

FISHING

MARKING SCHEME

1990 Q2

(a)

- Mining of salt, e.g. Fundisha salt works
- Tourism numerous tourism resorts, marine parks
- Transport, Ocean liner sand boats ply coastal waters
- Exploitation of mangrove swamps
- Trade
- Ship repairs/boat building

(b) (i)

- Allow better use of land water resources e.g ponds swamps etc.
- Contributes to meeting the demand for food e.g animal proteins by increasing the supply to the local production
- Creates employment/income opportunities e.g pond construction e.t.c
- Fish culture helps maximize on the use of wastes
- Fish farming is free from inter-territorial conflicts and disputes
- It may lead to development of related industries e.g fertilizers or (Any named industry applicable) Any processing industries
- Fish may be exported thus earning foreign exchange

(ii)

- Establishment of fishing co-operatives which give loans to fishermen
- Introduction of improved fishing techniques and equipment in fishing industry
- Introduction of refrigerated containers/vessels
- Improvements in transport of fish to markets
- Expansion of markets through intensified campaigns aimed at encouraging more people to eat fish
- Restriction of importation of fish/fish products
- Establishment of research institutions to investigate aspects of the fishing industry
- Control of water pollution

(c)

- The law ensures that countries have an extensive sea frontage from which they can exploit marine resources
- It reduces the competition of such resources especially from the developed countries
 - which have the capacity and skills to exploit the resources over wide areas
- The zone is useful for security or military purposes
- Most African countries have large expanses of the sea to make it free from international pollution

1994

(a)

- Trawling method is use to catch fish in the open water away from the shore using large ships/boats known as trawlers
- The trawl net which is bag-shaped is attached to the trawler
- The mouth of the trawl net is kept open by other boards of head beams

- The upper parts of the trawl net is kept afloat while bottom part is held down by weights
- The trawler trap fish drags the trawl net along the sea bottom
- After sufficient catch is realized, the net is hauled into the trawler
- Factory trawlers are equipped with refrigeration and canning facilities

(b)

- The area has shallow waters for aeration, light and wide continental shelf for abundance of fish
- Continental shelf/land derived minerals which are suitable for their growth
- Cold water which is suitable for the growth of more commercial species of fish/cold winters provide natural ice for preserving fish
- Cold and warm currents in the Northern Hemisphere tend to converge near the coast
- This causes upwelling of waters which in turn bring fish food to the food to the water surface
- Fishing tradition/culture rugged landscape
- Adequate capital
- Advanced fishing technology
- The nature of the coastline. Land in the Northern Hemisphere has indented /indented coastline which are suitable for fish breeding and development of fishing ports and villages.
- Availability of market. The region is densely populated and this provides ready market for fish
- Convergence of two currents favours the growth of planktons.

(c)

Explain why fresh water fishing is more important than sea fishing in Tanzania

- There are numerous inland fishing grounds swamps/rivers/lakes which are accessible to many people
- Fresh water fish is more popular. This encouraged more inland fisheries while equipment for sea fishing are inadequate/low level of technology.
- Tanzania has a regular coastline with a narrow continental shelf which lacks suitable breeding environment for fish, while inland fisheries are rich in plankton and hence with fish
- Inadequate capital to buy fishing equipment

(d)

Explain how the fishing industry has contributed to the economy of Kenya.

- It is a source of income / self-employment thus individuals are able to generate income through fishing
- The industry has led to the development of ports and fishing villages/transport facilities, which make such areas accessible. Fish products are used as raw materials in other industries such as manufacture of animal feeds and shoe making
- Fishing is a sport that attracts tourists. Thus it generates revenue/foreign exchange for the government
- Fish related industries have been developed
- Revenue to government through taxation/ export.

1997 Q 3

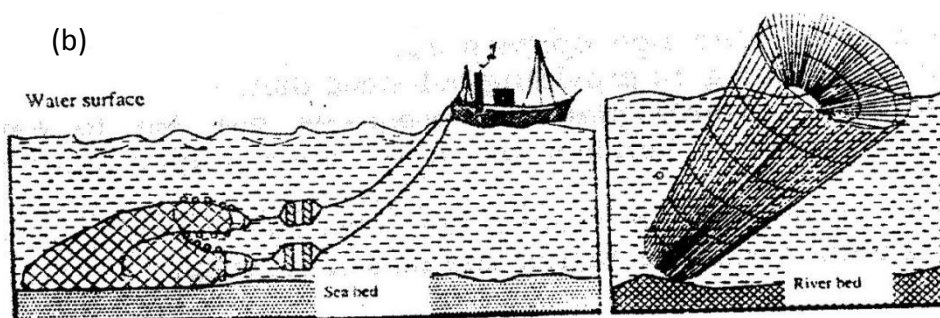
- The continental shelf is narrow
- Poor transport connections to the fisheries
- Local fishermen do not have adequate capital
- The coastline is fairly straight/has few indentations
- The water is too warm for fish breeding/ lack of upwelling of water/shallow continental shelf

