

# **Quality of groundwater under different land uses: A case study in Jaffna Peninsula, Sri Lanka**

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## **Abstract**

The study was conducted to investigate temporal variation in quality of groundwater in two different land use domestic and agriculture. Groundwater quality analysis was done for pH, electrical conductivity, chloride and nitrate for forty wells. Measured parameters varied significantly within the forty wells. There was no significant different in pH due to land use and values were within the recommended level of Sri Lankan and WHO drinking water standards in domestic wells and within the irrigation water standards in agricultural land use. Increase in chloride concentration due to over abstraction in agricultural land was not realized much but increase in chloride concentration due to salt lagoon water intrusion was observed. Most of the wells were below the permissible level of Sri Lankan standards in electrical conductivity. This risk of significant amount of nitrate leaching to groundwater from the permeable soils could be considered as high in agricultural land use. Continuous monitoring and quality assessment of well water are necessary to avoid the quality hazards to the people in these areas.

## **Keywords**

Domestic, Agricultural land use, Groundwater quality

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