

FISHING IN EAST AFRICA.

Fishing refers to all human activities that deal with the hunting of aquatic animals that live in water, i.e Ocean, Lakes, rivers, Swamps. The animals hunted include; fish Whales, crustaceans, molluscus, sponge etc.

Fishing is one of the important economic activities in East Africa. However fishing in East Africa is poorly developed because fishing is carried out by a small group of people using simple methods e.g Angling and spearing.

Factors Favouring Fishing in East Africa.

Physical factors.

1. **Presence of water bodies** the habitat for fish e.g lakes Victoria and Tanganyika, rivers, Nile Rufiji, Pangani, swamps-Mpologoma, Opeta , ponds and the Indian ocean.
 2. Presence of plenty of fish food (planktons) on which the fish feed to grow and multiply
 3. Presence of many varieties of fish of commercial value e.g Nile Perch in L. Victoria and Turkana, Dgaa in L. Tanganyika and Tilapia in most of the lakes.
 4. **The wide continental shelf** with shallow water which allow sunlight to filter through the water and encourages the growth of sea plants on which some fish feed.
 5. The indented coastline which offers **Favourable sites** for the development of **Landing sites or ports** e.g Dar-es-salaam and , Malindi, Lamu.
 6. **Well oxygenated water** especially the fresh waters of East Africa which favour fish life.
 7. The relatively **constant water levels** especially in the lakes due to the reliable rainfall in many parts of East Africa. This ensures the fish life and multiplication.
- #### **Human Factors.**
8. Presence of ready market for fish both domestic and foreign market e.g in Urban centres like Kampala, Nairobi and in the European union.
 9. The Advanced Technology used in fishing e.g where modern fishing equipment is being employed e.g motorized boats, gill nets and purse seine nets
 10. Availability of capital to invest in the fishing activities e.g purchasing the fishing gear. Capital is secured through cooperatives and other soft loans from financial institutions like banks.
 11. **Availability of Transport** e.g improved roads from landing sites to markets used to transport fish.
 12. Availability of labour to carry out fishing, transportation and fish processing activities.
 13. Improved methods of preservation e.g use of refrigeration facilities and modern smoking kilns.
 14. Favourable Government Policy: The East African Governments encourage the conservation of the existing fisheries resources.

Fresh water Fisheries.

- These include: lakes, rivers, swamps, ponds etc including lakes, Victoria, Tanganyika, Albert, Edward, George, Turjana Rukwa, Malawi, Nakuru, Natron. Baringo, Magadi, Manyara Eyasi etc.

The rivers include, Victoria Nile, Kagera, Kafu, Nzoia, Katonga, Rufiji, Ruvuma, Pangani, Ngaila, Tana etc.

- 2.

Marine Fisheries.

In the Indian Ocean where there is a shallow continental shelf for both Kenya and Tanzania. However, marine fishing in East Africa is poorly developed due to the limited modern fishing gear. About 9% of the total catch in East Africa comes from marine fishing. In Kenya marine fishing is concentrated around the ports of Malindi and Lamu. Marine fishing is also important on the islands of Zanzibar and Pemba.

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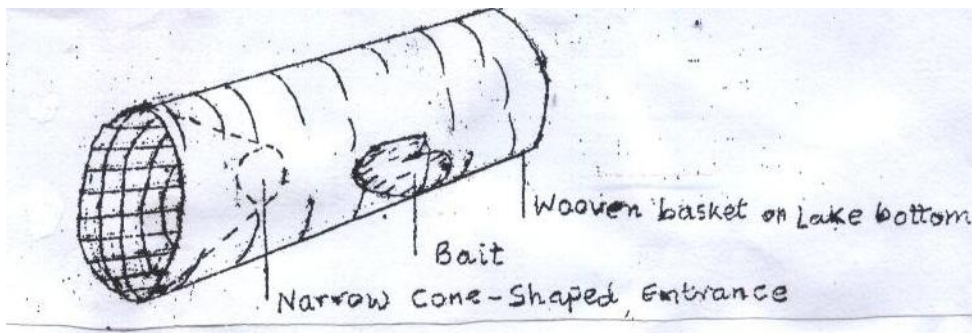
Methods of Fishing.

