



A study on fishery resources in MP

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Abstract

The Narmada river is suffering from the effects of having several dams on its course. This ecological loss is rapidly affecting the breeding and nursery grounds for freshwater and marine fish. The current riverine fishery is below subsistence level with an average yield of 0.3 tonne per km, which is about 15% of their actual potential. This is a matter of serious concern. The Narmada River is the fifth longest in India. It's already been dammed in several places but the main dam, the Sardar Sarovar is close to the Sea. The Narmada River is the fifth longest in India. It's already been dammed in several places but the main dam, the Sardar Sarovar is closet to the Sea. In the river Narmada carps should be in major quantity but in spite of that data's are reflecting that the No. of cat fishes are increasing rather than the carps. Therefore fish species and Ecological condition of our area is being changing. No. of species are decreasing it mean's species diversity in the descending order.

Keywords: Madhya Pradesh, fishery, dams, Narmada river

Introduction

India has 14 major and 44 medium rivers and countless tributaries, floodplains, riparian tracts, mangroves and estuaries. These inland waterbodies combined together, stretch over 45,000 km across the country, making India one of the richest fish germplasm in the world. However, the reallocation of water through dams has severely affected the ecosystem of these rivers, as the downstream flows are restricted and mangroves vanish. The Narmada river is suffering from the effects of having several dams on its course. This ecological loss is rapidly affecting the breeding and nursery grounds for freshwater and marine fish. The current riverine fishery is below subsistence level with an average yield of 0.3 tons per km, which is about 15% of their actual potential. This is a matter of serious concern. The Narmada River is the fifth longest in India. It's already been dammed in several places but the main dam, the Sardar Sarovar is close to the Sea. The Narmada River is the fifth longest in India. It's already been dammed in several places but the main dam, the Sardar Sarovar is close to the Sea. In the river Narmada carps should be in major quantity but in spite of that data are reflecting that the No. of cat fishes are increasing rather than the carps. Therefore fish species and Ecological condition of our area is being changing. No. of species are decreasing it mean's species diversity in the descending order.

The problem is further confounded by ambiguities in the nomenclature adapted by some of the States. The word tank is often loosely defined and used in common parlance to describe some of the small irrigation reservoirs. Thus, a large number of small manmade lakes are designated as tanks, thereby precluding them from the estimates of reservoirs. There is no uniform definition for a tank. In the eastern States of Orissa and West Bengal, pond and tank are interchangeable expressions, while in Andhra Pradesh, Karnataka and Tamil Nadu, tanks refer to a section of irrigation reservoirs,

including small and medium sized water bodies. In fact, some of the tanks in Tamil Nadu and Karnataka are much bigger than Aliyar and Fireworthy reservoirs. A fishery may involve the capture of wild fish or raising fish through fish farming. Directly or indirectly, the livelihood of over 500 million people in developing countries depends on fisheries and aquaculture. Overfishing, including the taking of fish beyond sustainable levels, is reducing fish stocks and employment in many world regions.

Many species of peninsular and Himalayans rivers in India migrate short or long distances for spawning. Any obstruction in the spawning routes affects recruitment. Dams, without provisions for fish migration have a major impact on fisheries. This is an established global phenomenon and a number of countries are trying to mitigate this problem. United States has decommissioned more than 1000 dams in the past decade and many of these were decommissioned to reinstate migratory runs of fish like salmons and steelheads. There is a lot we can learn from the experience.

Review of Literature

Ujjania NC (2017). This study describes the important parameters such as length-weight relationships (LWR), condition factors (K) and relative condition factor (Kn) of *Catla catla* from Vallabh Sagar reservoir, Gujarat. A total of 554 specimens were used to measure the total length and weight during June, 2013 to May, 2014. The LWR was analyzed and growth exponent 'b' (2.880) was observed from pooled data which indicates negative allometric growth in studied fish. The correlation coefficient 'r' (0.976) was observed during the study which depicts high correlation in length and weight variables. The value of condition factor and relative condition factor were found >1 which indicates the well-being of studied fish and conduciveness of the habitat, Jayshree Sharma *et al.* (2016). The fish community of the

Narmada River at Jabalpur region was studied by monthly sample taken from Nov. 2014 to Oct. 2015. Narmada River is the largest Westward flowing river of India. It is also referred as the life line of Madhya Pradesh. Present study was aimed to generate information on the fishes of Jabalpur region of river Narmada. 49 fish species identified during the study period belong to Cyprinidae 24 Species of fishes followed by Bagridae 4 species, Siluridae and Ophiocephalidae with 3 species, Claridae, Notopteridae and Mastacembellidae with 2 species and Schielbeidae, Clupeidae, Belonidae, Centropomidae, Nandidae, Gobioidae and Anabantidae with species of fish in each family.

