

Comprehensive environmental monitoring of Richhai Industrial areas of Jabalpur Madhya Pradesh 2021- 2023

Madhya Pradesh Pollution Control Board was conducting the study entitled “Comprehensive environmental monitoring of Richhai Industrial areas of Jabalpur Madhya Pradesh.” during the year 2021- 2023. The main objective of this study was carried out to generate baseline data of environmental pollution in Jabalpur industrial area.

Industrial pollution has adversely affected biodiversity for the last two centuries and continues to increase globally. The effect most closely correlated with loss of ecosystem services is toxification of environmental sites, whereby the organisms living in the ecosystem are damaged because of the poisonous nature of many pollutants. Therefore comprehensive environmental monitoring is important to knowing whether the quality of environment of industrial area is getting better or worse. This project is aimed to assess the environmental pollution status of Richhai industrial area with special reference to ambient air quality, ground water quality and soil quality.

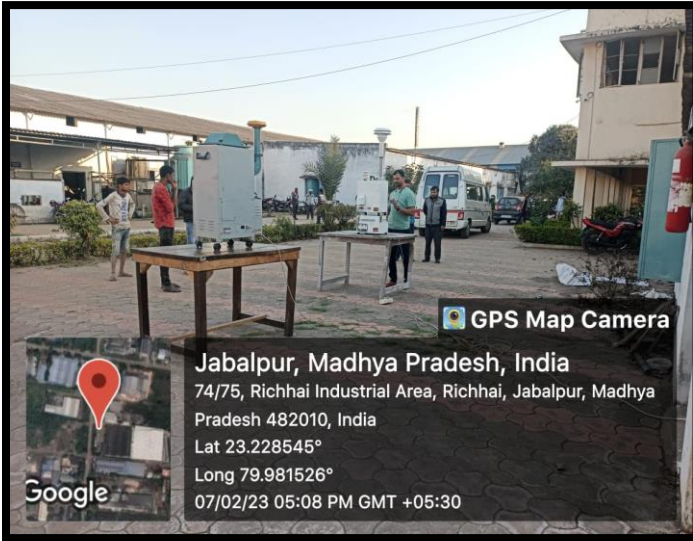
To study the environmental status, total five locations selected for ambient air quality, ground water quality and soil quality monitoring in industrial area of Richhai. Sample collection and analysis was carried out as per standard methods.

The study revealed the average concentration of gaseous pollutants i.e. NO₂, SO₂, O₃, NH₃, in ambient air are well within standard limits at all selected locations during the study period however particulate matter (PM₁₀, PM_{2.5}) and heavy metals (Pb & Ni) level were found exceeding the National Ambient Air Quality Standards (NAAQS) 2009. Overall ambient Air Quality Index of Richhai industrial area was observed, satisfactory to moderate during year 2021-23.

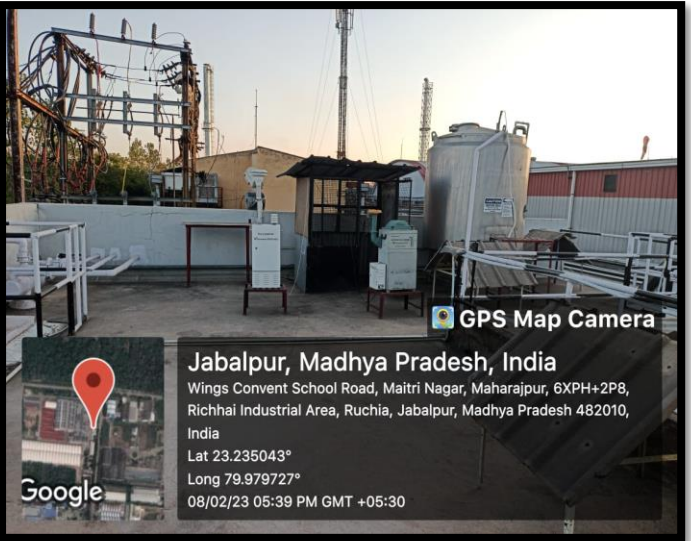
The ground water data indicated that ground water pollutant levels were found exceeding the Bureau of Indian Standard 10500 limits at few monitoring location during this study. With respect to Colour, Odour, pH, Conductivity, Turbidity, Total Dissolved Solids, Total Suspended solids, Chloride, C.O.D., Ammonical Nitrogen, Nitrite, Nitrate, Ortho Phosphate, Alkalinity, Total Hardness, Calcium Hardness, Magnesium Hardness, Sulphate, Fluoride, Sodium, Potassium, Calcium ion and Magnesium ion etc.

