

## **FISHING**

1. a)

- The over fished areas are being restocked
- There are laws enacted against indiscriminate fishing types of nets/seasons for fishing/areas free for fishing.
- Special hatcheries have been set up for artificial fertilization of eggs (pisciculture)
- Disposal of effluent into fisheries is prohibited
- Research is carried out to expand and improve fisheries
- Institutions have been set up to train personnel to manage fisheries

b)

- It has an extensive continental shelf
- Its waters are rich in plankton
- It has a long forded coastline which provides sheltered waters ideal for fishing/breeding ground for fish.
- Cold climate/rugged terrain drove people to fishing.
- Norway has a long tradition in sailing and fishing
- It has a well developed ship building industry which provides fishing vessels.
- Its cool climate makes preservation of fish easy/it has advanced technology in fish preservation.

c)

- Harrowing
- spearing
- Poisoning

- Using of rafts
- Single lining

d)

- Setting up fish ponds and hatcheries demonstration farms
- Provision of extension officers to advice farmers
- Encouraging farmers to set up fish ponds
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- Encouraging farmers to set up fish ponds
- Provision of technical and financial assistance to fish farmers by fisheries department
- Government's food policy encourages eating of fish by communities that never ate fish.

2

a)

- Trawling
- Purse seining/serning
- Drifting
- Lining

b)

- Salmon
- Mackerel
- Herring
- Haddock
- Flounder

- Sardine

c) **Indented coastline**

- These provide secure breeding grounds for fish because the bays are sheltered from sea waves
- The sheltered bays provide suitable sites for building fishing ports/fishing landing site.

**Ocean currents**

- The meeting of cool and warm currents causes upwelling of ocean water which brings plankton/fish food to the surface and for oxygenated waters.
- Cool waters provide ideal water temperatures for survival of numerous species of fish.

d)

- Freezing
- Sun drying
- Salting
- Smocking
- Canning

e)

- The occurrence of strong winds leads to high waves causing accidental drowning/destruction of fishing vessels and nets.
- Most fishermen have poor fishing equipment/motor boats engines which are ineffective. This leads to low catch delayed landing

- Fishermen lack appropriate storage/preservation facilities which cause heavy losses of the catch/low catch.
- Presence of floating vegetation/water hyacinth which entangle and tear the fishing nets which is a loss to the fishermen
- Parts of the lake shores are swampy/marshy which makes the landing of the catch difficult.
- Insecurity/theft of fish and fishing equipment discourages the fishermen.

3. a) P-Norway

Q- Japan

b)

- The areas have cool waters which have abundant supply of planktons which is the main food of fish.
- The areas have shallow continental shelves which allow light to penetrate to the sea bed encouraging the growth of micro-organisms used as food by fish.
- The areas experience convergence of warm and cool currents which result in upwelling of ocean water thus bringing minerals for fish and planktons from the sea bed to the surface.
- Cool waters experienced in most of these coastal areas encourage thriving of numerous fish species
- Most of the coasts are indented/have numerous sheltered bays which provide secure breeding grounds for fish.
- The sheltered bays provide suitable sites for building fishing ports/fish landing sites

- The large population in these areas provide a ready market which promotes the fish industry.
- The rugged landscape in some of the areas limits agricultural activities thus people turn to fishing as an alternative economic activity.
- Cool to cold climate provides natural preservation of fish.
- Advanced technology enhances fishing
- Cold climate limits agriculture

4

a)

i) R- Trawling

S - Basket fishing

ii) **Basket fishing**

- The basket is funnel shaped to slow easy entry for fish.
- At the mouth there is no –return valve which restricts the outward/escape movement of fish once inside the basket
- The basket is lowered in water with the mouth facing the direction from which the water is flowing.
- A bait is put in the basket.
- The basket is held in position with ropes/stones/sticks to prevent it from being swept downstream
- The basket is left in that position for sometime/overnight for landing.

### **Trawling**

- A gag-shaped net is attached to a ship/trawler
- The nets mouth is kept open by other boards/head beams

- The upper part of the net is kept afloat by corks/floats.
- Weights are used to keep the lower parts of the net at the seabed.
- The trawler drags along the net
- After sufficient fish is caught, the net is hauled to the trawler.

