

Water Pollution and Industrialization: A Study on the Impact of Industries on Water Quality of Major Rivers in India

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Indiscriminate and wasteful water consumption practices has led to deterioration in the water quality, be it surface water or groundwater. Lack of inadequate effluent treatment measures have often resulted in the discharge of toxic substances either on to land or surface water bodies which percolate through the soil to affect groundwater resources. Agricultural usage is also another route through which fertilizers, pesticides and metallic ions could percolate to the groundwater source. The present study attempted to analyse the major water polluting industries in India and to explain the spatial and regional variation in the total number of water polluting industries in each state and the effluent treatment plants besides explaining the industry-specific pollution control with the available data. The state-wise distribution of problem areas were identified. The parameters selected for groundwater analysis includes heavy metals, pesticides, physico-chemical and bacteriological parameter with the help of various field settings conducted under Central Pollution Control Project. The study attempted not only to throw more light on the extent of ground water quality deterioration but also describes the geochemistry of severely affected problem areas of different states. The study with the help of secondary data highlighted the quality of the groundwater with the help of identification of major dimensions using the multivariate statistics. The major findings of the study revealed that the major industrial area such as Vapi (Gujarat) deteriorates the water quality mainly due to pesticides whereas the ground water quality in North Arcot (Tamilnadu) is reported to be contaminated largely by tanneries by adding a high chromium exceeding permissible limits.