

# **STUDY AREA**

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The study area is a part of Western Ghats region from South Maharashtra. Western Ghats are the ranges of high hills that run along the west coast of peninsular India. The terrain is characterised by an assemblage of discontinuous hills and plateau. An unique features of these hills are presence of steep slope toward west and low slope toward east. The west side slope and plains receive heavy precipitation, resulting in a series of fast flowing rivers which meet the Arabian sea.

Western Ghats region of Maharashtra have a typical topography consisting hills with flat top and steep slope towards west and inclined slope towards east. The rock type comprises of the basalt rock of Deccan trap system. The plateau tops are covered by laterite rock with red and brown colours. The soil is highly porous so supersaturated with water during rainy season and water level goes down immediately after monsoon. The altitudinal range of hills is about 2500 to 3350 feet from sea level. The hills from valleys are covered by thick vegetation.

Western Ghats cover some part of Kolhapur district, of which Radhanagari tahsil area is an important one, containing evergreen & semievergreen type vegetation. The thick forest from Radhanagari region represents a typical Ghats vegetation.

The Radhanagari forest is about 85 km. away from Kolhapur which is located between latitude 16°10' to 17°46' North and longitude 73°50' to 74°5' East. The forest area consists of highly undulating hills and valleys covered with grasslands and deciduous evergreen forest. Some major dams were constructed across the rivers originated from this region.

From the Radhanagari forest some area (lies between latitude 16°20' to 16°30' North and between longitude 73°50' to 73°57' East) was selected as representative study area. The rock of this area is laterite type and climatic condition represents typical Western Ghats climate. The region receives heavy precipitation upto 6000 mm per annum, which results in availability of sufficient water resources in the form of springs, streams, ponds and rivers. The water resources at Radhanagari forest supports flora and fauna of the region and human society.

Inspite of heavy precipitation in study area, there is shortage of water to wild life living in the protected forest. People living in small villages surrounded by protected forest are facing shortage of good quality water during summer. Therefore the study of water resources and its quality have been undertaken. In which water resources from the protected forest were surveyed & their quality was monitored along with drinking water resources from villages.

① Due to lack of water resources in the forest, the quality of water is poor. The water resources in the forest are not sufficient to meet the requirements of the forest. The water resources in the forest are not sufficient to meet the requirements of the forest.

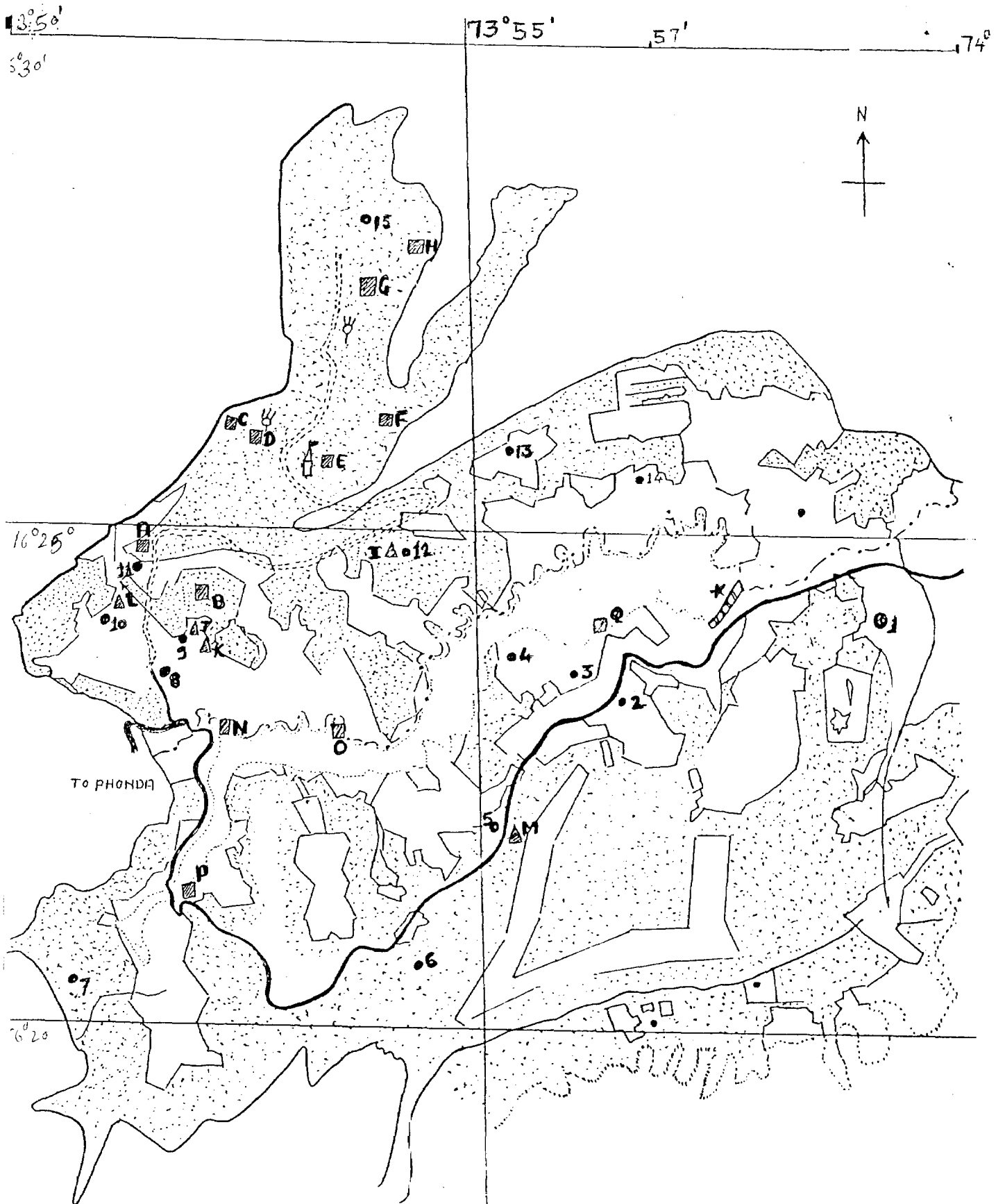


Fig-1-Map of study area showing sampling sites

## SAMPLING SITES FROM STUDY AREA

### Lotic water bodies :

- 1) Site A : Stream near Dhangarwada
- 2) Site B : Stream near Olvan village (Local name Kutre Wazar).
- 3) Site C : Stream towards the western side of old tower (Umbarache pani)
- 4) Site D : Waghache pani
- 5) Site E : Stream near the Gagangiri Maharaj Ashram
- 6) Site F : Sambarkond

### Lentic water bodies:

- 7) Site G : Manbet pond (Sawaracha Sada)
- 8) Site H : Gidhadache pani

### Drinking water bodies :

- 9) Site I : Digas - Water supply scheme
- 10) Site J : Olvan - Well water
- 11) Site K : Olvan - Water supply scheme
- 12) Site L : Malewadi - Water supply scheme
- 13) Site M : Mandharewadi - Water supply scheme

### Man- made reservoir(Radhanagari dam)

- 14) Site N : Back water of Radhanagari dam near Dajipur.
- 15) Site O : Back water of Radhanagari dam near Digas
- 16) Site P : Back water of Radhanagari dam near the bridge
- 17) Site Q : Back water of Radhanagari near Yejiwade