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A CHECK LIST OF WATER BIRDS IN INLAND WETLAND OF WESTERN GHATS, MAHARASHTRA

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ABSTRACT

Western Ghats biodiversity is one of the most significant in the world, internationally declared as world heritage. South Western Ghats of Maharashtra have vast number of inland wetland especially they are built for irrigation, drinking, domestic and drinking purposes. The present work carried out some inland wetlands of South Western Ghats of Maharashtra by line Transect method and direct observation method. The result revealed that huge number of water birds were attracted to different wetlands of South Western Ghats of Maharashtra in winter. Total 38 species of wetland birds were observed during study period. They were belonging to 4 order and 11 families. The status of bird and wetlands were studied, it revealed that more number of wetlands were facing several anthropogenic pressure, therefore indirect effect on population of water bird. This study is not complete but further research need to improving understanding of general pattern of inland wetlands and their biodiversity.

Figures : 06 References : 06 Table : 01

KEY WORDS : Inland wetland, South Western Maharashtra, Water bird.

Introduction

Wetlands are one of the natural resources. They are defined as lands transitional between terrestrial and aquatic-ecosystems where the water table is usually at or near the surface or the land is covered by shallow water[6]. Because of wetland people get many things like food, water and other raw materials. Worker[3] classified wetlands into marine wetland, lakes, riverine and marshes. Wetlands support a large variety of plant and animals species adapted to fluctuating water levels, making the wetlands of critical ecological significance. Wetlands help to bird for roosting, resting and foraging purposes.

Inland wetlands are always containing freshwater or rain water but no sea water. It includes natural lakes, streams, village ponds, reservoirs, water logged area, marshes, canals paddy field and river *etc*. In South Western Ghats, Maharashtra is containing many inland wetlands because of river Krishna and their tributaries. According to a survey of space application center (ISRO), there are 393 inland wetlands in state covering an area of 209206 hector.

Village ponds are predominant, they play important role of providing habitat to numerous resident and migratory waterfowl. The growth of herbs, shrubs and trees at several inland wetlands provide roosting or nesting site to the resident water birds. Rural communities still depend on ponds for various domestic and economic purposes such as for drinking and irrigation.

The lake or reservoirs are primarily meant for irrigation purposes. It makes the life-supporting system for a large number of local people. Marshes are associated with pond, lake and rivers. Streams are containing continuous water flow in brief period of a year to help water birds for feeding and roosting.

River play an important role in caring the biodiversity. Water spread area drastically reduces in summer in inland wetlands. The reduction in the extent of water spread area and aquatic vegetation adversely affect the habitat of avifauna, fishes and other aquatic fauna during the summer. The water birds and man are the most visible components of the biodiversity.

South Western Ghats, Maharashtra many inland wetlands are facing several anthropogenic pressure due to rapidly expanding human population, improper use of watersheds, developmental activities and large-scale changing land use. Water pollution and dumping of waste from industries, domestic and agricultural are some of the major threats. The conservation of wetlands is very much important and essential for sustainable food, shelter to birds and availability of water for people and other

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Fig.1 Map of India showing Study area

Fig.2 Map of Maharashtra showing study area

creatures therefore the present problem was undertaken.

Objective of Study

1. To observe the various wetlands in South Western Ghats of Maharashtra and study their nature.
2. To obtain scientific information of water birds.
3. To study the status of birds, whether they are migratory or local migratory and residence.
4. To study in detail their food, feeding and roosting behavior.
5. To study the causes of inland wetlands loss.

Material and Method

Monthly visit was carried out during study period between 2010-2012 and 2013. Some basic methods are explained[2]. The line transects method and direct observation method was used. The birds were observed by using a field binocular (Olympus 8x10). Identification of species was done. Activities of birds recorded during the survey period included calling, overflying, perching and feeding etc.

Study Area

Chinchani(A) M.I. Tank is located between Chinchani and Sonkire village in Palus Teshil. The construction of this Tank was started in year 1991 and completed in the year 1994. The Tank is earthen type and catchment area about 30.04 sqmiles. Geographically it lies near 74^0 20" (N) latitude and 17^0 20" (E) longitudes

Kadegon small village tank is located at east side of Kadegon village in Kadegon Teshil. This is very old tank constructed in year 1975. Geographically it lies near 74^0 37" (N) latitude and 17^0 19" (E) longitudes. Catchment area is 28.49sqmiles. Rural communities still depend on tank for various domestic and economic purposes such as for drinking and irrigation

Shalgaon tank is located at east side of Shalgaon village. This is very old tank constructed in year 1971.

