



Remote sensing and its applications in environment

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The natural environment represents a complex set of inter-relationships among flora, fauna, landforms, geological structure, and atmospheric composition. These biophysical components interact to form ecosystem at various scales that define the surface characters of the earth. They also define renewable and non-renewable finite source bases for human activity. Maps have traditionally been used to explore the Earth's environmental condition and to exploit its natural resources.

Applications of remote sensing : Remote sensing has been used for acquiring the large volume of spatial data for inventorying, monitoring and gaining new insight into the complexity of the natural environment. Spatial information is related to geographical features such as topography, land use, land cover, climate and other such feature on a large scale. Remote sensing has been widely used in many fields like ecosystem analysis and management, resources conservation, mineral exploration, biodiversity monitoring and its conservation, meteorology, water resource management and atmospheric chemistry.

Data acquisition : The sensor pleased on the platform of the satellite; detect information from the reflected radiation, which is reached back to the sensor after hitting the object of interest. In comparison to the traditional methodology of data acquisition, the remote sensing technique of data acquisition has several advantages, *i.e.* 1. Capacity to take a synoptic view, 2. Capability for the fast survey, 3. Better accuracy, 4. Provides multispectral data for more information, 5. Covering a large area, 6. Simultaneously data acquisition for different places, etc.

Remote sensing from airborne and space borne platforms provides valuable data for mapping, environmental monitoring and disaster management, civil and military intelligence. However, to extension and proper use of these data, information has to be exquisite and should be representing in a way to magnify its importance and usefulness. The object-oriented approach can contribute to powerful automatic and semiautomatic

analysis for most remote sensing applications.

Remote sensing in future : The future of remote sensing growing significantly due to its faster rate of data acquisition, more accuracy, new platforms, advance sensors and so on. In future, this technology will be highly applicable to the information broadcasting, for environmental monitoring such as forest area, forest fire, aquatic and terrestrial animals survey, cropping area survey etc.

This paper mainly focused on remote sensing, its component, image interpretation/analysis and applications in the environment.

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