Impact of Municipal Solid Waste on Characteristics of Water Resources in and around Guntur city

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ABSTRACT

This survey was conducted in Guntur district Andhra Pradesh during the year 2022-2023 to study the impact of municipal solid waste on water resource characteristics in and around Guntur city. Water samples were collected near the landfill sites from various sources like bore wells, lakes or ponds and irrigation channels. Irrigation through underground water sources was very common in the areas of Guntur city. This study was carried out to know the physico-chemical, chemical and bio chemical properties of water samples collected near landfill sites. These water samples were collected from five different landfill sites *viz,*Budampadu, Naidupeta, Etukuru, Mangalagiri and Jindal power plant at 300 and 600 meters distances, respectively. Physico-chemical properties like pH, EC and chemical properties like chlorides, calcium, magnesium, carbonates and bicarbonates and bio chemical properties like BOD and COD were also analyzed. This study showed that the impact of municipal solid waste on water resource characteristics had greater impact on water samples near 300m distance from landfill site. All physico-chemical, chemical and bio chemical properties showed the highest values at 300m distance from landfill site compared to water samples collected from 600m distance.

Keywords: *Guntur, Land fill site, Municipal solid waste and Water Characteristics.*