CLIMATE CHANGE AND NILGIRI TAHAR

BY

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• Nilgiri Tahr, a mountain goat, is the highly threatened flagship species occur on the crest lines and ridge forests of the southern Western Ghats.

• The ideal habitat of this species is the rocky outcrops adjacent to the shola-grasslands and other ridge forests.

• Only less than 2000 individuals of this species is remaining in the wild in the whole world with the major population confined to Eravikulam National Park in Kerala and Grizzled Giant Squirrel Wildlife Sanctuary in Tamil Nadu
Location of western ghats on map
• Nilgiri tahr -- endangered wild mountain goats – found only in high altitudes in India’s Western Ghats — could be losing their footing with increasing climate change.

• Even under moderate scenarios of future climate change, tahrs could lose approximately 60% of their habitats from the 2030s onwards.
Climate induced habitat loss for Nilgiri Tahr in its native range

Current suitable habitat

Future habitats

climate change

CCOL WARM
Impact on mountain vegetation zones

Current climate
- Alpine wet tundra
- Subalpine moist forest
- Subalpine montane scrub
- Montane steppe
- Montane desert scrub
- Lower montane thorn steppe
- Premontane thorn woodland

Nival Polar desert
- Alpine wet tundra
- Subalpine moist forest

Nival Polar desert
- Alpine wet tundra
- Subalpine moist forest

+3.5 °C and +10% precipitation change scenario
- Montane steppe
- Lower montane thorn steppe
- Premontane thorn woodland

Sources: Martin Beniston, Mountain environments in changing climates, Routledge, London, 1994; Climate change 1995, impacts, adaptations and migration of climate change, contribution of working group 2 to the second assessment report of the Intergovernmental Panel on Climate Change (IPCC), UNEP and WMO, Cambridge press university, 1996.
• a continuous decline in Tahr populations owing to hunting, conflict with livestock, grazing and habitat loss over the years and no study till date has looked into the likely effect of climate change on the Nilgiri Tahr.

• The study also forewarns that the existing protected area network might not be effective in conserving the Tahr if climate mitigation measures are not adopted in management plans of protected areas
• the movements of these animals between the high-altitude forest grasslands separated by thick forest barriers, the possible impacts on the habitat suitability are increasing the chances of local extinction since the animals may then not be able to move to suitable habitats from the existing ones,"
Montane grasslands at altitudes greater than 1,800 metres above sea level in the Western Ghats are at risk of being overrun by invasive plants.

As a consequence of warming, reduction in incidence of frost and competitive advantage of invasive plants,

under increasing atmospheric CO2 levels, there are already indications that Australian wattles (planted on a large-scale in the montane grasslands and the ornamental scotch broom have spread in recent times.
A landscape-based conservation programme to extend the conservation of Nilgiri tahr outside the Eravikulam National Park is being formulated in the State for the long-term survival of the species.
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