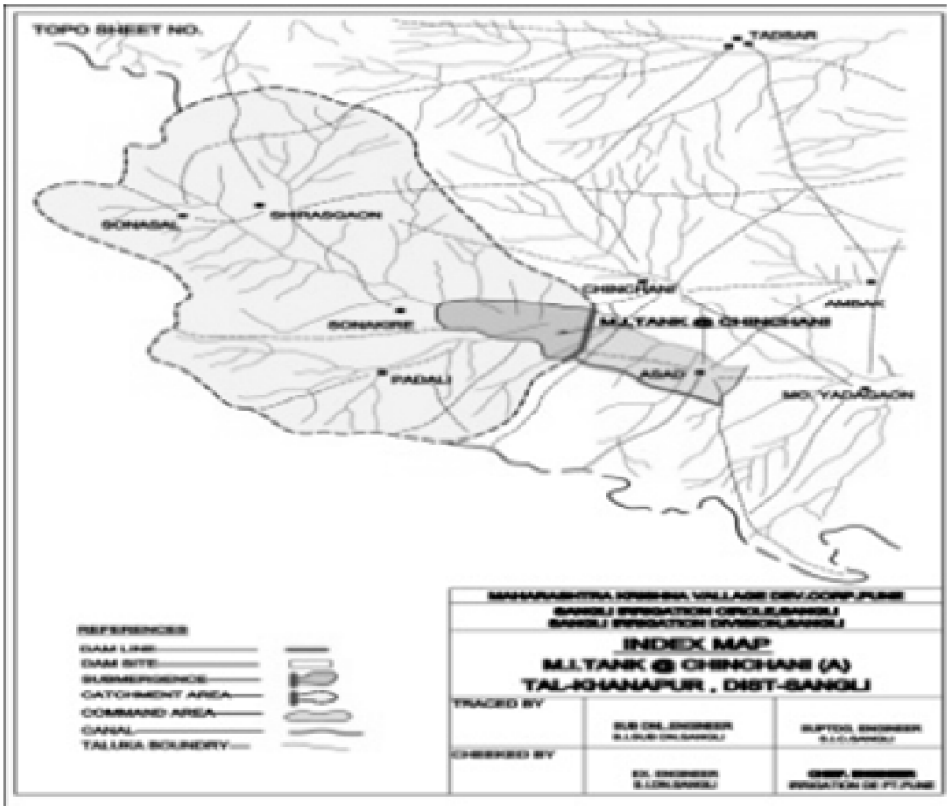

Fig.3 Map of Chinchani Tank

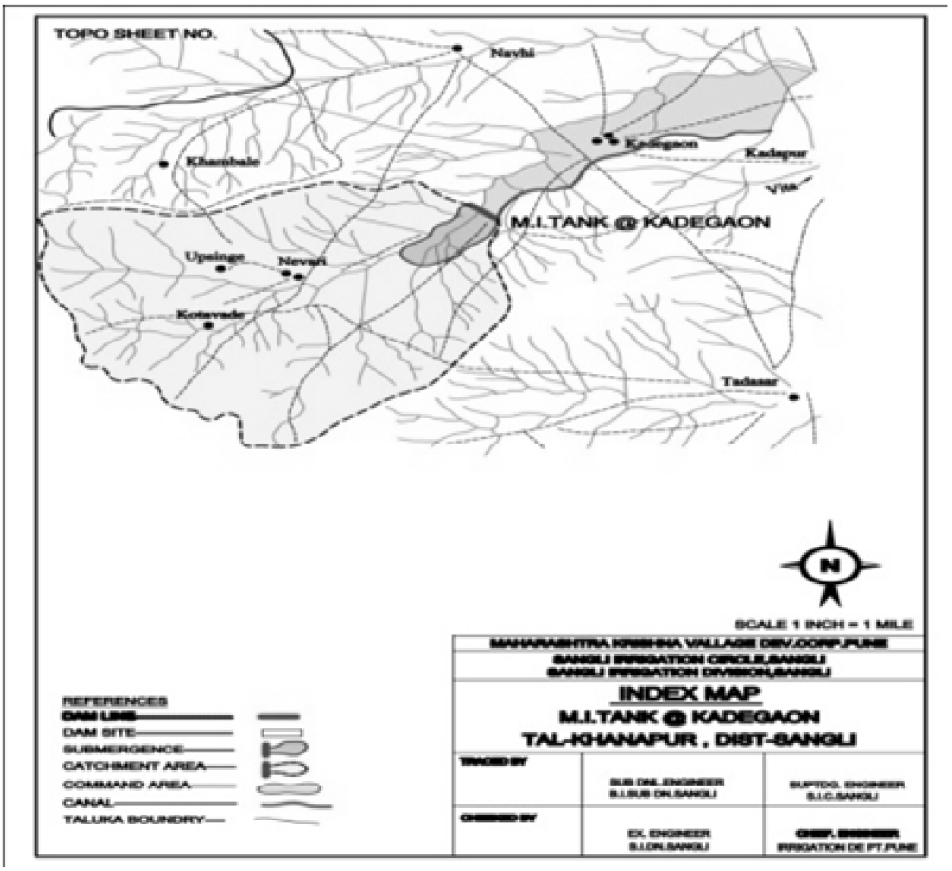

Fig.4 Map of Kadegaon Tank

Geographically it lies near 74^0 37" (N) latitude and 17^0 19" (E) longitudes. Catchment area is 21.68 sqmiles. Rural communities still depend on tank for various domestic and economic purposes such as for drinking and irrigation.

Nhavi tank is located at Nhavi village. This is very old tank constructed in year 1979. Geographically it lies near 74^0 13" (N) latitude and 17^0 15" (E) longitudes. Catchment area is 16.14 sqmiles. Rural communities still depend on tank for various domestic and economic purposes such as for drinking and irrigation.

Ramling Island is located in the Krishna River near Bahe,Walwe Teshil, Maharashtra. This is popular tourist destination for both local and outside visitors. There is very long bridge over Krishna River. This Bridge connects two adjacent villages such as Bahe and Narsinhpur.

Result and Discussion

I observed 37 species of bird belonging to four orders and eleven families in Morna, Chinchani, Kadegaon, Shalgaon, Navi tanks and in river Krishna near Bahe, Walwe, Nagthane and Shirgaon *etc.* I also observed water birds in Northern part of Sangli. The maximum diversity of species was eight in family ardeidae and five in family rallidae. Maximum species was common and few were uncommon. Common species was residence and local migratory but uncommon species were winter visitor.

The number of species of family ardeidae increased in summer due to decline water in these wetlands and favorable for