Chandanshive Navnath Eknath (2013). The study highlights pollution status and impact on fish diversity in Mula-Mutha River and dams on it. Seventy two species was reported in 1942 in this river. However, it has been observed that fish diversity is gradually decreasing since last thirty years unprecedentedly, mainly due to manifold human activity. Fish diversity in midway of river is becoming rare and only four species have been reported from polluted stretch of river. The river Mula-Mutha is flowing through city area and is one of the important sources of water body because of seven dams on it and its importance in agricultural, industrial and development of Pune city.

Fisheries in Narmada

Narmada River system on the west coast experienced significant decline (68.24%) in Hilsa catch in 2004-05 (4866 t) as compared to 1993-94 (15319 t) and this decline was prominently recorded from 1998-99 onwards. The construction of the Tawa Dam resulted in a reduction of water depths and loss of carp breeding grounds, spawning and feeding in the central 240 km stretch of the Narmada Basin. Flow reduction is the reason for reduced carp fisheries. Hoshangabad, on the banks of Narmada in Madhya Pradesh enjoyed some of the best Mahseer landings in the country. After construction of Tawa and other projects, the Mahseer catches have already dropped drastically. In the sixties, monthly catches of Mahseer at Hoshangabad alone ranged upto 2-3 tonnes. The fish is nearly wiped out from the river after construction of Tawa Dam and Madhya Pradesh is now embarking on protecting the fish only through reservoir breeding and hatcheries program.

Incidentally, like many other states, Madhya Pradesh has also declared Mahseer as its state fish. If targeted through ecosystems approach, there could be hope for reinstating Mahseer in Rivers of Madhya Pradesh, but there is no evidence that Madhya Pradesh is serious about this. At the Narmada estuary near Bharuch, the fish landings are reducing at an alarming rate. Even as fishermen blame low Hilsa runs and fish decline on the low water levels and non-release of water from the Sardar Sarovar Dam in the upstream, the Sardar Sarovar Narmada Nigmal Limited (SSNNL) maintains that enough water has been released in the downstream. No data is available in the open domain to establish this claim of SSNNL.

Conclusion

Although Narmada River is of great significance as many dams have been constructed on it still the Narmada River is

suffering from the effects of having several dams on its course. This ecological loss is rapidly affecting the breeding and nursery grounds for freshwater and marine fish.

Several dams have been made on Narmada River. There are about seven dams constructed on Narmada River. Due to the Dam formation the ecology of Narmada River is quite degraded which results in threat aquatic biodiversity of river. The idea of damming the Narmada was discussed as far back as the late 19th century during the days of the British Raj. Of the 30 big dams proposed along the Narmada, Sardar Sarovar Project and Narmada Sagar Project are the mega dams. The Maheshwar and Omkareshwar dams along with Sardar Sarovar Project and Narmada Sagar Project are to form a complex which would ultimately cater to the needs of Sardar Sarovar Project. The struggle of the people of the Narmada valley against large dams began when the people to be displaced by Sardar Sarovar Project began organizing in 1985-86. Since then the struggle has spread to encompass other major dams in various stages of planning and construction chiefly Maheshwar, Narmada Sagar, Maan, Goi and Jobat. Tawa and Bargi Dams were completed in 1973 and 1989 respectively have seen the affected people organize post-displacement to demand their rights. The government is planning to build 30 big dams, 135 medium dams and 3000 small dams on the Narmada & its tributaries. When dams are being constructed on the river, they work in two ways. In some aspects it is beneficial for the people to have dam, whereas for some reason constructing dams is disadvantageous for local people.

References

1. Napit Mukesh Kumar. Study of fish fauna of Bundelkhand region with special reference to Damoh district, International Journal of Advance Research. 2013; 1(4):24-30.
2. Vivek Parashar, *et al.*, Assessment of the socioeconomic status of fishermen communities: a case study from a selected reach of River Narmada, India, International Journal of Research in Fisheries and Aquaculture, 2016; 6(2):47-59.
3. Pascale Gibeau, *et al.*, Run-of-River hydropower and salmonids: potential effects and perspective on future research, Canadian Journal of Fisheries and Aquatic Sciences, 2016.
4. Bodane Arun Kumar. Dam Water Quality Index (Dwqi) for Tillar Dam of Pacheti Village, District Agar Malwa, MP, India, International Journal of Scientific Research, 2015, 4(5). ISSN No 2277-8179.
5. Agarwal A, Narain S, Khurana I. (Eds.), Making Water Everybody's Business: Practice and Policy of Water Harvesting. Centre for Science and Environment, New Delhi, 2003.
6. Appan A. A dual-mode system for harnessing roof water for non-potable uses. Urban Water. 1999; 1(4):317-321.
7. Bannerjee A, Bhatnagar M. Capital hope. In: Agarwal A., Narain S. & Khurana I. (Eds.), making water everybody's Business: Practice and Policy of Water Harvesting. Centre for Science and Environment, New Delhi, 2003, 211-214.