FISHING

Fishing is a primary profession as it is directly related to nature i.e. Water. Other primary professions are: Mining, farming, forestry.

Fishing as a system

Inputs
- Water bodies e.g. Sea, river, etc.
- Labour like fishermen
- Capital or investment
- Handmade nets
- Wooden boats
- Sailing boats
- Ice baskets
- Gill netters
- Mechanized boats
- Cans
- Salt (for processing)
- Vaccinates for vaccination

Processes
- Catching or harvesting
- Feeding
- Vaccinating
- Refrigerating / Preserving
- Gutting (cleaning)
- Canning
- Breeding
- Salting

Outputs
- Fish and fish products

Subsistence vs Commercial Fishing

Subsistence
- For home use / family use.
- Coastal only (if marine)
- Less capital is invested
- Traditional methods are used e.g. Sailing and wooden boats, ice baskets, family labour, inherited knowledge, handmade nets, etc.

Commercial
- For sale / profit
- High amount of capital is invested
- Can go 50 – 60 km off shore (if marine)
- High catch/output
- Modern methods are used e.g. Engines, gill netters, skilled labour, chillers, nylon nets etc.

Marine vs In-land

Marine
- Practiced in sea waters e.g. Makran (Balochistan) and Sindh (Karachi) coast.
- Both commercial and subsistence e.g. Local market, international market (exported)
- Modern as well as traditional methods used.

- Relatively less labour is required as compared to in-land.
- but more catch as compared to in-land
- Catches are: Sharks, drums, cat fish, ray, croakers, herrings, skates.

In-land
- Practiced in rivers, lakes, ponds, reserviors of dams and includes in-land fish farms as well
- Examples are reserviors of Mangla and Tarbela dams, Haleji lakes, etc.
- It is used for both commercial (only local) and subsistence
- Less catch due to less quantity in reserviors because of traditional methods
- More labour is required because:-
  - More labour is required for fish catching
  - More people live near reserviors
  - People needed for hatcheries
  - For feeding on in-land fish farms
  - For vaccinations
  - For transport, etc.
- Catches are: Trout, rahu, thalla, palla, grass, crap, silver

Sindh vs Makran coast

Sindh
- Example is Karachi port
- It has less coastal area which is 30% of the total coast of Pakistan
- More output due to :-
  - More creeks / natural labour
  - More use of modern methods
  - Developed infrastructure e.g. Roads / railways for transport
  - Wide shallow sea (more continental shell)
  - More availibility of nutrients for fish in the Indus Delta
  - Better processing and refrigerating facilities because of availibility of electricity,   etc.

Makran
- Fishing centres are: Jiwani, Ormara, Pasni, Gwadar
- More area i.e. 70% of the total coastal area of Pakistan
- However, Less output due to poor infrastructure like:
  - Lack of roads for transport
  - Lack of educational centres for training skills
  - Lack of fresh water for processing
  - Lack of electricity for processing
  - Lack of telecommunications to markets
- Old / traditional methods are used.
- Less continental shell / less shallow sea.

In-land fish farms

Distribution
- Mostly in Punjab
  - Mostly along rivers or on doabs
- Many in Sindh
  - Many along River Indus
- Some in KPK / NWFP

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- None in Balochistan
- None in extreme north (Gilgit Baltistan)

Methods
- Fish lay eggs in hatcheries where they are hatched
- Small fish are shifted to rectangular ponds
- Feeding in ponds
- Vaccination if required (when sick)
- When fish attain certain weight and age then:-
  - They are transported to market...
  - .. where they are sold for profit

Fish Marketing

- Sold in either 1) Local or 2) International market
  - 1) — In international, exported to Japan usually in shrimps.
    - Also, in Middle East and Sri Lanka (mainly dried shrimps)
  - 2) — In local markets, sold to retailers
    - There are two types of retailers: Superstore (canned fish) and Street bawkers /
local shops (fresh fish preferred)
- More catch but less local consumption diue to:-
  - Expensive therefore difficult to afford
  - Not a preferred meat as chicken / mutton are usually preferred
  - Fresh fish is not available everywhere and since that is the preferred type, people are reluctant to eat it.
  - People are unaware of its benefits due to low literacy as they do not know that it is a low cholestrol die (good for heart patients).
  - People who are educated are reluctant because they know that they are caught from polluted water.
  - Lack of storage facilities, etc.

Problems of fishing industry

- Lack of capital / poverty of fishermen so modern methods i.e. Gill netters, trawlers, etc cannot be purchased.
- Lack of education so fishermen are unaware of modern techniques.
- Unhygenic environment of fish market therefore buyers are reluctant.
- Threat to mangrove trees due to polluted water. This reduces the amount of fish because they are:-
  - Breeding ground for fish
  - Provide food (planktons) to fish
  - Protect them from predators
- Water pollution due to many reasons i.e oil seepage which kills fish.
- Lack of government attention which slows down the development of this industry.
- Lack of modern machinery so fishermen cannot go to deep sea water for more catch.
- Lack of storage facilities so a lot of fish are wasted.

Solutions / Development

- More processing facilities like canning, gutting, etc.
- Increase in storage facilities e.g. Refrigeration, ice factories, etc.
- Modern methods are being introduced by the government. For example, loans are being provided for purchase of new methods e.g. Engine, boats, etc.
- Marine Fisheries Department has been established which monitors deep sea vessels and also strengthens quality controlled laboratories.
- Development of Makran coast especially of Gwadar port e.g. More storage, ice and

processing facilities.
• Fish harbour of Pasni with the help of Asian Development Bank.
• Guidance and weather information for media and Meteorogical Department.
• Awareness about establishing in-land fish farms through pamphlets by Fisheries Departments of different provinces.

Importance of fishing industry

• Contributes to GDP/GNP (Gross National Product) therefore to national income.
• Fish are exported like shrimps to Japan and ...:-
  – Are thus a source of earning foreign exchange.
  – Improves Balance of Trade
• It restricts imports of fish as it fulfils local demand.
• Employment for fishermen
• Extra income to agricultural farmers who also own fish farms
• Reduces rural to urban migration because most of the fishing centres are in remote areas.
• Helps to develop remote areas e.g. Coastal areas of Balochistan, like roads / electricity.
• It is a nutricious food with :-
  – More protein and
  – Less cholestrol
• Used in poultry feed
• Used in fertilizer industry
• Used in pharmaceutical industry
• Used in cosmatic industry

Advantages & Disadvantages of developming fish industry in Pakistan

Advantages
    • More food
    • Healthier food e.g. More protein, etc.
    •More exports e.g. Fish to Japan, dried fish to Middle East, etc.
    • Better communication e.g. Better roads and telecommunications in Balochistan so better infrastructure
    • More education by teaching skills
    • More technology e.g. Introduction of engines, machines, etc.
    • Growth of other industries like processing and boat building
    • Sustainibility as fish are 'free', thus should not run out.

Disadvantages
    • Lack of skilled labour due to high illeteracy
    • Technology costs money as it has to be imported, and as Pakistan is a developing coutry
    • Water pollution – kills, damages fish, Pakistan rivers are polluted, mangroves polluted.
    • Restricted – marine fishing banned in June and July (only seasonal employment)
    • Some products bnned by western countries ...:-
      – .. as they are caught from polluted water.
      – .. can be poisonous / makes them unsuitable to eat.
    • Income – not large, delay of profit (not very profitable)
    • Sustainibility – especially issue of over-fishing.