

Bio Monitoring of River Sone of Madhya Pradesh 2021-22

M. P. Pollution Control Board, accomplish the study entitled “**Bio Monitoring of River Sone**”. The study is sponsored by M. P. State Government, Bhopal. Project tenure is of one year (2021-2022). Monitoring work was started from April, 2021 with identification of sampling sites. Total twelve sampling sites were identified for monitoring of river Sone from Anuppur region of Amarkantak origin point to Rewa region of M.P. before it passes to Uttar Pradesh. Identification of macro zoobenthos as a bio-indicator used as a tool to obtain information on certain aspects of the river biosphere. The entire river stretch was divided into three zones viz. Anuppur region, Shahdol region, Rewa region respectively to carry out the studies.

Anuppur region cover the river stretch from Origin Point Sone River Amarkantak to near OPM Amlai, Anuppur with 4 sampling sites viz. Origin Point Sone River Amarkantak, Anuppur, Sone river U/s near MPEB Pumping station, Chachai, Sone River, D/S OPM Amlai, Anuppur, Sone River, Bhatraghat 200 meter D/S after confluence of nallah, OPM Amlai, Anuppur.

In Shahdol region, 4 sampling location were identified viz. Sone River near Jarwahi road bridge, Shahdol, Sone River U/S near Diyapepper road bridge, Shahdol, Sone River D/S near Diyapepper road bridge, Shahdol, Sone River near Devlod Baan Sagar Dam.

Rewa regions covers the area from Jogdaha to Karpur goan Interstate boundary with 4 sampling sites were identified namely Sone River Jogdaha near sone Ghadiyal Breeding Center, Sone River near Bhawarsen road bridge, Sidhi, Sone River Churhat Distt., Sidhi, Sone River Karpur goan Interstate boundary.

Monitoring of biological parameters like identification of macro invertebrate was carried out from the above sampling sites. Collection of samples for analyzing these components was as per standard methods and CPCB protocol. Analyzed data were compiled and discussed in detail in the project report.

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

In Anuppur region at subsequent sampling locations the quality of water classified in class A-C based on BWQC score. Deterioration of water quality mainly due to mixing of sewage nalla within and around the river bed.

In Shahdol region, 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 influence which includes Religious activities, anthropogenic activities, Idol immersion, Agriculture activities affecting water quality of river.

In Rewa regions the BWQC score designate the quality of river water in class B to C at all the sampling location. Water quality of sampling site at this region is mainly degraded basically due to sand recovery activities near the river bed.

During the entire monitoring of river Sone year 2021-22 in all the three regions at twelve monitoring sites the quality of water classified at most of **the sampling locations from Class B to C** whereas at some sampling location class A is also noticed based on BWQC score indicate water quality as Clean to Moderate Pollution.

PHOTO GALLERY

A: Identification & Collection of Micro invertebrates at Sampling Sites



B: Bio monitoring at River Sone

