



Degradation of Paddy Land - Special Reference to Nintavur Agrarian Service Area

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Abstract

Agricultural activities have been a part of human civilization for thousands of years and are essential for economic growth and food security. The use of fertilizers in agriculture is increasing to enhanced production in line with population growth. Fertilizer consumption per hectare in 2020 in Sri Lanka is 297 Kg. Agricultural lands are being degraded in Nintavur area due to excessive fertilization, coastal erosion and sea water intrusion. Through this study, the condition of degraded lands is identified and their impacts on productivity are compared. For this research, soil samples were collected from 11 agricultural lands in Nintavur area and electrical conductivity (EC) was tested. Data were spatially analyzed using a geostatistical spatial interpolation (kriging) method with the help of a Geographic Information System (GIS). According to this, 23.6% of the land has high salinity, 50.3% moderate salinity and 26% low salinity. Also, compared to rice production data based on secondary data, it was found that rice production has decreased in saline areas. Also, according to information obtained through questionnaires and interviews with farmers in the area, Coastal erosion, chemical use, irrigation system and drought were identified as major salinity factors. To reduce salinity, awareness work should be carried out by constructing stone barriers and sand barriers in coastal areas.

Keywords: Chemical fertilizer, Erosion, Land degradation, Paddy, Soil testing