

## ICT and Geomatics as process tools for Community centric Watershed Development

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**Abstract:** Developmental activities in rural areas are always a challenge for the implementing agencies as rural systems are generally complex in nature. Many a times the programs undertaken by Government institutions to address specific problems of rural masses get poorly implemented due to insufficient technical inputs, lack of zeal and transparency in implementation and ineffective monitoring methods. These are found to be more pronounced in Natural Resources Management (NRM) programs involving terrain dependent interventions for better sustainability. Remote Sensing and Geographic Information System are effectively used techniques for integrated land and water resources development at grass root level to address specific NRM issues. In addition, innovative integration of Information Technology elements could further help in effective monitoring of major programs. This, in turn, could help in enhancing the productivity levels leading to better livelihood conditions, particularly in the dryland areas. An attempt is made to institutionalize technological inputs with judicious use of Geomatics and IT in terrain characterization, participatory plan preparation, sound implementation strategies, effective on-line project monitoring and impact assessments. The innovativeness in the interventions lies in the integration of remote sensing inputs, locale specific information systems with web-based MIS/GIS for close monitoring. The kind of unique technology oriented interventions in implementation and monitoring has resulted in positive changes in NRM with significant impacts at local level. This has led to better conservation practices and sustainable trends in livelihood support systems at community level.

**Keywords:** GIS, WebMIS, Watershed developments, Natural Resources Management