There are both traditional and modern methods of fishing. The traditional methods include;

1. **Spearing**
It is used for catching fish in shallow water especially in streams and rivers e.g Mud fish.
2. **Angling/use of the hand line.**
This is a simple hook and line method. It catches one at a time. It is very good for catching large cat fish which lie at the bottom half buried in mud of most rivers.
3. **Lamp Attraction.**
Used especially for catching small fish e.g Dagaa and moon fish(silver fish or mukene)
4. **Basket Traps.**

The baskets are woven locally including:

- (a) One with a small hole in it enough for fish to enter. It is placed in water e.g a river or lake bottom with baits inside it. The fish find their way in for food but cannot get out.



- (b) A cone-shaped basket which is held in swiftly moving river water so the unsuspecting fish are caught in the open end and the basket lifted out before they can escape.

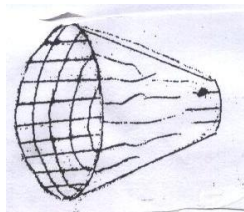


Fig 3

c) Some baskets are placed on the sides of shallow lakes and ponds and lots of people wade and stamp their way through the water to frighten fish into the baskets.

Some of the modern methods include.

5. Gill Netting.

Nets are spread with floats at the top and weights at the bottom. The nets may be placed between boats or between people who wade around in circles to frighten the fish into the nets or spread across a river so that the fish have to swim into the nets. **When the fish gets into the Net,** It gets entangled with the net by the gills being unable to move either forward or backward.

It is normally used for catching shallow water fish i.e Pelagic Fish.

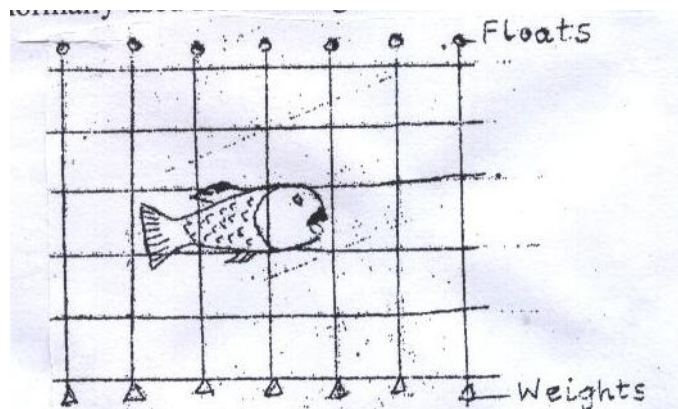


Fig. 4

Nylon Net held vertically in water.

6. Long Lining.

Here Long lines/ropes are trailed behind fishing boats. With very many hooks attached to them. The hooks have baits. When the fish is hooked, the rope is pulled in the boat and the fish is removed from the hooks.

Long lining is used to catch shallow water fish and deep water fish, i.e Demersals.

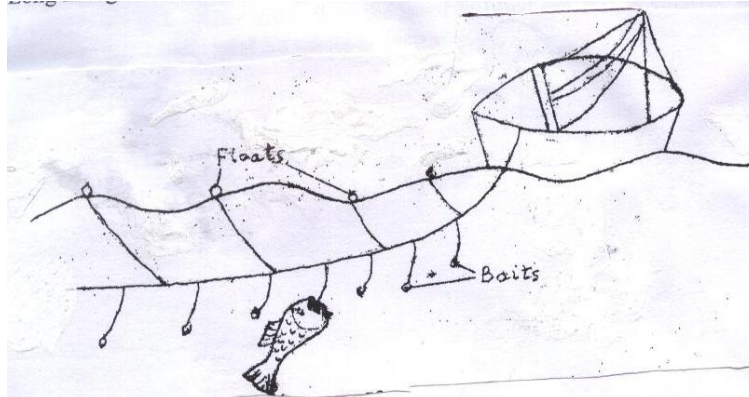


Fig.5

7. **Beach seining/ Drag seining.**

It is carried out in shallow water nets are operated from the shore. One end of the net is tied out in a canoe and is cast in the water while the other end is held at the shore. Ropes are then pulled from the shore and the trapped fish is removed.

