Evolution of Fisheries and Aquaculture in India

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5

Catalogue of existing freshwater aquaculture and fisheries technologies

Inland

The existing aquaculture technologies can be categorised into technologies for fish seed production and for grow-out. Seed production and grow out technologies are available for different categories of fishes, *i.e.* carps and catfishes including air-breathing fishes, prawn and ornamental fishes. An overall catalogue of these technologies is mentioned below:

Freshwater aquaculture

The current freshwater aquaculture technologies may be classified into:

Polyculture of Indian carps or Indian and exotic carps together (Composite carp culture)

Mono - and polyculture of catfishes and air-breathing fishes
Mono - and polyculture of freshwater prawns
Integrated fish farming
Paddy-cum-fish culture
Fish-cum-cattle farming
Pig-cum-fish farming
Duck-cum-fish culture
Poultry-cum-fish farming
Ornamental fish culture
Freshwater pearl culture
Giant freshwater prawn farming (Scampi)
Spirulina farming

Based on the level of inputs polyculture of Indian major carps or Indian and exotic carps together (Composite Carp Culture) may be classified as :

Low input fertiliser based system or sewage fed culture system or Aquatic weed-based system

Medium input or fertiliser and feed based system
High input or intensive feed and aeration based system
Aqua Feed Technologies
Finfish-carps

Brackishwater:

Shrimp farming
Mud crab fattening
Clam culture
Finfish farming
Aqua Feed Technologies

Inland capture

The inland capture technologies are primarily the fishing practices in rivers, estuaries and floodplain wetlands.

Crafts

The crafts or boats in the aquatic systems of India are:

Raft
Boat
- Dug-out boat
- Plank built boat
- *Dinghi* and *Nauka*
- *Musula* Boat
- Dug-out canoes
- Coracle
- Built up boats
  - *Bassien* type
  - *Satpati* type
  - *Broach* type
  - *Batchary* and *chot* type

Gears

The gears operated in the open and aquaculture waters include:

Dragnet
- With pocket
  - *Chanta*
- Without pocket
  - *Mahajal*
  - *Chaundhi*
  - *Ghanali*
  - *Dodandi*

Gillnet
- *Phasla*
- Current
- *Gochail*
- *Ranga jal*
- *Kamel,*
- Hook and Line
- Cast net
- Traps

Culture-based technologies for Fisheries enhancement
- Stock enhancement
- Species enhancement
- Environment enhancement

Hatchery technologies

Freshwater

Technologies for fish breeding and seed production may be categorised as under :

Induced breeding of carps and strain development
Intensive carp seed rearing
Breeding and seed production of air breathing catfishes
Breeding and seed production of giant freshwater prawn
Breeding and seed production of ornamental fish
Freshwater mussel hatchery

Brackishwater

Bivalve hatchery
- Clam

Shrimp hatchery

Hatchery input technologies :
- Live feed
- Micro-algae
- Rotifer
- Brine shrimp (*Artemia*)

Processing and post-harvest

- Supply of fresh fish
- Icing
- Canning
- Transport of live fish / prawn fry