Deforestation. monoculture, use of insecticides and fertilizers, industrialisation and Westernisation added to the immense increase in human population in India, apart from other problems is perpetually inflating the problem of disposal of waste products. As a practice and process, city sewage, domestic waste and industrial affluents are finding a place invariably in the rivers, lakes, ponds and reservoirs this day. Pure drinking water is the basic human requirement and for this purpose, perhaps the ancient human race recorded their presence from river valley or from river banks.

One reason for this location is the power of regeneration in the river systems. Basic difference in the lotic and lentic water is the water current, which replaces the pre-existing water mass at every point every moment.
Water being a factor of prime importance, for we use it for (i) drinking and (ii) other purposes (in the present age being used for power generation also). Its sole source is precipitation. A careful study of three of its aspect is very necessary (i) A portion splits into $2\text{H}_2 \& \text{O}_2$ (although to a negligible quantity) (2) much more of water evaporated from the sea and ocean than returned, Benton et al. (1950), (3) About 0.2 geograms (1 geogram = $10^{20}$ gms.) of water captured as fresh water (fresh water lakes and rivers) and 2 geograms run off each year. Annual rain fall 1.0 geogram minus annual run off 0.2 geogram = 0.8 geogram come out as annual recharge rate of ground water, Odum (1971), "May soon reduce the very important ground water component." Environmentologists and Ecologists have clearly indicated the urge of celebration of international Hydrological decade comparable to international biological programme.

Water covers more than 70 % of the earth surface, rain being its sole source in the form of hydrological cycling through evaporation and precipitation.
Human activities have profoundly affected the fresh water masses world over, so much so that no lotic water mass is left in its original condition in the nature this day, Knight (1966). Human activities range from simply using the river water for drinking purposes to harnessing this water current to any of its use finally leaving it polluted to the extent that it can no more be used for drinking purposes. Important scientific informations have been generated during the last quarter century bringing about the changes incorporated in the riverine ecology, mostly as a result of human interferences. Workers in this field mostly focused their attention on the physico-chemical aspects of the river water with less emphasis on the fish and fisheries. However a great urge to study such interferences is earnestly felt, Jhingran (1988). The importance of these factors is associated with the presence or absence of an organism. Further these individual factors produce a complicated phenomenon which is called factor interaction, Maitland (1978). Needless to emphasize the importance of these factors, so much so that some of them have become limiting factors this day. The
physico-chemical factors tell us about the living
conditions of the water mass. However it may sometimes
be the resultant of the activities going on inside the
water mass, Hutchinson (1957).

Life can not exist without water as it is the
most important and the most abundant ingradient of the
protoplasm. Of the two major ecological habitats viz.,
terrestrial and aquatic, we are equally concerned with
both of them, because, we live in the one and do so
with the help of the other. Water has two fold importance,
firstly we use water as an essential ingradient and
secondly it is responsible for cycling/recycling of all
organic and inorganic material without which the "Ecological
Balance" is not possible. The aquatic habitats are
oceanic, esturine and fresh water. The last is again
segregated into lotic (or running) and lentic (or standing)
forms. There is but one source of fresh water and it
is rainfall. Lakes, glaciers, rivers, springs, wells
and all other are secondary and are fed by rain or snow.
India receives a bountiful 400 million hectare meters
(mhm) of rains every year, of which 230 mhm swerves
back to the skies in the form of evaporation, leaving a
handsome 170 mhm to feed our streams, and rivers through surface flow. No river or river system in Madhya Pradesh has its origin from the Himalayas and as such, are not fed by melting snow during summer months. Year to year replenishment is through monsoon bursts only. The state enjoys a net work of about 7,000 miles of river stretch and the estimated run off from these rivers is 143 million acre feet. During the monsoon the rivers are flooded and they acquire the typical rainy character, providing excellent breeding ground for the fishes (specially mahasheer) at places.

We are neglecting or doing injustice to the water masses. To emphasize and publicize the needs for conservation of the reverine system we have celebrate the "Conservation Decade" Ganges once as clear as Narmada at Hoshangabad today, become problematic to a student of hydrobiology. It is right time that we start a survey of this river system and plan to lay down a long term policy.

Overgrowth of aquatic vegetation (due to saturation of nutrients as a result of human
activities) in the water bodies exercise a measure of retreat on the development of inland fisheries. Similarly kill by biocides is another contrivance. Pollution of waters caused by industrial effluents/domestic activities is posing similar problems at various places as Ganges at Varansi. Blind folded the human civilization has marched and advanced in leaps and bounds towards the glittering luxary of modernization and industrialization, polluting the air and water to the extent of great concern. On the one hand we are adding to the population and on the other we are exhausting (or deteriorating) the natural resources. As a student of Hydrobiology/Limnology one has to contribute to better the quality of water in river systems and feed the administrators and planners with the data for the adoption of such measures. It is with this idea in mind that investigations on the river Narmada at Hoshangabad has been planned to bring to light the physico-chemical characters of the water at this place and to know the flora and fauna (with details of economic fishes) in this water.
This thesis embodies the authors more than six years observations on river Narmada at Hoshangabad on the physical, chemical and biological aspects with special reference to the economic fishes. The thesis is split up into various chapters. The customary Preface, Introduction and Material & Methods emphasizes (i) the need for the study of environment and hydrobiology; selection of river Narmada (and the various sampling stations) for the present study along with (ii) the work done so far in this field and (iii) the methodology or technique followed for various investigations throughout the course of study. The observation on physico-chemical aspect have been arranged next under headings Morphometry, Meteorological, Physical and Chemical features, (Adoni 1985), followed by a short discussion which describes the views and observations of other workers in this field / on this river. The next chapter deals with the biological aspects giving details of the micro flora, macro flora, micro fauna and macro fauna, (Gray 1963). Thereafter the salient features of the biological aspect have been
discussed. The last chapter on observation deals with the fishes, enlisting all the available species in the river here along with a taxonomic account. Besides, the percentage catch and availability at the various sampling points is also dealt with. Gut content analysis of some of the fishes of economic importance is described next along with the most popular and common fish in detail. The last two chapters give an abridged account of the observations recorded in this thesis, in the form of summary and an alphabetically arranged list of references enlisting the literature procured, consulted or recorded from various sources. References marked with an asterisk have not been consulted in original but from the source where they have been cited.

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