Nitrate Pollution of Ground water in Parts of Musi river basin, Nalgonda mandal and Nalgonda District, Telangana state, India.

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Abstract:

Hydrogeochemical Studies in part of Musi river basin have shown nitrate pollution of groundwater in the basin. Out of forty three groundwater samples analysed for various Hydrogeochemical parameters twenty one samples registered a high Nitrate content exceeding the desirable limit (>45ppm) for human consumption. Nitrate contaminating groundwater is widespread in especially in the central and the eastern areas in part of Musi river basin and significant enrichment of nitrates observed in the central parts of the basin where its content is more than 500 ppm indicating severity of nitrate pollution. Topographically the nitrate pollution region is closely associates with relatively plain terrain near to the confluence of another streamlet with the confluence of groundwater in the basin, which has already dissolved the fertilizers used in the agriculture crops of monsoon season. There is a risk of nitrate content accumulation in groundwater resulting when excess use of nitrogen fertilizers are applied for high crop yields and it becomes even worse when conventional land use is changed from cereal crops to vegetable crops and horticulture in this river basin.

Keywords: Nitrate, Groundwater pollution, Musi River, Hydrogeochemistry.