

Water Resources Development and Management in Sub-basin Using Geospatial Technologies: A Case Study

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Abstract: Water resources development and its availability is one of the crucial factors for sustainable development of nation. Planning for water resources development in basin requires careful assessment of the available water resources and reasonable need of the basin in foreseeable future for various purposes such as Irrigation, Drinking, Industries, Hydro power, Recreation, Tourism, Aquatic life, Agro-based industries, Dairy development, and Navigation etc. The water resources development and management should be planned on the basis of hydrologic unit such as sub-basin or watershed as a unit of development for integrated use of water resources together. For planning of integrated use of water, the precise knowledge of Geology, Drainage, Geomorphology, Hydrogeology, Land use and Landcover, Rainfall, Distribution of soils, Existing cropping pattern and Socio-economic factors are essential need to be studied in detail. Considering this main aspect an integrated planning of water resources in Prakasam district of Andhra Pradesh in India has been attempted. The primary objective of the study involves the assessment of various water resources available in the sub-basin by using of "Four Waters Concept". The methodology of the Four waters Concept revolves around the harvesting of available runoff like Rainwater, Surface Water, Ground Water and In-situ soil moisture. For entire water resources development of an area, the basin shall be decentralized from basin to sub-basin to the lowest possible level units for efficient utilization. Study also involves the Published literature, Field surveys, Ground water data, Toposheets and Soil Maps, Geological Maps analysis along with satellite data analysis for various seasons by using of the Geo-Spatial tools like ARCGIS, GPS. From the conducted study it can be revealed that available water resources in the sub-basin can be better utilized and managed by modern irrigation methods like drip and sprinkler irrigation and also by building the Water Grid system.

Index Terms: Sub-basin, Four Water Concepts, Remote Sensing and GIS, LULC, Runoff, Water grid

Identification and Critical Analysis of Risk Factors in Construction Projects

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Abstract: Present days in construction projects risk management is considered to be a very main managerial process for accomplishment of completing the project within the financial aspects and within the time period. The document has been mostly focusing to identification and critical analysis of risk factors in construction projects, in with the intention of procedure to first identifying the risk factors from the literature review and collecting the data related risk factors from site works. Methodology process is direct interviews with project managers, contractors and site engineers. To identifying the construction risk factors mainly focus monetary, political, environmental, technical, management, safety and materials. In this process conducting the interviews and questionnaire surveys, after completion of survey analyze the data collected from site work and responses.

Index Terms: Risk management, factors identification, factors analysis.