- There is low demand for fish
- The fishermen lack modern equipment/preservation facilities/storage facilities
- Inadequate skills/inadequate research/technology
- Competition from developed countries
- Provides alternative sources of protein/save foreign exchange
- Encourages development of infrastructure
- It is a source of income for the farmers/earns foreign exchange
- It creates employment opportunities
- It promotes industrial development

1998 Q 8



- P- Norway
- Q- Japan
- The area has cool waters which have abundant supply of plankton which is the main food for fish
- The areas have shallow continental shelves which allow light to penetrate to the sea below 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 waters thus bringing minerals for fish and plankton from the sea bed to the surface
- Most of the coast 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 limits agricultural activities thus people turn to fishing as an alternative economic activity/ cold climate also limits agriculture
- Cold climate provides natural preservation of fish



(iii) R – Trawling

S – Basket fishing

Basket fishing

- The basket funnel shaped to allow easy entry for fish
- At the mouth there is a non- return valve which restricts the outward/ escape movement of fish once inside the basket it is held in position with tropes/ stones/ sticks to prevent it from being swept downstream
- The basket is left in that position for sometime/ overnight then removed for landing the fish

Trawling

- A bag – shaped net is attracted to a ship – trawler
- The nets mouth is kept open by otter boards/ head beam
- The upper part of the net is kept a float 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

- Fishing is restricted to specific seasons to allow for breeding and maturing of fish
- The size if the nets used in fishing are standardized to ensure that fingerlings are not caught
- Licenses are issued to prospective fishermen to control their number and to ensure that there is no over fishing
- The law of the sea restricts fishing in the exclusive economic zones/ this ensure the protection of marines fisheries from external exploitation
- Fish farming is being encouraged to ensure that there is sufficient supply of fish from other sources other than the natural fisheries
- There is restriction of the water remain artificial fertilization is carried out is special hatcheries to sustain the supply of fish/ restocking of over fished waters

2002 Q 3

- The over fished areas are being restocked.
- There are laws enacted against indiscriminate fishing / types of nests/ 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 / control of water pollution through legislation.
- Research is carried out of expand and improve fisheries
- Institutions have been set up to train personnel to manage fisheries.
- b)
- It has an extensive continental shelf.
- Its water are rich in plankton

- It has a long forded coastline which provides sheltered waters ideal of fishing / breeding ground for fish.
- Cold climate / rugged terrain drove people to fishing
- Norway has a long tradition in sailing and fishing
- It's cool climate makes preservation of fish easy / it has advanced technology in fish preservation / fishing advance techniques.

2003 Q 9

- Trawling
- Purse-seining
- Drifting /gill net
- Lining /Line /hook and line/longline

- Salmon
- Mackerel
- Herring
- Haddock
- Flounder
- Tuna
- Sardine
- Pilchard

Indented coastline

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

Ocean currents

- The meeting of the cold and warm currents cause up welling of the ocean water which bring plankton/fish food to the surface.
- Colder currents provide ideal temperature for survival of numerous species of fish/growth of planktons.

- To increase the fish number/ restock over fished areas by breeding fingerlings in fish farms and then release them into the sea/induced fish regeneration.
- Standardizing the size of fish nets used in fishing to ensure that only the mature fish are caught.
- Restricting disposal of untreated waste into the sea to ensure that the water remains clean for survival of fish.
- Enforcing the international conventions in order to protect the endangered fish species
- Licensing fishermen to control their numbers and ensure that there is no ever-fishing
- Restricting fishing to specific seasons to allow for breeding and maturing of fish/ ensuring natural regeneration of fish..

- Freezing
- Salting
- Canning

- Sun drying
- Smoking

- The occurrence of strong wind lead to high waves causing accidental drowning/destruction of fishing vessels and nets
- Most fishermen have poor fishing equipments/ motorboat engines which are inefficient. This leads to a low catch delayed landing.
- Fishermen lack appropriate storage/preservation facilities lead to low catch
- Presence of floating vegetation/water hyacinth entangles and tears the fishing nets, which is a loss to the fishermen. // hunters movement of fishing boats.
- 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 fisherman.

2012 Q2

(a)

- Trawling
- Drifting
- Seining / purse
- Line fishing / lining

(b)

- Encourage fish farming
- Restocking over fished areas
- Banning indiscriminate fishing/enforcing the use of standardized nets/seasonal ban of fishing to allow breeding
- Establishing research stations
- Controlling water hyacinth
- Dredging of skilled lakes
- Looking for external markets for fish/encouraging fish eating culture
- Controlling water pollution
- Establishment of ministry of fisheries
- Encouraging formation of fishing co-operatives
- Establishment/improving roads to fisheries