Indian Journal of Ecology (2019) 46(4): 823-827

Manuscript Number: 2925
NAAS Rating: 4.96

Impact of Industrial Wastewater Disposal on Surface Water Bodies in Kalingarayan Canal, Erode district

R. Divahar, P.S. Aravind Raj, S.P. Sangeetha and T. Mohanakavitha[1]

Department of Civil Engineering, Aarupadai Veedu Institute of Technology, Paiyanoor, Chennai-603 104, India
[1]Government College of Technology, Coimbatore-641 013, India
E-mail: divaharmr@gmail.com

Abstract: The Kalingarayan canal is crossing the major textile town Erode which is abundantly occupied by textile units. Major streams carrying the untreated / semi treated industrial effluents are mixed into the canal. However, the gradual introduction of a large number of new chemical compounds and the technologies has resulted in much higher number of contaminants. The original situation, which local intense pollution from a limited number of well-defined sources has been transferred into a situation with widespread contamination by a large variety of compounds from a multitude of sources. Continuous disposal of industrial effluents on canal, which has limited capacity to assimilate the pollution load, also leads to ground water pollution. Kalingarayan canal has helped to cultivate more than 6000 hectares but farmers are experiencing various problems. The area of cultivation is reduced to 3000 hectares because of the contamination in the canal by the different polluting industries like tanneries, textiles and dyeing units located in Erode and Tirupur taluk areas. The farmers and their cattle are affected by the pollution of the canal. Hence their yield on their lands has decreased to a certain extent. Thus, this study gives a clear picture of pollution source points, types of effluents added in the canal. The scope of the present study is to assess the impact on surface water of Kalingarayan canal, a comprehensive experimental study to identify the pollutant levels in the surface water of the Kalingarayan canal and to suggest a suitable remedial measure to handle this problem. The results of the analysis were correlated with the water quality standards of BIS. It shows that all the parameters studied are exceeding in the permissible limits. This is due to more discharge of industrial effluents into the canal and it should be regularly monitored and wastewater should be treated. This will control pollution and prevent the depletion of the quality of canal water.

***Keywords*:** Industrial effluents, Kalingarayan canal, Pollution, Sewage water, Tanners and dyers