Fig.5 Map of Shalgaon Tank

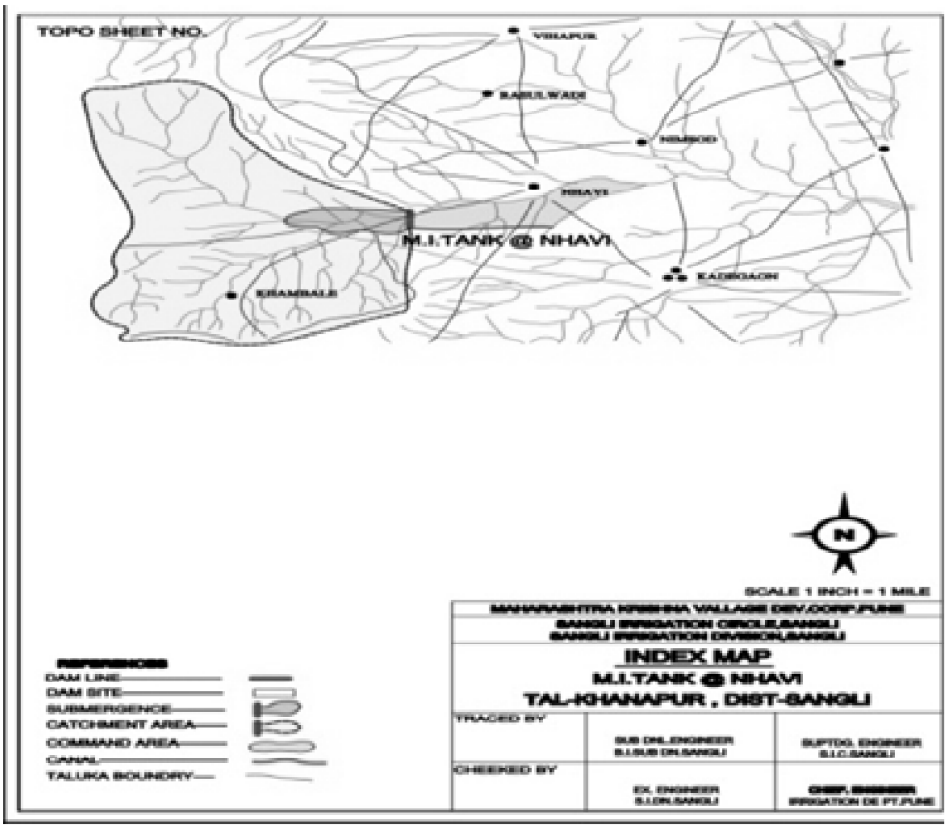

Fig.6 Map of Nhavi Tank

feeding. The village tanks show large number of Grebes. Coots, Spot bill Ducks. Ruddy Sheld Ducks, Common Teals, Little Stint and Black winged Stilt were observed in reservoirs, marshy places and on the bank of river. River Tern was observed in some wetland especially Shalgaon, Chinchani and Navi tanks which may indicate that this bodies were less polluted while in Bahe, Nagthane, Shirgaon region of Krishna river and Morna reservoir shows large number of Cormorant which may indicate that the water bodies were moderately polluted[4,5]. Observation showed that wetlands (lotic wetlands like Streams, some part of Krishna river and their tributaries-Warna, Morna and Yerala *etc.*) was densely polluted due to addition of industrials waste, agricultural waste, large- scale changes in land use and improper use of water to agricultural[1]. Large number of fishing activities were also responsible for degradation of some Inland wetland[1].

Conclusion

South Western Maharashtra contains large number of wetlands therefore it provides good feeding ground for birds. Small ducks were dominantly prepared for village tanks for feeding. Egrets, Cormorants, Ibis, Storks, were feed in large water bodies like river and reservoirs. Some water bodies were less polluted like Shalgaon, Nhavi ,Chichani and Kadegaon tanks while some part of Krishna river near Bahe, Walwe and reservoir like Morna was densely polluted. Large number of diversity was observed in winter while less diversity was observed in summer.

TABLE-1: List of species observed at various wetlands in Sangli district (2014-2016)

Sr. No.	Common Name	Scientific Name	Family	Order	Status
1	Ruddy Sheld duck	*Tadorna ferruginea*	**Anatidae**	**ANSERIFORMES**	UC
2	Common Teal	*Anas crecca*			UC
