Performance Evaluation of Thatipudi Irrigation Project Using Landsat 8 Images

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ABSTRACT

Synergistic application of satellite remote sensing and Geographic Information System (GIS) techniques were used to analyse the agricultural performance and sustainability of the Thatipudi irrigation project of Vijayanagaram district of Andhra Pradesh state. Presently, there are number of satellites providing such datasets and many of them are available in public domains. Methodology was established for the use of public domain satellite datasets from Landsat 8 OLI. Analysis of Landsat 8 multidate satellite data during the year 2014-15 for all the seasons helped to generate spatially distributed information on total cropped area.The study thus demonstrated the synergy possible from applying satellite remote sensing and GIS to estimate the cropped areas of different seasons. It is concluded that the satellite crop area estimated as *kharif* crop constitutes 81% (5057 ha), *rabi* crop constitutes 5% (303 ha) of the ayacut designed ayacut during the year 2014-15 and irrigation intensity is 88%.

Key words: *GIS, Irrigation, Remote Sensing, Satellite, Public domain.*