

Application of remote Sensing:-

The Synoptic view and repeatative coverage of the earth surface provided by satellite remote sensing has significantly increase our capability to comprehend our environment and monitor and its changes thus remote sensing has immense potentialities for application in diverse areas of human interest such as water resource, geology, agriculture, forestry, land use, marine science etc.

Water resource:--water resources study, remote sensing has useful application in areas like basis show cover mapping surface and run off prediction, flood inundation and hazard zone mapping, surface and ground water, study, reserve monitoring , water quality studies, watershed, channel morphological study, irrigation potential, water use studies and wet land studies etc.

Forest resource:--Remote sensing provides reliable and up to date information about the extent of forest cover type of forest, magnitude and distributes of forest hazards such as deforestation shifting cultivation fire land decreases for geological mapping, geo-technical study, mineral exploration, oil exploration, ground water studies and geomorphologies studies. Remote sensing techniques provided to be of great use. Remote sensing is also use for underground fire map in Jharia coal field area of india very successfully.

Marine science:--In marine science, remote sensing is use to monitor to detect the fish prospecting areas and sea surface temperature etc.

Land use survey:---Remote sensing has tremendous potential for application in land use survey, soil mapping and crop inventory. In addition to other land use potential, remote Sensing is finding is wide application in urban planning. In agriculture, it is used to may the areas under different crops and in some cases it forecast the crop yield.

In many cases, specially for flood mapping, the common satellite data of visible and infrared becomes useless when real time information are required due to cloud cover. In this region the SAR (Synthetic Apparature Radar) Date are of great help at this micro wave can penetrate the cloud cover and collect in forth of the cloud ground situation.

In Short remote Sensing Technology is becoming increasingly meaning full to use as sophistication in instrumentation improves and our capability to interpret and use these data increase

Question no - 9: Discuss the application of remote sensing in forestry or forest resource management..

Answer:--

Application of remote Sensing in forest resource management:

Forest are one of the most valuable ecological resources of the global interests. They are the sources for many our essential replacements such as wood, timber, raw material for paper production etc.

The Existing forest cover of the world is depleting due to increasing biotic activities like deforestation, over grazing and cultivation of marginal land. In order to say the further detereoration of forest and vegetation by proper planning and management and to being more land under than the systemetic survey, Classification and mapping of forest and vegetation are an essential pre-requisite. The conventional techniques use for preparing the forest inventory upto recent times have been found tedious, time consuming, costly and less and accurate, particularly inaccessible areas. Aerial and satellite remote sensing techniques have been prove economic faster and accurate the classification and mapping of forest and vegetation the use of aerial photo interpretation for forest resource survey and mapping over large areas in different places of the world.

With the launch of US Landsat-I in 1972, the satellite remote sensing has asherthed in a revolutionary change in the surveying and mapping of forest. The information acquired from sat is near real time and absolute relevant for planning the development activities. Based on visual and digital analyze of land sat MSS and TM data surveying and mapping of forest vegetation have been done in deferent parts of the world. The data generation French satellite SPOT and Indian Remote Sensing satellite have in areas the potentiality of the satellite remote sensing in

forest survey and mapping.

The use of small, medium and large scale black and white aerial photographs has been extensive use by the pre -investment survey of forest resource organization for the survey classification and mapping of forest in different parts of the world. The result of this studies have indicated that on small scale photograph (1:4000-1:60000) it is difficult to identified individual species. On medium scale photograph (1:20000-1:40000), various species coniferous forest and mixed deciduous forest pure gregarious patches of teak, sal, bamboo etc. have been identified and mapped. On large scale photograph (1:10000-1:20000) taken in suitable reason some species in the deciduous or evergreen forest could be identified and mapped. The identification of gregarious stand of teak, sal, bamboo, reads and young forestry plantation conduction with ground truth could be easily identify and mapped.

Estimation of height, crown density and crown diameter has been done by aerial photographs which is an essential pre-requisite for forest inventory and management.

Land sat-visual and digital analysis techniques have been successfully use for operational project by NASA (National Aeronatic Space Administration, USA) for surveying or mapping and monitoring forest feature and phenomenon in different parts of the country.

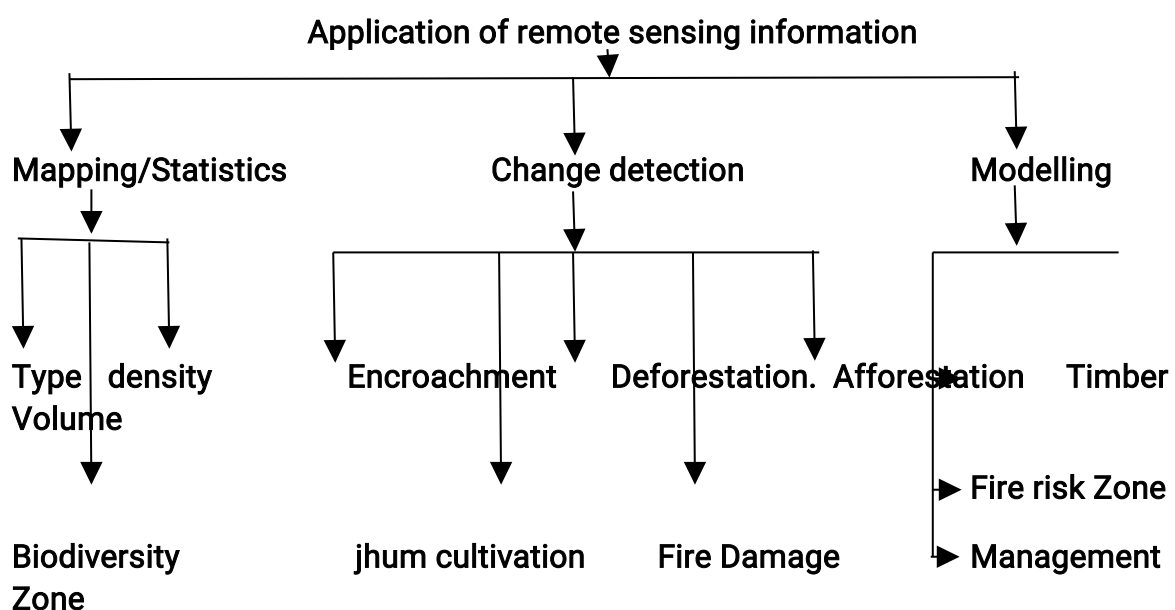


Fig: Possible application of Remote Sensing in forestry