

## Paradise lost: India's biodiversity is in crisis

Thursday, 24 January 2019 | [Kota Sriraj](#)

**While developed nations are bending over backwards to usher in biodiversity into urban spaces, India is tracking backwards and losing its green cover. The Western Ghats are symbolic of the country's pristine hotspots and must not be allowed to wither away**

Population pressures, hunger for land and prime real estate have all made many a nature hotspot disappear over the last decade. These permanent losses of biodiversity hotspots would seem insignificant when compared to the rather disturbing findings of a latest study published in the Yale Journal of Biology and Medicine. The study found that unplanned developmental activities and land use are reducing the evergreen forest cover and perennial streams in the central region of the Western Ghats in India.

While other developed nations in the world are bending over backwards to usher in biodiversity into their cities and urban spaces, India is tracking backwards and losing its green cover and natural sanctuaries for its flora and fauna. The Western Ghats, a biodiversity hotspot known for its rich ecology, natural forest systems and perennial rivers, are slowly but steadily falling prey to large-scale human activities that are now beginning to erode the ecosystem of this central region of the country.

The study sharply focusses on the Kali river that originates in Uttara Kannada district in Karnataka and joins the Arabian Sea. The river is as old as the Western Ghats but over the years, it has been dammed at six locations. As a result, 325 species of flora and 190 species of fauna are at immediate risk of extinction. Remote sensing data formed the basis of the study and showed how the silent destruction of one of nature's best known habitats is taking place systematically. The data specifically shows that between 1973 and 2016, forest cover reduced from 85 per cent to 55 per cent.

Additionally, land use pattern in the region also underwent changes during 1980-2000 due to developmental projects such as the building of dams on the river Kali, Kaiga nuclear plant and Dandeli paper mill. The paper mill establishment itself led to large-scale conversion of forests to crops. These developments are not only sad but also irreversible. The study also noted that forests had shrunk thanks to the large water reservoirs, which had been constructed at the expense of forest cover.

The lush environs of the Western Ghats came to be replaced with exceedingly dry and dusty atmosphere. This mainly due to changes in water usage. Eco-hydrological footprint is a measure of how the ecology of a region responds to changes in water cycle and water usage. This can be measured by assessing the ratio of available water and water lost due to usage and evaporation. Around 2,309 million cubic metres of water is required to meet demands of society and livestock in the region, while around 4,700 million cubic metres are required to maintain ecosystems and the aquatic life.

An analysis in the report also showed that although the Kali river has sufficient water supply and perennial streams in the Ghats and coastal area, regions that lie in plain lands with a higher degree of agriculture and cultivation, have intermittent and seasonal flow. This is leading to water scarcity for four to nine months in a year.

Whereas those areas, which have greater than 70 per cent of forest cover, are not experiencing any type of water scarcity. This shows the strong correlation between ecology and hydrology in the backdrop of land use. The unfortunate part is that in the process of clearing the forests for developmental activities, India is losing native species of vegetation, which play a pivotal role in enhancing the water retention capability of the catchment area.

This levelling of the forests for dams and other development activities maybe touted as development but it is a skewed progress at best since it ensures the best interests of only a certain section of society. Indigenous population or the local people are paying a steep price as they not only lose the habitat but also their income and livelihood.

According to experts, villagers in the vicinity of native forests earn Rs 1.54 lakh per acre per year, compared to Rs 32,000 in villages with stream catchments experiencing deforestation. This confirms the vital role of native forests in sustaining water and people's livelihood.

The study also revealed that management practices adopted by engineers also contributed to the erosion of water retention capability in the river catchment with severe water scarcity. Keeping these aspects in mind and for the best interests of the Western Ghats, a United Nations Educational, Scientific and Cultural Organisation (UNESCO) recognised World Heritage Site, the Government agencies must establish better management and conservation strategies to maintain the forest cover and take immediate measures to preserve the exclusivity of the flora and fauna of the region.

The role that the National Green Tribunal (NGT) can play to preserve the Western Ghats cannot be emphasised enough. Although it has already put in place many measures, in the light of the recent report, gaps in the efforts to conserve Western Ghats are becoming apparent. The NGT must take cognisance of the same and take suitable action. Western Ghats are symbolic of India's pristine biodiversity and must not be allowed to wither away.