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Climate change to impact vegetation in 7 Karnataka districts: Study

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The Karnataka state action plan on climate change said that around 38 per cent of forest area in the state would be hit by climate change by the 2030s. It also noted that forests in the central and northern parts of the Western Ghats would be impacted by climate change.

The study predicted change in vegetation largely in the scrub and open forest areas of seven districts — Bijapur, Raichur, Koppal, Bellary, Chitradurga, Kodagu and Hassan — in both short term (2030) and long term (2080s). The study states the forested grids in these seven districts will be impacted by climate change.

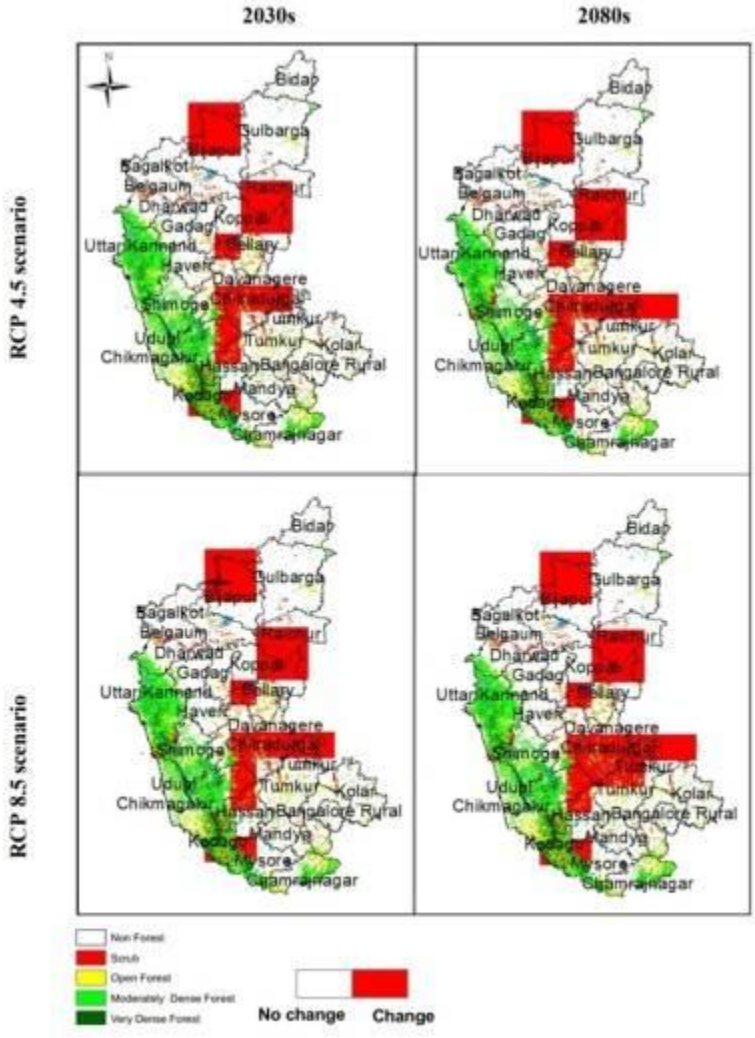

Figure 4.7: Grids undergoing change in forest type overlaid on forest density categories of FSI for the 2030s (2021-2050) and the 2080s (2071-2100) with respect to the historical baseline from 1975-2005 for RCP 4.5 and RCP 8.5 scenarios

"This means that the future climate at such locations would not be suitable for the existing vegetation or forest type and biodiversity. The forest type change may be accompanied by forest

dieback (a condition in which a tree or a shrub begins to die from the tip of its leaves or roots due to unfavourable environment) and mortality," the study, which is part of the state government's draft climate action plan, stated.

According to the State of Forest Report (2019) of the Forest Survey of India, the recorded forest area in Karnataka is 38,57,548 sq km, which is 20.11 per cent of the geographical area of the state. According to forest canopy density classes, the state has 4,501 sq km under very dense forest, 21,048 sq km under moderately dense forest and 13,026 sq km under open forest.

"Change in the very dense and moderately dense forest is projected only for the Western Ghats district of Udupi in the short as well as long term periods," the study says.

Dr Indu K Murthy, principal research scientist, Center for Study of Science, Technology and Policy (CSTEP) Bengaluru, under the professorship of Prof NH Ravindaranth at Indian Institute of Science, worked on the study.

The experts have used the dynamic global vegetation model which takes into account large scale terrestrial vegetation dynamics and land-atmosphere carbon and water exchanges to study the impact of climate change on forests.

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