

## Urban sprawl

## Land use change in Bannerghatta buffer zones, finds study

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**BENGALURU:** Urbanisation has had a major impact on land use of Bannerghatta National Park (BNP), located around 25 km from the city.

A study by Energy and Wetlands Group, Centre for Ecological Sciences, IISc, on the ecologically sensitive zones of BNP shows that the forest patch spread across 102.7 sqkm, is undergoing severe land cover changes due to anthropogenic pressures. Anthropogenic chiefly refers to the pollution caused by human beings.

The land analysis was carried out in BNP and buffer regions of five kilometres. Land use changes within BNP region are less compared to the buffer region. The moist deciduous forest which covered 50.4% of the area in 1973 had come down to 28.5% in 2015 due to anthropogenic pressure, Prof T V Ramachandra, from CES, IISc, told *Deccan Herald*.

BNP Deputy Conservator of Forests Sunil Panwar said, "The department commissioned this study because we wanted to get a scientific opinion to preserve forest land and corridors. Nothing can be done about changes in private land use, and controlling its impact on forest lands can be a challenge. We have to analyse the report before chalking future plans."

Forests in Ragihalli, Yelavantha and Bettahalli regions with good protection measures show minimal disturbance. However, implications of unplanned urbanisation are evident in the buffer regions. Land use analysis in the buffer region (5 km) highlights ur-

ban sprawl in peri-urban regions. It has fragmented and dispersed urban patches in the periphery, amounting to 5,462 hectares of built-up area. The region has lost moist deciduous cover which has come down from 26.1% to 13.8 % with an increase in horticulture, from 8.5 to 11% (between 1973 and 2015).

The region has lost large tracts of deciduous cover in Kanakapura and Anekal taluks due to intensified horticulture activities and deforestation, Ramachandra added. Analysis shows that there are 69 villages in the Ecologically Sensitive Regions-1 (regions of high sensitivity according to the Forest Act), 78 villages are in ESR- 2 (regions of higher sensitivity) and 79 villages in ESR- 3 (regions of high sensitivity) and 176 villages in ESR- 4 (in the buffer regions spread across 10 km which are moderately sensitive). The study shows there are 120 human settlements located within five kilometres radius of BNP boundary and five human settlements inside BNP limits. Tribal settlements dominate close to BNP boundary in the south-east and south-west and depend on agricultural livestock for livelihood.

The area needs protection especially because it houses a healthy population of elephants, tigers and leopards. BNP is a prime elephant corridor. Conservation has become a challenging task, especially in the wake of increasing human pressures on the ecosystem. An anthropogenic disturbance on landscape is of much higher intensity compared to natural disturbances like wind and fire, Ramachandra said.

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