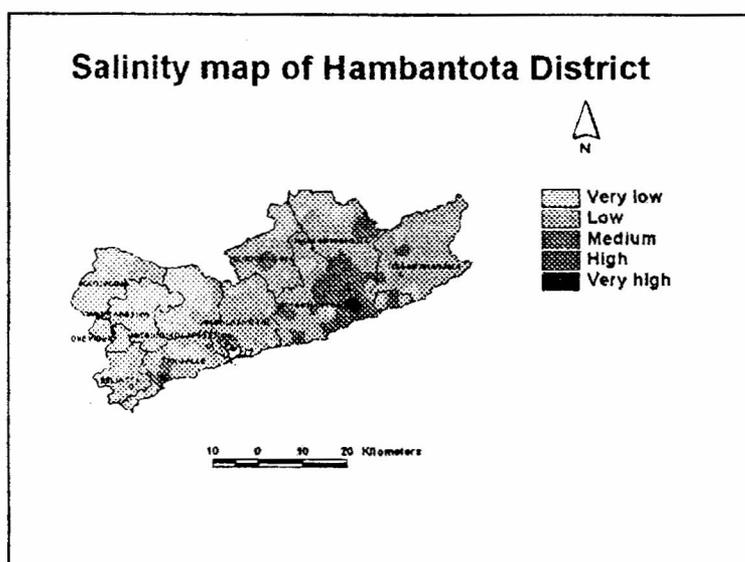


## IDENTIFYING AND MAPPING SALT-AFFECTED LANDS IN HAMBANTOTA DISTRICT, SRI LANKA: AN INTEGRATED GIS AND REMOTE SENSING APPROACH

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Since available lands in Sri Lanka is decreasing every year mainly due to degradation of lands, it is very important to restore these lands for useful agricultural production. In this regard, identification of salt-affected lands and differentiates into salinity levels would help to take necessary actions to restore these lands.



An extensive soil survey was conducted throughout the Hambantota district in order to identify the salt-affected lands in the district. The sampling was done at different depths (i.e. 0-10cm, 10-20cm, 20-30cm, 30-40cm and 40-50cm) by using a manual soil auger. The distance between sampling sites was approximately 3km. The exact position of

sampling points in latitude and longitude was identified by GPS (Global Positioning System). A total number of 100 points and 400 samples were collected. Topographic maps of survey of Sri Lanka used in the study were Timbolketiya (82), Kataragama(83), Yala(84), Hambantota(88) and Tissamaharama(89) of scale 1:50,000. Digital thematic maps of same map sheets and Scale of 1:25000 digital maps were also been used.

The samples were taken to the laboratory of the Department of Crop Science, Faculty of Agriculture, University of Ruhuna, where EC and pH measurements were taken using the EC meter and the pH meter. All the locational data taken using GPS system, entered into a database. EC and pH data also been entered to the database. Using ArcView software, a point map was generated using all the locational data including EC and pH values as attributes. By applying interpolating techniques, salinity maps were produced.