Chapter-III

STUDY AREA

Osmanabad is one of administrative district of state Maharashtra. Most of the area is rocky, while remaining park is plain. Height of the district is 600 m above sea level. Most part of district surrounded by Balaghat range (Washi, Kallamb, Osmanabad, and Tuljapur Tahsil.) Some part of the major rivers like Godavari and Bhima flows through this district.

Location

Osmanabad district is located in southern part of state. This district located on east side of state (south-east), within North latitude 17.35° to 18.40° and longitude 75.16° to 76.40° East.

Osmanabad district is surrounded by following districts.

Solapur - South East
Ahmednagar - North West.
Beed - North
Latur - East.
Bidar and Gulbarga (Karnataka) - South

Area: - Total area of district is 7512.4 Sq. km, out of which 251.4 sq.km. is urban (3.21% of total) and 7271.0 sq. km is rural (96.79% of total)

Population: - As per census 2001 the population of Osmanabad district is 14, 86,586 out of which 12,53,330 is rural population and 2,33,256 is Urban population. This district is having sex ratio 932 (Male – 7, 69,368, female 7, 17,218).

Talukas: - Osmanabad district consists of 8 Talukas, being Paranda, Bhoom, Washi, Kallamb, Osmanabad, Tuljapur, Lohara and Omerga.
Climate and Rain fall:-

The climate of Osmanabad district is primarily dry. This district receives rain fall from south-east monsoon. During mid June to end of September Average Rainfall is 600 mm.

Soil type :- Osmanabad district mainly consist of two types of soils Black and low type.

Crops :- Both Kharif and Rabi crops are taken in this district. The main crops are Jawar, Sunflower, Gram, Hybrid-Jawar, Sugarcane, Tur etc. Total cultivable area is – 5.70 lakhs hectares. Out of which Kharif crop is 3.26 Lakhs hectares and rabbi crops 3.47 hectares.

Animal Husbandry:-

Dairy is main agriculture allied activity. There are about 850 dairy societies and two dairy federations in this district. Total milk collection is 34,427 lit. per day. Total cattle population is 8, 51,997 as per 1992 cattle population survey.

From last many decades nobody has carried out Biodiversity work on this area. So the research guide suggested to work on this area, to motivate the people about the importance of Biodiversity. According to study of Biodiversity a Aquatic ecosystem is most Preferable because the first life originated in water and now most of the animals uses Aquatic ecosystem as a Habitat, that’s why I have undertaken the work in Aquatic ecosystem, so the Turori dam selected for biodiversity study. As the characteristics of water body affects on survival and appearance of Aquatic organisms so, to study the Biodiversity the Limnlogical study of Dam water is also included in the present study.

The Turori Dam is located about 11 Km from Omerga city, at latitude 17° 48 min and longitude 76° 44 min. This dam located near Turori village Tal- Omerga, Dist-Osmanabad. The purpose of constructing this dam is to provide water for nearby villages i.e. Ashta (Kasar). Turori and Dapka. This dam is having catchment area about 34.16sq. mile. Maximum height of Dam is 17.50 meters. and Length is 1192
meters. This dam is having cross command area of 2660 Hect. Where as the cultivable command area is about 2394 Hect. and Irrigable command area is about 2190 Hect. This dam is having two canals the Length of right canals is 10 km the Length of left canal is 8 Kms. This Dam surrounded by Agriculture fields of villages Turori, Ashta (kasar) and Dapka.

Principal features of Turori Dam.

1. Name of Dam - Turori Dam
   A State - Maharashtra
   B District - Osmanabad
   C Taluka - Omerga
   D Toposheet No. - 567/NE.
   E Latitude - 17° 48 min.
   F Longitude - 76° 44 min.

2. Yield and utilization of project.
   a. Catchment area - 34.16 sq. mile
   b. Average rainfall - 22.48 inch.
   c. Total yield - 8.62 mm. or 342.407 mcft.
   d. Gross annual utilization – 8.6299 mm².

3. Influencing rain guage station – Omerga.

4. Yield at site dam and Reservoir.
   a. Gross capacity of reservoir at FRL - 7.664 mm³
   b. Capacity of dead storage - 1.46 mm³
   c. Capacity of live storage - 5.73 mm³

5. Evaporation losses - 1.57 + 1.1173

6. Controlling levels :-
   a. River bed level - 535 mtrs.
   b. Sill level - 543.20 mtrs.
   d. F.R.L. - 548.50 mtrs.
   e. M.W.L. - 550.50 mtrs.
   f. T.B.L. - 556.90 mtrs.
7. Type of Dam :-
   a. Height of dam - 17.50 mtrs.
   b. Length of dam - 1192 mtrs.

8. Spill way –
   a. Type - Dam.
   b. Design flood - 38.720³ mtrs.
   c. Flood depth cher crest - 2 mtrs
   d. Length - 195 mtrs

9. Command area :-
   a. Gross command area - 2660 Hect.
   b. Cultivable command area - 2394 Hect.
   c. Irrigable command area - 2190 Hect.

10. Canals
    a. Right - 10 Kms.
    b. Left - 8 Kms.

11. No of Talukas benefited - one-Omerga.

12. No. of villages benefited
    - Three-Ashta(Kasar), Turori, Dapka.


14. Physical status - 100 % completed.

**Principal Objective of present work –**

1. Determination of Physical and chemical, parameters of selected stations.
2. Evaluation of phytoplankton and zooplanktons.
3. Identification of Macro flora.
4. Identification of macro fauna.
5. Determination of population ecology of Dam.

   Aquatic Macrophytes collected with help of string from Dam at different sampling stations and kept in polythene bags and brought to laboratory. Plants treated with 10% silver sulphate (in 90% ethers) to prevent fungal and bacterial infection. For identification standard literature were used.
STUDY AREA

PLATE- A

MAP OF INDIA
PLATE- B

MAP OF INDIA SHOWING MAHARASHTRA STATE
PLATE- C

MAP OF MAHARASHTRA SHOWING STUDY AREA

MAP OF OSAMANABAD DISTRICT SHOWING STUDY AREA
MAP OF OMERGA TALUKA SHOWING STUDY AREA.