

## **MAPPING AND MONITORING LAND USE /LAND COVER CHANGES OF AN UNGAUGED WATERSHED OF VEERANAM TANK, CUDDALORE DISTRICT, INDIA**

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### **ABSTRACT**

Veeranam tank, Cuddalore district is the second largest tank in Tamil Nadu, which has an ungauged catchment. Land use, is one of the important parameter which determines the runoff in the watershed. This study attempted to identify Land Use/ Land Cover (LU/LC) changes in the study area. The satellite imageries of the year 1986, 1996 and 2005 are acquired from the IRS, Anna University, Chennai to derive LU/LC maps. Remote sensing and GIS software is used to recognize the LU/LC changes. The classification results show that this area has twelve classes of LU/LC such as crop land, Fallow land, Forest plantations, Forest Blanks, scrub forest, Gullied/ravenous land, Land without scrub, Reservoir/tank, River (stream), Settlements, and Salt affected areas as per Level 3 classification. Changes between different land use categories are assessed. The change detection obtained from LU/LC would be used for the prediction of runoff of the watershed. The study reveals that there is change in crop land and plantation. 78.55 km<sup>2</sup> of crop land and 254.885 km<sup>2</sup> of plantation changed to other categories, namely water bodies, built-up, Land with scrub, Land without scrub, current fallow and forest Blanks.

**KEYWORDS:** LU/LC, Land Use Imageries, Remote Sensing and GIS, Ungauged Catchment