The soil quality data concluded that high concentration of heavy metals was found at all monitoring location in Richhai industrial area during year 2021-23.

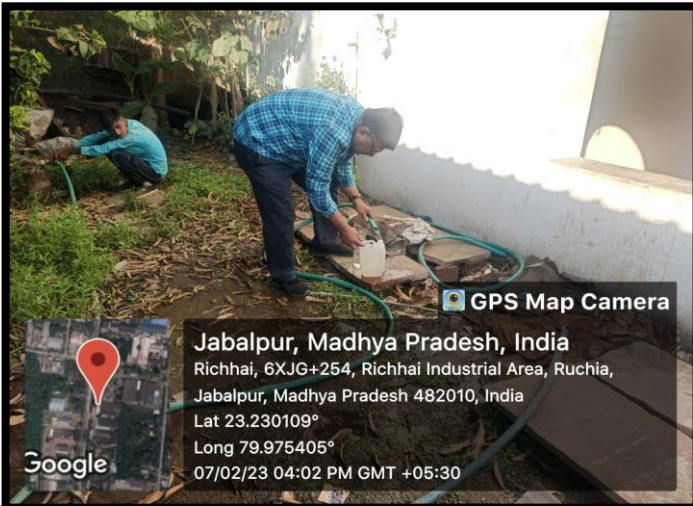
Photo Gallery



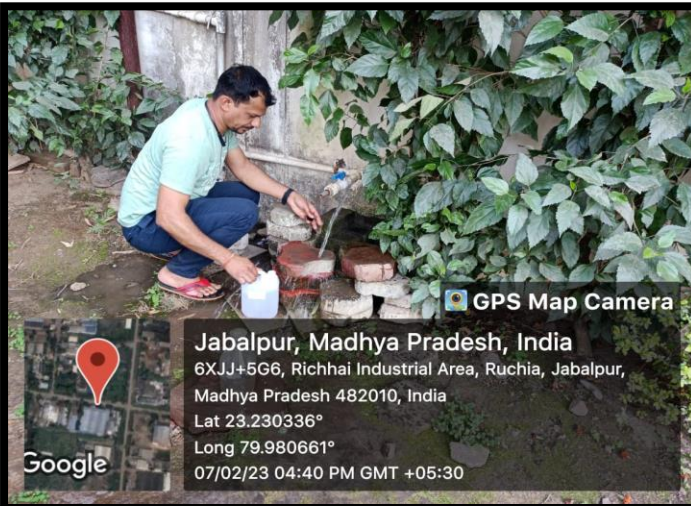
Pic: Ambient Air Monitoring at the study location



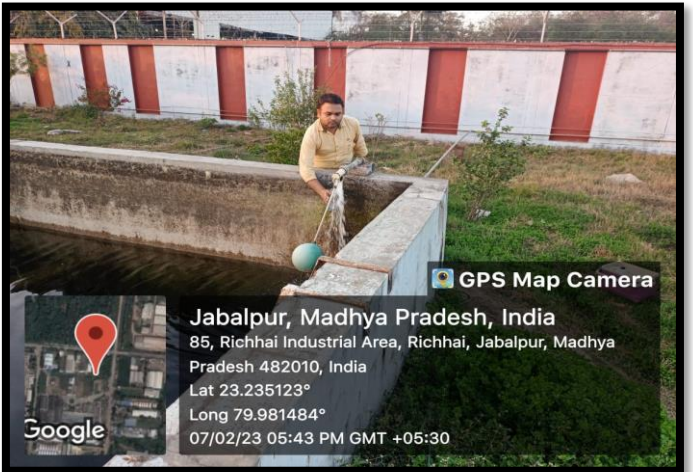
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Pic: Ground Water Monitoring at the study location



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