

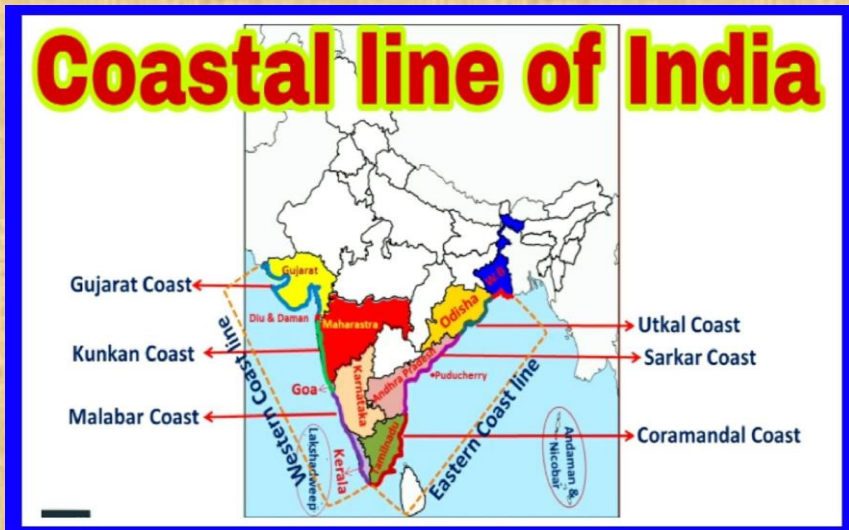
Chapter 09

Production of Food from Animals

Fisheries:

Fish is rich sources of high quality animal protein.

- India has a coastal line of about 7500km.
- Total available area for fishing both inshore and offshore is nearly 0.48 million square meter.



- There are extensive inland water areas comprising of numerous rivers, fresh water and brackish water, lakes, reservoirs, tanks, ponds, swamps etc.

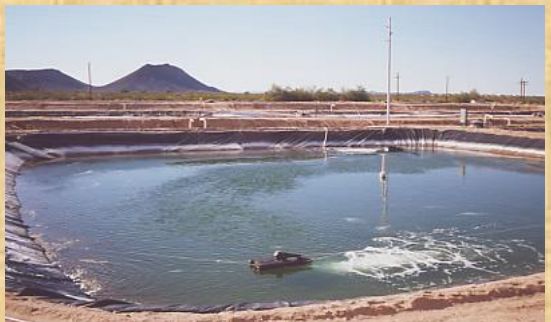




- Nowadays fish and prawn culture is a large-scale industry in the coastal districts of our Country.



- Most of the farmers convert their agricultural fields into prawn culture ponds.



- The marine water is the big source of fish.



It is constituted by several groups of varying magnitude and importance. The sardines, mackerel, crustaceans, tunas, molluscs, catfish, ribbon fishes are some of the marine varieties. Besides these, the sea weeds may be included, which form an important living source from the sea.



Sea weeds constitute an important marine resource and they are found along the Rocky intertidal and sub tidal regions of the coasts of India. The Sundarbans, the Chilika lake, the deltas of Godavari and Krishna, Gulf of Mannar, Palk bay, Gujarat coast and around Lakshadweep, Andaman and Nicobar Island are the areas rich in sea weeds.

Uses of seaweed:

They are used for human consumption, as cattle and poultry feed, as manure and for industrial purposes as the sources of phycocolloids like Agar-agar. Prawns, lobsters, and crabs together constitute the crustacean fishery.

A few examples of local varieties of fishes are,

- Murrel (Korramenu)



- Catla (Jalla)



- Katrana (Bochalu)



- Rohu (Mosu)



- Seer (Vanjiram)



Cultivating fish and prawn is a large-scale industry in our state. In our state cultivating fish is done in lakes, rivers and reservoirs. So fish breeds are collected, suitable to these water and reared.

Fish seeds:

Fish larvae or fish eggs are called as fish seeds (breed).



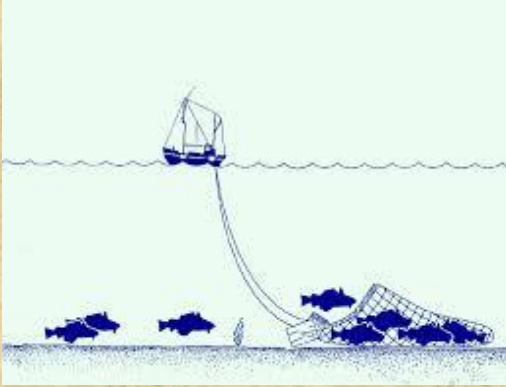
So, selection of fish breed, collecting fish seed and catching fish are important activities in fish culture.

This topic is again subdivided to marine fisheries and inland fisheries.

Marine Fisheries:

India's marine fisheries sources include 7500 km of coastal line and deep seas beyond it.

Marine fish are caught using many kinds of fishing nets through fishing boats.



With the introduction of synthetic fiber nets, there has been revolution in fishing gear material.



Fishermen catching fish by machines is called mechanized fishing and they catch tons of fish everyday.



