

Resource Assessment for Environmental Health Management

A geospatial study of Noyyal River Basin in Tamil Nadu

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ABSTRACT. India is the country experiencing the mixed developing economy with the contribution from the agricultural and industrial sectors in its path of development since independence. But, the nation has witnessed a rapid industrial growth during the post liberalization period. Unfortunately, this rapid growth has caused environmental stress in certain regions of the country. Acceleration of industrial exports, especially during the globalization period has aggravated the environmental problems further, which has posed upswing in social costs on many local communities. To save and sustain the environment, the governmental activities have led to and passed different environmental laws during the last decade. The Pollution Control Boards in the state are the regulatory agencies, which have been entrusted to enforce these laws. But in many cases, these agencies have not been able to implement pollution control measures to the fullest extent, especially in respect of unorganized small scale industries, which are located in clusters. The effluents from the units cause various forms of pollution, which contaminate the surrounding air, water and land. The contamination of air, water and land leads to ill-health to the community indirectly that needs local regulatory monitoring mechanisms.

This paper is mainly aimed to study the nature and impact of water pollution in the Noyyal river basin and the need for proper governance. The main thrust of the study is to study the impact on the health status of villagers, agriculture and the livestock population. The river basin has about more than 850 bleaching and dyeing units and nearly 90 million liters per day of effluents are discharged into the river system. Discharging of effluent into the river system leads to contamination of surface and groundwater in the river basin. To study the level of water contamination, 117 water samples have been collected from different potential wells in the basin and also analyzed in the laboratory. From the result, it is found that more than 81% of well water has been contaminated and the well water is not suitable for agriculture and domestic purposes. About 43 villages have been selected for and a primary survey was conducted to understand the level of pollution and causes of pollution on health problems of the people. It was evident from the study that almost all the 43 sampled villages were affected by different levels of water pollution and the people are facing different health problems such as skin allergy, respiratory infections, general allergy, gastritis and ulcers. In view of the above findings, there is an urgent need to have a local level monitoring mechanism to control the water pollution for sustainable livelihood in the study area.

Key words: Resource Assessment, Water Pollution, Proper Governance.

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