

INVESTIGATION ON THE GROUND WATER SALINITY PROBLEM IN THE MADUKKARAI RESETTLEMENT VILLAGE AT MANNAR DISTRICT

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This study focuses on the groundwater salinity problem in the Madukkari Resettlement village in Mannar district. This study was aimed to ensure the livelihood of the settlers by investigating the problem of groundwater salinity as ground water is the major source of irrigation in these areas and developing strategies to manage the land and water resources appropriately.

Secondary data on EC and pH were used in this study to evaluate the salinity and condition of ground water in Madukkarai Resettlement village during 10-07-2007 to 06-03-2008. Further EC, pH and river water levels at three selected locations in the river. GIS based database and map of EC were also developed for the project boundaries. Past experiences of selected farmers in relation to water quality, crop management, and information on soil layers (soil profile) were also gathered through a questionnaire survey. Furthermore, soil samples were collected from critical locations of the study area and analysed for soil texture and other soil quality parameters.

The results show that the best quality water of the study area is present in agro-wells those are far away from the river. As expected, the poor quality water is found in wells which are very proximity to the river. Results of soil analysis revealed that there is no evidence for the development of salinity in soil in Madukkarai Resettlement village.

It is concluded that, at present there is no evidence for the build up of higher concentration of solutes in the agro-well waters and it could be reasoned that the quantity of the "Maha" seasonal rains and of the total annual rains received in this region are sufficiently adequate to leach out and dilute solutes that have built up in the soil during the dry season.

Key words: Groundwater, Salinity, Groundwater aquifer, Electrical Conductivity (EC)

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