

ENVIRONMENTAL EVALUATION OF SEWAGE IRRIGATION SYSTEM, ROORKEE, INDIA

Rajendra Bhatnagar
Himanshu Joshi
D.C. Singhal

Department of Hydrology, IIT, Roorkee, India

ABSTRACT

Irrigation is one of the widely accepted uses of sewage effluent because it contains nutrients of value to crops. However, its use needs to be approached with caution, as it can be harmful to human beings, animals or vegetation as it may be charged with viruses, bacteria and other organisms, or may contain toxins and carcinogens. The Municipal Board of Roorkee, India has promoted sewage irrigation on the land at a location four kilometers northwest of Roorkee, between the villages of Saliar and Ibrahimpur. Vegetable farms use the sewage for irrigation. The untreated sewage of the old Roorkee area is pumped from the pumping station to the sewage farm, through sewer lines. During the lean period of agricultural activity, it is directly disposed of to the Solani river, which pass through the town. The present study has been undertaken to ascertain the possibility of contamination of groundwater and soil in the upper aquifer due to the ongoing practice of sewage irrigation. The results of the study show little to no deterioration in the quality of groundwater at present in the shallow aquifer in the vicinity of the disposal area. However, higher values of solids, minerals and heavy metals in the sewage-irrigated soils highlight the enrichment of these compounds.

Reference: *Bhatnagar, R., H.Joshi and D.C. Singhal; Environmental Evaluation of Sewage Irrigation System, Roorkee, India, Journal of Environmental Hydrology, Vol. 12, Paper 11, July 2004.*

CONTACT:

Himanshu Joshi
Department of Hydrology, IIT
Roorkee - 247667
India

E-mail: joshifhy@iitr.ernet.in

[Return to HydroWeb Homepage](#)