

## ASSESSMENT OF SURFACE WATER BODIES USING AUTOMATED ALGORITHM, WEST GODAVARI DISTRICT, ANDHRA PRADESH, INDIA

KOLLI MEHAR GANESH<sup>1</sup>, RACHAKONDA SUBBA RAO<sup>2</sup>, Y.S.S.R.MURTHY<sup>3</sup> & P.A.R.K.RAJU<sup>4</sup>

<sup>1,4</sup>Professor Department of Civil Engineering, S. R. K. R. Engineering College, Andra Pradesh, India

<sup>2</sup>Professor Department of Mathematics, S.R.K.R. Engineering College, Andra pradesh, India

<sup>3</sup>Professor Department of Information Technology, S.R.K.R.Engineering College, Andra pradesh, India

### ABSTRACT

*In the recent past lot of research is taking place on surface water bodies. The surface water includes lakes, ponds, rivers, streams and other exposed inland water bodies. There will be variation in spatial extent of these features as a function of rainfall amounts, the intensity of rainfall, etc. after season / year. Remote sensing, providing lot of data and extracting a lot of information over the changes from time to time. Nowadays the role of satellite image process is widely used in extraction of water bodies. Different researchers are using various methods to delineate water bodies from different satellite imagery varying in characteristics like spatial, spectral, and temporal. Our present study, includes an automatic approach to capture the water body, from a Resourcesat-2 AWiFS (Advanced Wide-Field Sensor) imagery, using an Automated Algorithm, for extraction of surface water body's model. The dynamics of surface water bodies in West Godavari district are studied through geospatial analysis for the extraction of water body layers for the month of December month 2016. Geospatial database on water body's information has been created from the Resourcesat-2 AWiFS image. The model was used for the estimation of the water spread area where bands 0.52-0.59  $\mu\text{m}$  (Green), 0.62-0.68  $\mu\text{m}$  (Red), 0.77-0.86  $\mu\text{m}$  (NIR) and 1.55- 1.70  $\mu\text{m}$  (SWIR). Quantitative estimates of water spread area (WSA) of water bodies are obtained from analyzing inter / intra seasonal / annual analysis. The WSA calculated for each is 3782 ha. The information can be used in deciding the cropping pattern in the study area.*

**KEYWORDS:** Surface Water Bodies, Water Spread Area, Remote Sensing & Gis

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