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FOREST COVER FACES THE AXE EFFECT IN UK DISTRICT

By Deepthi Sanjiv, Bangalore Mirror Bureau | May 3, 2016, 04.00 AM IST

A study undertaken by scientists of the Indian Institute of Science shows a sharp decrease - from 57.31 per cent in 1979 to 32.08 per cent in 2013 - in evergreen forests of the district

Uttara Kannada district has the distinction of having the highest forest cover in Karnataka. It is also the fifth largest district of Karnataka with abundant natural resources, perennial rivers, abundant flora, fauna and a long coastline of about 140 km. The district consists of three distinct agro-climatic zones covering 11 taluks with a total population of 1,437,169 (as per 2011 census) with a density of 140 persons per sq km.

Dr Ramachandra TV of the Energy and Wetlands Research Group, Centre for Ecological Sciences, Indian Institute of Science, Bengaluru, along with researchers Bharath Setturu and Subhash Chandran, also from IISc conducted a study in the region during 2011-13 as part of the integrated carrying capacity assessment of the district supported by the Karnataka Biodiversity Board. The study has now been published in Forest Ecosystems under the title 'Geospatial analysis of forest fragmentations in Uttar Kannada district'.

Of their findings, Dr Ramachandra, lead author of the paper, says the temporal land use analyses show a decrease in the evergreen forest cover from 57.31 per cent in 1979 to 32.08 per cent in 2013. Enhanced agricultural activities are evident from the increase in agricultural land use from 10.02 per cent in 1979 to 14.13 per cent in 2013 and areas under human habitation have increased during the last four decades from 0.95 per cent in 1979 to 3.07 per cent 2013.

In addition, various on-going unplanned developmental projects have contributed to the decline in forest cover. The increase in plantations of exotic species such as Acacia auriculiformis, Casuarina equisetifolia, various Eucalyptus spp, and Tectona grandis serve mainly to meet the demand of forest-based industries. These plantations constituted 12.04 per cent in 2013.

Degradation of vegetation cover in the coastal zone had triggered a series of landslides in 2009 at 21 locations along a national highway. The dry deciduous forest cover has declined considerably from 2.83 to 0.96 per cent from 1973 to 2013 and was noticed mainly in the north-eastern part of the district in Mundgod and Haliyal taluks.

Dr Ramachandra observes, "The Western Ghats, the repository of diverse biological organisms is one among 35 global hotspots of biodiversity. This region has been experiencing large-scale land cover changes with the

fragmentation of primeval forests. Forest fragmentation analysis based on remote sensing data of the 1979-2013 period helped in assessing the spatial patterns of forests changes under patch, transitional, edge, perforated and interior cover.

"The study region, as an ecologically fragile area, is now left with only 25.62 per cent of interior forests and the spatial extent of non-forests is 47.3 per cent as on 2013, which highlights the need to restore forests. The district has 18.5 per cent of its area under monoculture plantations in the Haliyal and Mundgod taluks.

"Conservation planning of forest ecosystems needs to be holistic at watershed levels involving all stakeholders. Restoration of forests with native species would enhance hydrological services and biodiversity. By active participation in forest restoration initiatives and micro-level planning, stakeholders of the Western Ghats are likely to gain. Rendering such service would help in mitigating global climatic change and serve the cause of forest ecosystems in global biodiversity hotspots."

Consequences of fragmentation of contiguous forests are increased human animal conflicts, inbreeding pressure and extinction of species, and perennial streams becoming seasonal, which affects the agriculture and horticulture productivity and livelihood of people, according to Dr Ramachandra.