5. a)

- Fishing are all activities involved in harvesting of aquatic life in the seas and inland waters world over
- Fisheries refer to all the water resources which form the habitat from which fish is harvested. They are numerous such as seas, oceans, rivers, ponds, lakes among others.

b)

- Presence of planktons which fish feeds on.
- Cool climate favouring the growth of fish food and for preservation of the catch.
- Indented coastlines for breeding of fish as well as development of fishing ports and villages
- Environmental influences such as numerous islands
- Large population to offer ready market and labour.
- Advanced fishing technology for high volume of catch as well as processing of catch.

6. a) World's major fishing grounds

- High latitudes offers cool climate ideal for flourishing of planktons and preservation of fish.

- They are washed by warm and cool ocean currents and indented coasts offering ideal breeding ground for fish.
- Environmental factors limiting meaningful agricultural activities hence fishing is the alternative occupation
- A wide continental shelf for a rich fishery.

7.

a)

- Pelagic fishing; fishing used to catch fish which swims near the water surface
- Dimersal fishing: Fishing done close to the shores in shallow and sheltered waters along the coast and stretches of rivers
- Inshore fishing: Fishing done close to the shores in shallow and sheltered waters along the coast and stretches of rivers
- Fresh water fishing: Fishing done in streams, rivers, lakes and ponds having fresh waters.

b)

- Traditional methods of fishing include;
- Harpooning
- Wooven baskets
- Traps
- Handlines
- Herbs

c)

### **Drifting method**

- Tennis like nets are hanged vertically in water

- The nets are kept open by floats on upper side and weights on the lower side and weights on the lower side.
- On both sides , the edge of the net is anchored on the seabed.
- It is left in the position overnight
- When fish swims on it. They are entangled by their gills.

d)

#### **Trawling method**

- A cone shaped bag is attached to a slow moving ship
- The bag is dragged over the seabed
- Its upper part is kept open by floats (otter boards) and lower part kept open by weights.
- When sufficient catch is realized, the net is hauled back to the trawler.

8.

a) Uganda

i) Lakes Kyoga, Albert, George and Katwe. Rivers Nile, Kafu, Smiliki, Katonga and Kagera.

Tanzania

Lakes Rukwa and Malawi

Malagasi swamp

Rivers Ruvuma, Rufiji, Rungwa and Great Ruaha.

ii)

- The lake has many landing grounds
- Dense population around the lake offer cheap labour and ready market



- Lake has many fish species of commercial and domestic value
- High demand for fish around the lake region.

b)

- Inadequate market for marine fish.
- Inadequate capital to purchase the required fishing gear.
- Narrow continental shelf hence poor fishery.
- Competition from other foreign countries
- Rough sea wave limiting deep sea fishing

9. a) Source of employment

- Tourist attraction- sport fishing
- Source of food rich in protein
- Facilitate development of industries
- Medical value
- Income generation
- Source of foreign exchange
- Development of settlement
- Improvement of infrastructure

b)i)

- Inadequate capital to purchase modern equipment
- Low level of technology to undertake commercial fishing
- Inadequate transport network leading to high perish ability of fish.
- Limited internal market
- Presence of aquatic weeds hindering fishing activities

- Pollution of fisheries

ii)

- Formation of co-operative societies to advance loans and market fish.
- Ban on indiscriminate fishing in order to harvest only fish required sizes
- Restocking of overfished waters with fast maturing fish
- Legislation to control any form of pollution on the fisheries
- Improvement of infrastructure to the fish landing grounds
- Construction of cold storage facilities to preserve fish
- Establishment of research centers to research on fast maturing fish species
- Increased surveillance of fisheries to curb illegal gear and overfishing.

#### 10. Similarities

- In both countries, fishing co-operative societies have been formed
- Fisheries in both centres face the problem of overfishing and pollution of fisheries.
- In both countries, fish farming is done
- Similar methods of preservation and processing is employed in both cases

#### 11. a)

i) Management of fisheries refers to all measures undertaken for better and useful exploitation and rehabilitation of fisheries

ii) Conservation involves the proper utilization of fisheries to ensure little or no wastage.

b)

- International agreement on fisheries
- Forbidding indiscriminate fishing

- Carrying out research
- Restocking overfished waters
- Control of pollution
- Artificial fertilization