 2deg 10' 45.312" | E 45deg 35' 43.442" | Alt 15m | 05/07/2005 |
| 5. | Warsheikh | N 2deg 18' 3.72" | E 45deg 47' 52.459" | Alt -2m | 06/07/2005 |

| | | | | | |
|---|---|---|---|---|---|
| 6. | Adale | N 2deg 45' 35.446" | E 46deg 19' 20.458" | Alt -9m | 07/07/2005 |
| 7. | Ega | N 3deg 38' 31.473" | E 47deg 11' 15.884" | Alt -38m | 08/07/2005 |
| 8. | Mareeg | N 3deg 45' 14.189" | E 47deg 18' 04.408" | Alt 0m | 08/07/2005 |
| 9. | Hara Dhere | **Conflict area with movement restrictions** | | | |
| 10. | Hobyo | **Conflict area with movement restrictions** | | | |
| 11. | Gendershe | N 1deg 50' 04.061" | E 44deg 57' 59.397" | Alt -22m | 08/08/2005 |
| 12. | Jilib Merka | N 1deg 47' 56.261" | E 44deg 54'23.217" | Alt -17m | 08/08/2005 |
| 13. | Merka | N 1deg 41' 44.923" | E 44deg 44' 53.507" | Alt 16m | 16/07/2005 |
| 14. | Lihmooro | N 1deg 38' 24.610" | E 44deg 39'45.652" | Alt 0m | 17/07/2005 |
| 15. | El Ahmed | N 1deg 36' 37.556" | E 44deg 37' 27.962 | Alt -27m | 17/07/2005 |
| 16. | Mungiye | N 1deg 36' 8.574" | E 44deg 36' 46.852" | Alt -15m | 17/07/2005 |
| 17. | Barawe | N 1deg 6' 55.799" | E 44deg 1' 40.202" | Alt 3m | 17/07/2005 |
| 18. | Kismayu | S 0deg 21' 39.655" | E 42deg 33' 9.927" | Alt -30m | 21/07/2005 |
| 19. | Goobweyn | S 0deg 14' 59.969" | E 42deg 36'15.663" | Alt -18m | 22/07/2005 |
| 20. | Qandal | S 0deg 26' 55.707" | E 42deg 29' 7.108" | Alt 0m | 21/07/2005 |
| 21. | Ilisi | S 0deg 30' 5.779" | E 42deg 24' 56.823" | Alt -27m | 24/07/2005 |
| 22. | Fuuma | S 0deg 32' 34.969" | E 42deg 22' 58.391" | Alt -13m | 29/07/2005 |
| 23. | Koyama | S 0deg 37' 57.712" | E 42deg 20' 23.378" | Alt -23m | 29/07/2005 |
| 24. | Koyamani | S 0deg 38' 29.466" | E 42deg 20' 17.82" | Alt 35m | 29/07/2005 |
| 25. | Usiwangumi | S 0deg 43' 36.479" | E 42deg 16' 49.969" | Alt -10m | 29/07/2005 |
| 26. | Jama Araale | S 0deg 47' 54.60" | E 42deg 10' 59.967" | Alt -14m | 25/07/2005 |
| 27. | Jovay | S 0deg 52' 20.119" | E 42deg 9'20.508" | Alt -20m | 28/07/2005 |
| 28. | Ganbalayu | S 0deg 53' 48.758" | E 42deg 8' 12.899" | Alt -34m | 25/07/2005 |
| 29. | Istanbuuli | S 0deg 50' 34.489" | E 42deg 5' 48.507" | Alt 11m | 25/07/2005 |

| | | | | | |
|---|---|---|---|---|---|
| 30. | Yamani | **Migrated area** | | | |
| 31. | Juula | S 0deg 59' 59.995" | E 42deg 2' 22.561" | Alt -17m | 28/07/2005 |
| 32. | Madowa | S 1deg 0' 49.95" | E 42deg 1' 45.383" | Alt -33m | 27/07/2005 |
| 33. | Kudhaa | S 1deg 1' 58.991" | E 41deg 58' 25.366" | Alt -23m | 26/07/2005 |
| 34. | Burgabo | **Fundamentalist controlled & restricted area** | | | |
| 35. | Raskiyanboni | **Fundamentalist controlled & restricted area** | | | |

**Constraints in the Fishing sector:**

Major constraints facing the fishing sector were identified as lack of:

- Storage facilities
- Processing facilities
- Market access
- Roads & accessibility
- Knowledge of processing & preservation

The main hazards are

- Threat of depletion of fish resources

**Lesson Learned:**

1. Most of local NGOs working in Somalia do not have marine resource background and expertise

2. All local authorities and leaders of the visited areas do not like working or dealing with local NGOs. They prefer to deal with international agencies and engage in official agreements between themselves and the agencies involved. The mission established that the reason behind this is the history of exploitation where fishing equipment donated and meant for the locals found its way to the market and benefited non-target groups in the past.

3. The communities' willingness to collaborate with FAO is overwhelming given the past efforts demonstrated by the organization in the areas.

**Recommendations:**

To recruit FAO Consultant of fisheries sector for Central and South Somalia in order to implement the emergency intervention, monitor fishing activities and develop future fishing development projects in this area.

Urgent intervention of Central and South Somalia with the following requirements: -

- Fishery rehabilitation project of the affected communities by the Tsunami
- Provide fishing nets/gears
- Repair the damaged boats
- Trainings
- Provide Ice making machines and cold storage
- Support of post harvest
- Marketing for the products

**Strict control to prevent depletion of fishery resources**

One of the greatest threats to sustainability of fishing as an economic activity and source of livelihood in the areas assessed comes from the fishing community itself. This happens through use of fishing nets that facilitates harvesting of immature organisms. A strict control system that would ideally be nationwide in jurisdiction needs to be worked out and enforced by the relevant government organ through local authorities. Strengthened fishermen's associations may greatly help in enforcement of controls among members.

**Environmental Conservation and Management Strategy**

A coastal fishery resource management strategy needs to integrate enterprise with care for nature. This call is for incorporation of not only controls that prevent depletion of fishery resources but also protection of primary food sources that fish depend on. In this regard, traditional dumping of various types of waste, some of which is regarded as toxic, needs to be curbed at all costs.

In most of the affected areas, fish and lobster resource declines have been observed as a serious but not yet assessed fact of environmental negative impact.

Also curbing of illegal fishing activities by foreign ships (IUU) need to be part of control to safeguard against depletion and pollution.

**Access to market**

Fishermen in the surveyed areas have completely missed out on the benefits of economies of scale. This is particularly because working as individuals at all stages, from fishing to marketing, comes with high overheads that effectively reduce earnings. As a step towards increasing benefits, fishermen's associations need to be created and strengthened. In this regard, co-operatives are preferred in all the areas since this is what a larger part of the fishing community is conversant with.

Training will be critical in the area fish handling, good processing practices, administration, business management, marketing, environmental; awareness, etc in order to empower the local people to own, drive and sustain the associations. Such associations should be structured to produce results.

A focus on the improving the market network should be a primary goal priority for any of such grouping. It is clear that middlemen have the only say on prices and how much of the products can find a way to the international market. Yet 90% of the produce is meant for the international market. Not even Kenya, an important and convenient destination and neighbouring market is accessible to the fishermen.

The mission is also of the opinion that the domestic market can be expanded. Reliable market information gathering mechanism will be a key factor in this direction.