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## Assessment of sea water intrusion into the coastal aquifers

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Studies of sea water intrusion in coastal aquifers have assumed greater importance in recent decades because of the increased demands placed on subsurface water to meet the growing needs of water in large urban areas and agricultural practices located in the coastal regions in the world. The present work aims at assessing the sea water intrusion situation in the coastal mandals of Nellore district. These mandals include Kavali, Allur, Vidvalur, Indukurpet, T.P Gudur, Muthukur, Kota, Vakadu and Chittampur. Rainfall data for the period 2011 was collected from District Statistical Department, Nellore. Groundwater levels and groundwater quality for the parameters/ions, viz., pH, EC, TDS, Ca, Mg, K, CO<sub>3</sub>, HCO<sub>3</sub>, Cl and SO<sub>4</sub> (May, 2012) were collected from State Groundwater Department, Nellore. To delineate the seawater intrusion in the study area, Ca/Mg, Cl/ (CO<sub>3</sub> +HCO<sub>3</sub>), Na/Cl ratios were used. The general quality of groundwater for drinking purpose was discussed. The details of criteria for recognition for saltwater intrusion in coastal aquifers of the study area were presented and discussed. It is observed that Na is the dominant cation and chloride is the dominant anion in the study area. Seawater intrusion was noticed in Indukurpet and Muttukur mandal.

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