

7. CONCLUSION:

Monitoring of River Narmada was started from October, 2007 for two years. During this period monitoring of river is being carried out at 30 locations on quarterly basis in eastern, central and western zone respectively. Monitoring of physico chemical component and biological parameters like identification of macro invertebrates were carried out from all the 30 sampling sites. Collection of samples for analyzing these components was as per standard methods. Analysis data were compiled and discussed in detail in the project report. It is observed that the quality of river water based on physico-chemical analysis is classified in class A to D as per BIS 2296 [1982] at different sampling locations with Class B & C in most of the sampling points classified the water used for out door bathing and other recreation use. The water can also be used for domestic use after treatment and disinfection.

Biological Water Quality Criteria [BWQC] used for evaluating water quality based on identification of macro invertebrate families and awarding a specific diversity score and designate the quality from class A to E [from least to severe pollution respectively] .

In Eastern Zone at origin of river at Amarkantak the biological water quality did not support benthic macro-invertebrates due to lack of any substratum. In subsequent sampling locations the quality of water classified in class B-C based on BWQC score. Degradation of water quality mainly due to anthropogenic activities within and around the river bed. At one location Kapilvan of Amarkantak region observed class D during January, 2009.

In Central Zone, the biological water quality of the river classified in class B to C. The reason for the degradation of water quality is mainly due to human activities which includes mainly religious, recreational and agricultural. Confluence of domestic effluent is affecting water quality of river.

In Western Zone the BWQC score designate the quality of river water in class B to C at all the sampling location. Sampling site at Raptapul ghat in Mandla showed class A at during November, 07 and Oct, 08, the reason for improved water quality at this region is mainly due to riffle zone. River water at Saraswati ghat showed class D during November, 2007 indicating heavy pollution. The quality of water at this location improved in April, 2008 due to large volume of river water during the sampling time.

During the entire monitoring of river Narmada, in all the three zones at 30 monitoring sites the quality of water classified at most of the sampling locations from Class B to C based on BWQC score indicate *water quality as slight to moderate pollution*.