CONSERVATION OF RESERVOIR FISHERIES IN KERALA

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A reservoir is basically an artificial impoundment made by barricading the natural flow of a river. In India it contributes to more than three million hectares of waterspread area. The natural flow of a river is altered mainly for irrigational, drinking purpose and other recreational activities. If these biotopes are tapped properly it can turn out to be a great source of wealth in the form of fisheries. In Kerala, of the 30 reservoirs available, fishing as an organised activity is carried out only in 13 reservoirs by the Department of Fisheries of the State (Table 1).

According to Sukumaran, 1987 the fish production from the reservoirs of Kerala was 5-8 kg.ha. which is far below the optimum level. Lack of proper management measures accounts for such a low yield of fisheries from the reservoirs in Kerala.

Most of the reservoirs in Kerala are situated in the hilly tracts of Western Ghats zone. Reservoir systems are strongly influenced by inputs of nutrients and other sediments from the terrestrial watershed in which they lie. Generally, the catchment area is covered by forests, plantations and agricultural land. Naturally, terrestrial input consisting of fallen leaves, dissolved and particulate organic matter are brought down by surface run-off and inflowing streams and other rivulets. By this way depth and loading capacity of the reservoir is reduced in course of time. It may be due to the improper management of catchment area. The studies made on the rate of sedimentation in some Indian reservoirs have shown that the actual sedimentation is much more than what has been assumed while planning the project (Gupta, 1975).

Siltation in the rivers and reservoirs apart from diminishing the quantum of waterflow, results in the destruction of breeding grounds of fishes, migration of fishes and overall productivity of the reservoirs. Siltation also affects the benthic population and the natural recruitment of fishes in the impounded waters.

Reservoirs like rivers are inevitably being affected by the industrialisation and urbanisation. There is need for catchment modification for the control of fertilizers and pesticides into the reservoir through the agricultural runoff. The control of such pollutants can be effectively done by adopting best management practices in the agricultural fields and other lands falling within the catchment area of the reservoir. So along with other activities such as irrigation, industry, potable supplies etc., fishery sector too should be involved and given its due importance. The involvement of fisheries in the urban and industrial waste management practices, judicious use of fertilizers and pesticides, afforestation and social forestry programmes can be included in the best management practices, which would help a long way in stabilising and conserving reservoir fisheries. Apart from these, there is an urgent need for educating the farmers and the public about the ecological implications of the indiscriminate use of chemicals.

Fish production in the reservoir varies from water to water depending upon its fishery development activities. According to Balon and Coche, 1974, floods and drought greatly alter the availability of sites for reproduction and feeding of fishes. This is compounded by environmental hazards. The absence of a scientific database on the ecobiology, productivity processes and culturability of these reservoirs have created great difficulties in evolving a firm policy with regard to reservoir centered fisheries development in the state. Hence, if these man-made biotopes are subjected to scientific study in the context of fisheries development and with strong emphasis on conservation values of native species, the fisheries sector could play a significant role in the socio-economic fabric of the state by providing the population not only with the nutritious food but also income and employment opportunities.

References

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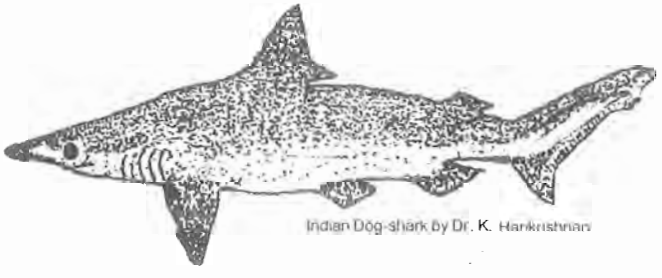

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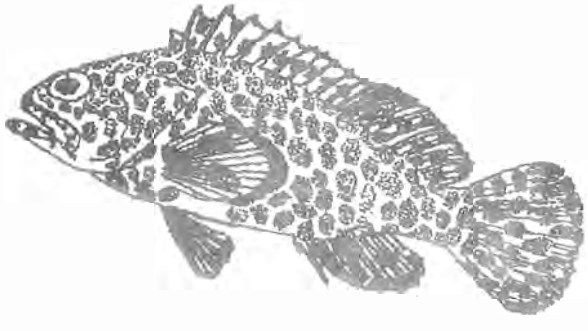
Table 1. Reservoirs in Kerala

S. No.	Name of the Reservoir	Name of district	Area (Hec.)
1	*Peppara	Thiruvananthapuram	582
2	*Neyyar	-do-	1500
3	Aruvikkara	-do-	258
4	*Parappar	Kollam	2590
5	Pamba	Pathanamthitta	570
6	Kakki	-do-	1800
7	Idukki	Idukki	6160
8	Ponmudi	-do-	260
9	Anayiramakaj	-do-	433
10	Kundala	-do-	230
11	Mattupetti	-do-	324
12	Sengulam	-do-	33
13	Neriyamangalam	-do-	413
14	Periyar lake	-do-	2890
15	Bhoothathankettu	-do-	608
16	Sholayar	Trichur	870
17	Peringalkuthu	-do-	263
18	*Peechi	-do-	1263
19	*Vazhani	-do-	255
20	Parambikulam	Palghat	2092
21	Thunakadavu	-do-	283
22	*Malampuzha	-do-	2313
23	*Mangalam	-do-	393
24	*Meenkara	-do-	259
25	*Chulliar	-do-	159
26	*Pothundi	-do-	363
27	*Walaya	-do-	259
28	*Kanjirapuzha	-do-	512
29	*Kuttiyadi	Kozhikode	1052
30	Pazhassi	Kannur	648
		Total	29635

* Reservoirs under fishery development in the state
SOURCE - Department of Fisheries, Government of Kerala.

Tiger, Panda and Rhino Horn
Most Nature Forests Do Adorn
May be they are Celebrates
Being Photogeric Vertebrates
But lest one Ever Forgets
There are Millions of Insects
So lets have a Poster or Two
On Ants, Bugs and Centipedes Too!

Air Cmde (Retd.) M. Vania,
Sowripalayam P.O., Coimbatore



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