8. **Purse Seining.**

It involves the use of a large boat and a small boat and nets. The nets are supported at the top by floats and at the bottom by weights. When the presence of fish is detected by a sounder, the small boat pulls the net around the shoal of fish. When surrounded the lower end of the net is closed by pulling the string at the bottom of the net. The bag of fish is then pulled into the big boat and transported to the shore.

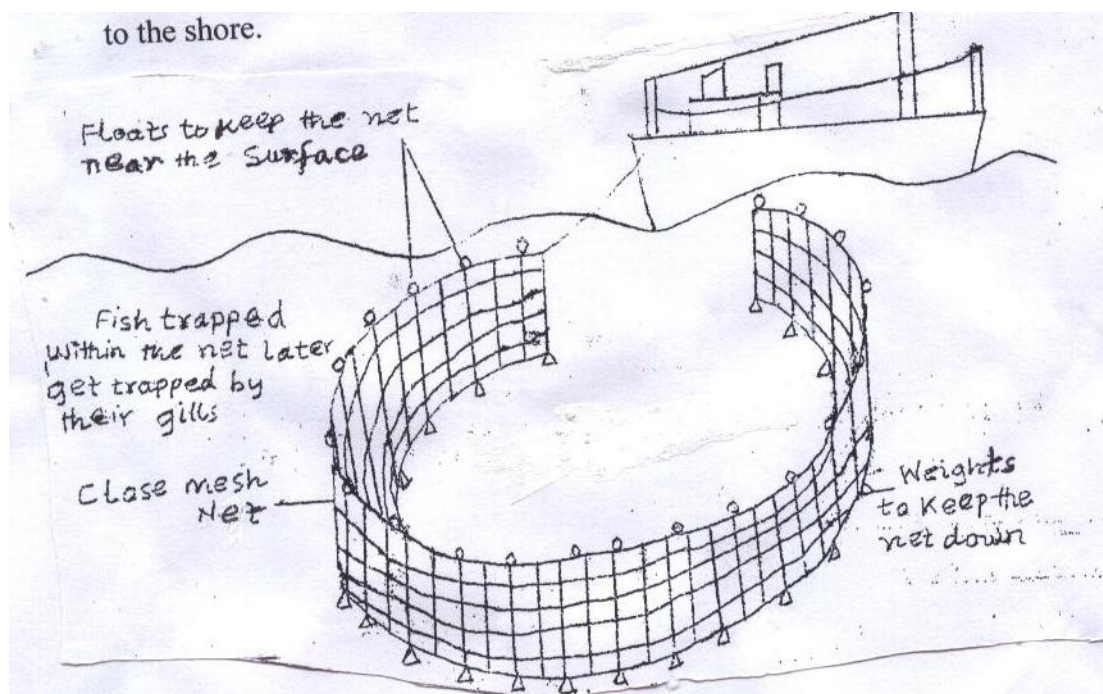


Fig. 6

9. **Trawling**

A cone-shaped net called a trawl is used with heavy weights to allow it deep down the sea. It is towed along behind a fishing boat called a trawler.

As the trawler passes through a shoal of fish, many are swept into the trawl and are trapped in the cod end. After some time the trawl is lifted out and is emptied on the ship's deck. It is normally used for catching deep water fish, i.e Demersals.

