

STATUS OF NITRATE CONCENTRATION IN GROUND WATER : A CASE STUDY IN NADIA DISTRICT, WEST BENGAL, INDIA

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Nitrate contamination of groundwater is a major concern, especially in regions where large quantities of agricultural fertilizers are applied. The investigation of groundwater quality in alluvial aquifers of Nadia district (West Bengal) reveals the presence of moderate nitrate in groundwater in some parts. The spatial distribution of nitrate concentration in these areas indicates that the contamination of aquifers is mainly due to diffuse source of pollutants. The prime source of nitrate enrichment is leaching from surface soil where fertilizer being utilized extensively for cultivation. The nitrate concentration decreases with depth and increases in post monsoon period when the groundwater leaching potential is very higher order along with surface infiltration process. As nitrate contamination is mainly restricted in shallower aquifer and its adverse effect has not yet been observed so much, however necessary steps should be taken to reduce the consumption of fertilizers so that nitrate concentration of groundwater should remain within permissible limit.