

# INDIA'S BIODIVERSITY-RICH ZONES ALSO 'HOTSPOTS' OF HUMAN IMPACTS

Relevant for: Environment | Topic: Biodiversity, Ecology, and Wildlife Related Issues

A view of paddyfield in the Western Ghats inside the Kudremukh National Park. | Photo Credit: [PHOTO](#) :

Human impacts on species occur across 84% of the earth's surface, finds a study published on March 13 in *PLOS Biology*, an international journal dedicated to biological science. Southeast Asian tropical forests — including India's biodiversity-rich Western Ghats, Himalaya and the north-east — also fall in this category; India ranks 16th in such human impacts, with 35 species impacted on average.

A team of scientists led by James Allan (University of Queensland) found this when they mapped the distribution of eight human activities — including hunting and conversion of natural habitats for agriculture — in areas occupied by 5,457 threatened birds, mammals and amphibians worldwide.

Using sources, including the recently-updated Human Footprint data, they found that a staggering 1,237 species are impacted by threats in more than 90% of their habitat; 395 species are affected by threats across their entire range. While the impact of roads is highest (affecting 72% of terrestrial areas), crop lands affect the highest number of threatened species: 3,834.

Malaysia ranks first among the countries with the highest number of impacted species (125). India ranks 16th (35 threatened species affected on average). Southeast Asian tropical forests — including those in India's Western Ghats, Himalaya and north-east — are among the 'hotspots' of threatened species. For instance, the average number of species impacted in the South Western Ghats montane rainforests is 60 and in the Himalayan subtropical broadleaf forests, 53. The maps show that roads and croplands are extensive in India and conversion of habitat for such activities could be a main threat, wrote Dr. Allan in an email to *The Hindu*.

However, these very areas are also 'cool-spots' (the world's last refuges where high numbers of threatened species still persist). Cool-spots could be the result of protection or because of intact habitat that has not been cleared yet, said Dr. Allan, adding that India still has crucial refuges that need protecting. Identifying such areas could aid conservation and development planning for countries. However, these refugia do not necessarily have to be off-limits to human development, just free of the actions that directly threaten species there, add the scientists.

With India having the world's second largest road network, we really need to plan for development that keeps wildlife conservation as a primary goal in biodiversity-rich areas, agreed wildlife biologist Sanjay Gubbi. Similarly, if wildlife-friendly cropping patterns lead to conservation of wildlife, that would be a victory too, he said. For instance, agricultural crops such as pulses have supported the conservation of the critically endangered great Indian bustard.

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