Marine fishes with high economical value:

Examples:

Finned fish like mullets, bhetki and pearl spots and sea fishes such as prawns, mussels and oysters and sea weed.

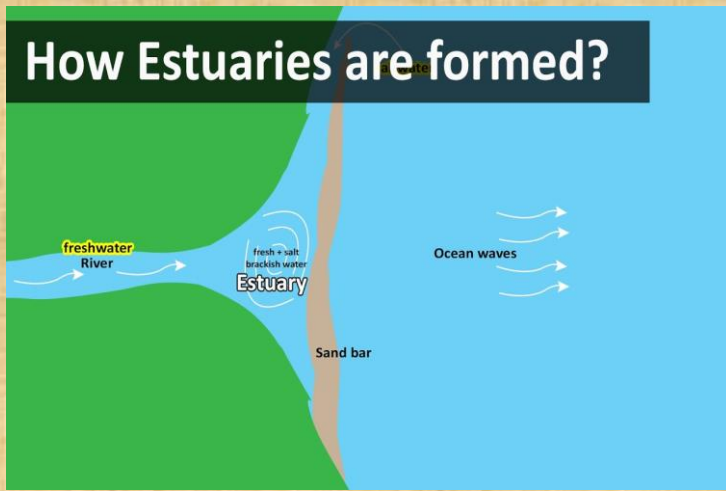
Inland fisheries:

Fresh water resources include canals, ponds, reservoirs and rivers, brackish water resources, estuaries and lagoons where seawater and fresh water mix together, are also important fish reservoirs.

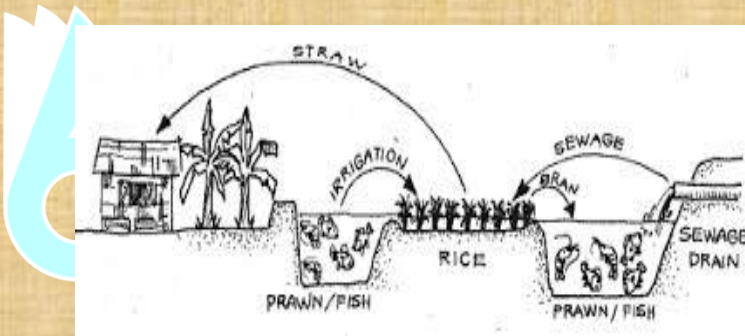
Fishing is also done in such inland water bodies, but the yield is not high.

Estuaries:

- Estuaries are a part of the river systems.
- The environmental conditions are in a state of flux and fauna is a combination of fresh and salt-water species, which can tolerate considerable variations in salinity.



Now Fish culture is often practiced in combination with a rice crop, so that fish are grown in the water in the paddy field. Growing fish in paddy field is also multi utilitarian practice.



The reason for this is the increasing use of inorganic fertilizers and insecticides in paddy fields, which cause deleterious effects on fish and predation for birds, snakes etc.

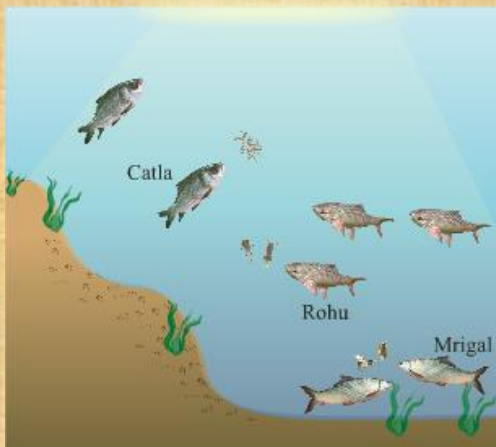


Cultivating fish in paddy fields lower pests like stem borers on paddy. Generally, farmers rear only one type of fishes or Prawns.



Composite fish culture:

Both local and imported fish species are used in composite fish culture systems.



Composite Fish Culture

In such a system, a combination of five or six fish species are used in a single fishpond. The selection criteria of these species is such that they do not compete for food among them and have different types of food habits.

As a result, the food available in all the parts of the pond is used.

Example:

We can put species like catla, rohu, mrigals/common carps and grass carps into composite fish culture system.



Because catlas are surface feeders. Whereas rohus feed in the middle zone of the pond and mrigals or common carps are bottom feeders, and grass carps feed on the weeds.

These species can use all the food in the pond without competing with each other. This increases the fish yield from the pond and even if one species of fishes are infected with disease and it is not spread to others.

Problem with composite fish culture system:

However, there is an issue with such composite fish culture system. For example, many of these fishes breed only during the monsoon. So, even if fish seed is collected from the wild, it can be mixed with that of other species due to water runoff.

- Major problem in fish farming is the lack of availability of good quality seed.

Solution of the problem:

To overcome this problem, we breed fishes in ponds using hormonal stimulation and this has ensured the supply of pure fish seed in desired quantities.



Now the fish is highly perishable, meaning they can decay quickly. So the

processing of fish is very important.

Methods of preservation:

- Sun drying
- Semi-drying
- Salting and drying
- Pickling
- Pit curing are some of the common methods of preserving fish.