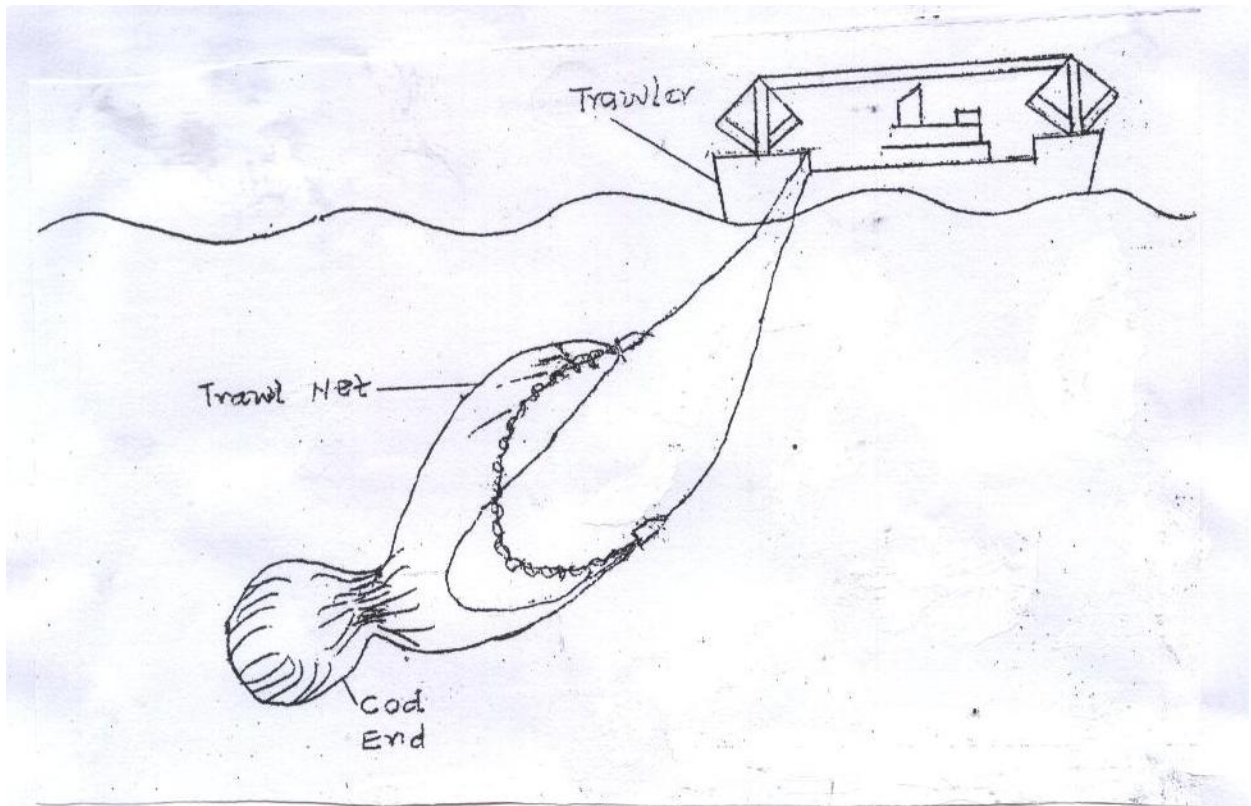


Fig. 7

Types of Fish caught in East Africa.

Fresh water Fish.

1. Tilapia: It is a popular food. It is common in lakes Victoria and Rukwa.
2. Nile Perch: common in L. Victoria, Victoria Nile, L. Kyoga and L. Turkana
3. Dagaa: It is common in L. Tanganyika.
4. Cat Fish: common in the Nile basin
5. Lung Fish
6. Mud Fish
7. Moon Fish (Mukene)

Marine Fish:

These include;

1. Cod
2. Sardines
3. Dolphin
4. Shark
5. Whales

Fish Preservation:

1. Sun drying especially for small fish e.g dagaa on L. Tanganyika and moon fish. Fish is spread in the open to be dried by sunshine before marketing.
2. Salting and sun drying. Fish is smeared with salt then sun dried then marketed

3. Smoking using fire wood to dry the fish before marketing.
4. Refrigeration. Though limited in East Africa. Using refrigerated facilities to store fish before marketing
5. Processing and then canning done in fish processing industries.

Importance of the Fishing Industry.

1. It is a cheap **source of food** or **animal proteins** used by many people
2. It is a **source of foreign exchange** when exported. Fish from East Africa is now on high demand on the world market especially the Nile Perch. Zambia also imports a lot of dagaa from Tanzania.
3. It **provides employment** opportunities to the population e.g: fishermen. Fish mongers and people working in fish related industries like production of fishing inputs and fish processing.
4. Fish bones are used in the **manufacture of fertilizers**, a source of income and boosting the agricultural sector.
5. The fishing industry has led to the **development of infrastructure** e.g roads from the landing sites to markets.
6. It is a source of income to the people involved e.g. fishermen, fish mongers, hence improving their standards of living.
7. It has led to the **development of industries** e.g industries producing fishing inputs e.g Nets and Fish processing industries.
8. It is a **tourist attraction** i.e tourists who are interested in fishing as a game. Tourism is also a source of foreign exchange.
9. Fish oil is used in the **production of cooking edible** oil which is a source, employment and income.
10. Fish remains are used in **the production of animal feeds** like poultry feeds boosting the livestock industry.
11. The skin of fish is used as **leather material** for shoes, belts, bags etc, hence boosting industrial development.
12. Fishing has led to diversification of the economy of East African countries as an alternative economic activity.
13. Fish is used in the production of medicine e.g Cod Liver oil extracted from fish, hence, improving the health of the population.
14. Fish oil is used in the manufacture of cosmetics and soap, hence boosting industrial development and a source of income
15. Fish bones are used in the manufacture of **glue**. A source of income.
16. Fishing activities are used for **study purposes** e.g: Fieldwork studies for schools and institutions.

