

FRESHWATER FISHERIES

OPEN WATERS

- **River Fisheries**

In rivers, different species of fish (both cat & carp fish) breed to the natural waters. There is a great struggle for existence. The fishes have to find their food by effort and yet keep away from the enemies. During the floods, in the months of June and July, the carp fishes like Rohu, Mrigal and Thaila ascend the streams and streamlets and lay eggs in shallow waters from where they return to the rivers. In the shallow pools the young ones emerge within 24 hours and grow to fry and fingerling stage. With the next flood, after a month or so, they ascend to the streams and find their way to rivers. They become adult in their third year and repeat the process of egg laying.

The river fishery has the following characteristics:

- i) There is a great variation of depth, width and speed of water.
- ii) There is a great range of temperature.
- iii) Life is hard to live against the enemies.
- iv) Food has to be searched.
- v) Breeding places have to be found.
- vi) Natural obstructions have to be surmounted.
- vii) The fish has to face the water-current perpetually.

- **Canal Fisheries**

The life of fish is more difficult in the canals as compared to the life of fish in rivers. In fact any fish that enters the canal is doomed to perish. This is because at least twice in a year closure of canals take place. The whole water from the canals is almost drained off. Most of the fishes therefore die. A few fishes are caught and sold. Others are eaten away by fish enemies. Some are saved by the Fisheries Department. However, a very small number survive in some waters that remain in the deeper places. There are no fish ladders provided in the canals. The fish therefore, cannot go back into the river.

- **Lake Fisheries**

In Pakistan, the lake fishery is of recent origin. The really big lake is the Mangala Lake (District Jhelum) reputed for Mahashair (*Tor macrolepis*) and common carp (*Cyprinus carpio*). This lake is full of water weeds. Apart from principal carp fish, the lakes have the big Wallago's in large numbers as well as some Channa fish (Murrel).

Excluding the above lakes, are the small dams of various areas varying from 100 to 1,000 acres. They have been stocked with carp fry which gave good results.

The lake fishery is characterized with:-

- i) Greater depth.
- ii) Greater expanse of water.
- iii) The main reservoir is quiet but at the farther end there is main river-current entering into lake.
- iv) The depth, temperature and food provide different habitats for fish.
- v) It takes quite a long time for a lake to provide necessary environments to fish life, usually a decade.

- **Small Dams**

Over the past 38 years the Small Dams Organization of the Irrigation and Power Department of the Government of the Punjab has constructed a number of small dams in the Province to provide irrigation to agricultural lands. At present there are 32 dams in operation. All small dams are located in District Jhelum, Attock, Rawalpindi, Chakwal and Islamabad. Detail of Small Dams is as under:-

Rawalpindi District

1. Dhok Sunday Mar
2. Jaawa
3. Misriot
4. Nirali
5. Doungi
6. Khasala

Jhelum District

1. Garat
2. Jamargal
3. Tainpura I+II

Islamabad

1. Rawal
2. Simli.

Attock District

1. Mierwal
2. Jabbi
3. Shakardara
4. Sipiala
5. Bango
6. Ratti Kassi
7. Kanjoor
8. Channibor
9. Qibla-Bandi
10. Shahpur

Chakwal District

1. Bughtal
2. Nikka
3. Dhok Qutab Din
4. Kot Raja
5. Pira Fatehal
6. Garabh
7. Dhurnal
8. Khokher Zer
9. Walana
10. Surla

At present fisheries management in the Small Dam reservoirs in Punjab province is under the control of the Department of Fisheries and has been decentralized to District Officers. The major management functions carried out by the Department of Fisheries in Small Dam reservoirs is stocking of fish fry and issuing of permits for harvesting.

Fish stocks and fisheries in Small Dams are dominated by a number of indigenous and exotic species, mentioned below:-

COMMON NAME

Calbans
Grass Carp
Gulfam
Mahashair
Mori or Mrigal
Rohu
Silver Carp
Thaila

SCIENTIFIC NAME

Labeo calbasu
Ctenopharyngodon idella
Cyprinus carpio
Tor macrolepis
Cirrhinus mrigala
Labeo rohita
Hypophthalmichthys molitrix
Catla catla