

Land Usage and Coverage of Andaman Islands for Geographical Information

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DESCRIPTION

There is a need to understand land cover changes and its effect on the overall ecosystems. Land use change affects the global climate *via* the carbon cycle, the water cycle through changing evapo-transpiration and hydrological regimes but land use change also affects biotic diversity, soil degradation and the ability of biological systems to support human needs. In other words, such changes influence earth system functioning. Information regarding land-use change is necessary for many applications, such as the monitoring, management and planning of natural resources. It is also important for applications like agriculture, hydrology, forestry and ecology. In order to improve the economic condition of the area without further deteriorating the bio environment, every bit of the available land has to be used in the most rational way.

Land cover change may be the most significant cause of global environmental change. Impacts of land cover modification such as habitat loss and degradation are known to impair ecosystem function and reduce ecosystem services. Lack of environment friendly technology in landuse change has led to host of undesirable impacts on both terrestrial and marine ecosystems. It has adverse effect on coastal ecosystems, soil erosion and carbon sequestration. Satellite or airborne-based monitoring of the Earth's surface provides information on the interactions between anthropogenic and environmental phenomena, providing the foundation to use natural resources better. Application of remotely sensed data made possible to study the changes in land cover in less time, at low cost and with better accuracy. The LULC data sets are in spatial as well as in nonspatial formats and thus are difficult to integrate conventionally. The Geographic Information System (GIS) is a powerful tool to

assemble, analyze, store, utilize, manipulate and disseminate scientific and technical data. Remote Sensing (RS) and Geographic Information Systems (GIS) techniques provide effective tools for analyzing the landuse dynamics of the region by sound planning and cost-effective decision measures are efficient tools for analysis and planning and modelling of land uses, as well as for monitoring, mapping and management of natural resources.

CONCLUSION

Andaman has the Indian subcontinent's richest rain forests, the indigenous human tribes of Negroid and Mongoloid origins (some are in the Stone Age period even now), unique culture and strategically as well as ecologically very important areas. Ecologically these Islands are fragile because of their steep hills, limited flat terrain, saline creeks and with poor and porous soils with very little water-holding capacity. The area runs roughly in a North-South direction for about 30.78 km from Wimberlygunj to Chidiyatapu. Along East-West direction, it runs for about 25.80 km. The study area has covered 39546 hectare of land and a coastline of 759.36 km. The sandy beaches on the edge of the meandering coastline are fringed with coconut palms that sway to the rhythm of the sea. The sea around the islands offers excellent scope for continental shelf, offshore and deep sea fisheries, coastal tourism and adventurous water sports like scuba dive, sport fishing. The marine ecosystem of South Andaman is endowed with specialized ecosystems namely mangrove ecosystem, seagrass ecosystem, mudflat, sandy beach and coral reef ecosystem. It is one of the active seismic zones in the Asian continent. Structural trends in area are controlled by tectonic activities related to movement of the Indian plate.

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