3	Spot bill duck	*Anas poecilorhynchos*			C
4	Purple Moorhen	*Porphyrio porphyrio*	**Rallidae**	**GRUIFORMES**	UC
5	Common Moorhen	*Gallinula chloropus*			C
6	Common Coot	*Fulica atra*			C
7	White breasted water hen	*Amaurornis phoenicurus*			C
8	Water cock	*Gallicrex cinerea*			C
9	Marsh Sandpiper	*Tringa stagnatilis*	**Tringinae**	**CICONIIFORMES**	C
10	Wood Sandpiper	*Tringa glareola*			UC
11	Little Stint	*Calidris minuta*			UC
12	Black winged Stilt	*Himantopus bimantopus*	**Charadriidae**		UC
13	Little Ringed Plover	*Charadrius dubius*			R
14	Kentish Plover	*Charadrius alexandrinus*			R
15	Yellow wattle Lapwing	*Vanellus malarbaricus*			C
16	Red wattle Lapwing	*Vanellus gregarius*			C
17	River Tern	*Sterna aurantia*	**Laridae**		C
18	Little Grebe	*Tachybaptus ruficollis*	**Podicipedidae**		UC
19	Little Cormorant	*Phalacrocorax niger*	**Phalacrocoracidae**		C
20	Great Cormorant	*Phalacrocorax carbo*			C
21	Little Egret	*Egretta garzetta*	**Ardeidae**		C
22	Indian Reef Heron	*Egretta gularis*			R
23	Grey Heron	*Ardea cinerea*			C
24	Purple Heron	*Ardea purpurea*			C
25	Great Egret	*Casmerodius albus*			C
26	Intermediate Egret	*Mesophoyx intermedia*			C
27	Cattle Egret	*Bubulcus ibis*			C

Sr. No.	Common Name	Scientific Name	Family	Order	Status
28	Indian Pond Heron	*Ardeola grayii*			C
29	Balck headed Ibis	*Threskiornis melanocephalus*	**Threskiornithidae**		C
30	Black Ibis	*Pseudibis papillosa*			UC
31	Spoon bill	*Platalea leucorodia*			C
32	Painted Stork	*Mycteria leucocephala*	**Ciconiidae**		UC
33	Asian open bill	*Anastomus oscitans*			UC
34	Woolly necked Stork	*Ciconia episcopus*			UC
35	White Wagtail	*Motacilla alba*	**Passeridae**	**PASSERIFORMES**	C
36	Yellow headed Wagtail	*Motacilla citreola*			C
37	Yellow Wagtail	*Motacilla flava*			C

UC-Uncommon, C-Common, R-Rare

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