Problems facing the Fishing Industry in East Africa.

1. There are some lakes especially the rift valley lakes with high alkaline content which makes them unsuitable for good fish breeding which limits fish in these lakes.
2. Drought: The inland fishing grounds suffer from occasional prolonged droughts which reduce water levels in lakes and rivers. Swamps dry up leading to death of fish and reduction of planktons.
3. Poor transport and communication systems between the major fisheries and the markets e.g L. Albert in the rift valley and L. Turkana are far from the major markets.
4. The water Weed/Hyacinth on some fishing grounds. It deprives the fish of light and oxygen leading to death of fish. It also distracts the movement of fishermen e.g on L. Victoria.
5. Shortage of capital to invest in the Fishing industry e.g to buy modern fishing gear e.g big ships and expensive equipment especially for fishing deep water fish.
6. Poor methods of fishing e.g spearing angling and use of basket traps leading to low catch hence, low development of the fishing industry.
7. Poor preservation facilities and storage facilities e.g salting, smoking and sun drying which cannot keep fish for long before marketing.
8. Competition from Foreign Fishermen who encroach on East Africa's marine fishing grounds e.g Russia and Japan fishing in the Indian Ocean.
9. Competition with other leading Fish exporters on the world market e.g Japan, Norway leading to low foreign market.
10. Over fishing where even the young fish are caught leading to depletion of some fish species.
11. Pollution from industrial wastes e.g in Jinja, Kampala and Kisumu leading to death of fish.
12. Predators of fish e.g the Nile Perch which feeds on small fish leading to their depletion.
13. Dangerous animals e.g crocodiles especially in L. Turkana which destroy fishing nets and attack and kill fishermen.
14. Cultural Taboos e.g in some communities women are not allowed to eat certain species of fish at all or eating fish is taboo hence limiting the market for fish.
15. Accidents e.g capsizing of boats which kills the fishermen hence limiting the labour force.
16. Presence of inferior fish species with low commercial value which does not boost the fishing industry.

Possible Solutions to the Problems Facing the Fishing Industry.

1. **Modernization of the Fishing industry** e.g that being sponsored by the UN on L. Tanganyika involving.
Research in fishing activities to identify the problems and solutions to the problems.

2. Provision of **modern freezing** facilities e.g ice and insulated transport facilities to keep the fish fresh until marketing
3. Secure **modern equipment** to capture big fish in deep waters e.g. Trawl nets and boats
4. Introduce **artificial ponds** for fish farming e.g those being established in Kenya to increase the fish population.
5. **Control/limit foreign fishermen** from East Africa's territorial waters of the 200 nautical miles so that local fishermen get a chance to carry out fishing.
6. **Licensing foreign fishermen** who wish to fish within the East African territorial waters
7. Formation of **cooperative societies** to operate Fishing activities e.g **acquisition of capital** through credit facilities/Loans and **Marketing** of the fish.
8. Improvement of **transport and communication** systems to quicken transportation of fish to market before it spoils.
9. **Legislation** e.g by the UNO against pollution or treatment **of industrial wastes** before dumping them in water bodies or **recycling of industrial** wastes to save the fish in the fishing grounds.
10. Introduction of **New Fish species** in the fishing grounds preferably those with high commercial value.
11. **Training of staff** of the fisheries department and Fishermen in management of fishing activities.
12. **Remove the water** weed from the main fishing grounds either physically or biologically to save the fish from death.