



Zoological Survey  
of India

A Large grant project  
under National Mission  
on Himalayan Studies  
(NMHS) programme

Funded by  
Ministry of Environment,  
Forests and Climate  
Change (MoEF&CC)

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## BIODIVERSITY ASSESSMENT THROUGH LONG-TERM MONITORING PLOTS IN INDIAN HIMALAYAN LANDSCAPE







The biodiversity and ecosystem health of Himalaya has been increasingly threatened due to ongoing anthropogenic activities and climate change. Studies have indicated that temperature will continue to increase with high variability in precipitation as a result of climate change. Altitudinal shift of vegetation is observed in many places and is estimated to be 80–200m per decade. Biodiversity of glaciers, snow fields and high altitude zones will be most adversely affected by these changes.

The project “Biodiversity Assessment through Long-term Monitoring Plots in Indian Himalayan Landscape” under the National Mission on Himalayan Studies (NMHS) programme of MoEF&CC, Govt. of India, both Zoological Survey of India and Botanical Survey of India are working in collaboration on a broad thematic group “Conservation and Sustainable use of Biodiversity”. The project proposes to establish long-term monitoring plots for assessment of biodiversity in the Indian Himalayan Region thereby enabling to address the climate-change-induced impact on the region. The base-line data collected over a period of last 100 years by both the surveys will be compared with the data which are being collected by the researchers of this project presently.



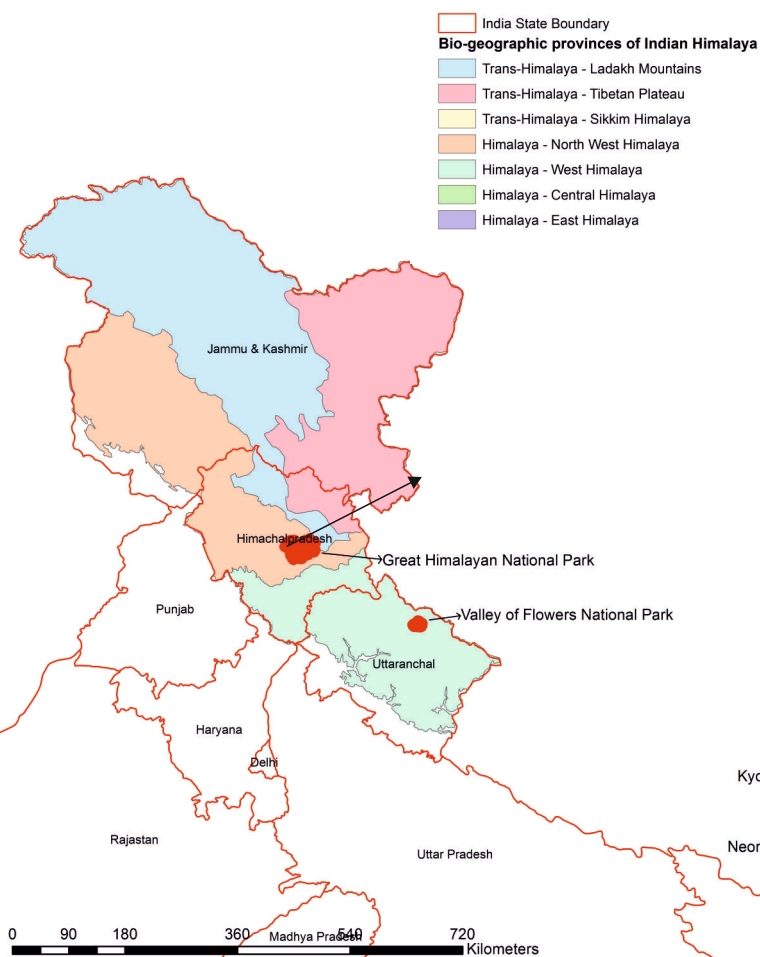
## PROJECT GOAL

Establishing long-term biodiversity monitoring plots and developing local level capacity for monitoring health of Himalayan ecosystem.



## PROJECT OBJECTIVES

- To create a geospatial and genetic database on the fauna of Himalaya and the climate- change-induced impact on faunal diversity of the region.
- To establish long-term faunal diversity monitoring plots across the Himalayan region.
- To develop long-term monitoring protocols for selected indicator taxa in the region.
- To develop local level capacity building among students, teachers and NGO's in long- term monitoring through training programmes and publications.







## STUDY LANDSCAPES

Sl. No.	State	Landscape	Bio - geographic province
1.	Himachal Pradesh	Great Himalayan National Park	Western Himalaya
2.	Uttarakhand	Valley of Flowers	Western Himalaya
3.	Sikkim	Kyangnosla Alpine Sanctuary and Gnathang plateau	Central Himalaya
4.	West Bengal	Neora Valley National park	Central Himalaya
5.	Arunachal Pradesh	Tawang district and Namdapha National Park	Eastern Himalaya

## PROGRESS MADE SO FAR

- Book on Monitoring protocol for fauna of Indian Himalaya has been published
- Monitoring plots in all study sites have been developed
- Geospatial and genetic database of fauna of Indian Himalaya are in progress
- Capacity building workshops to create awareness among different stakeholders of Indian Himalaya have been organized.
- The research findings of the project have been published in various International/ National journals of repute.
- The finding have also been presented at various national level meetings/seminars.
- Environmental Niche Modelling (ENM) to study the effect of climate change on different faunal species is in progress.
- More than 15000 specimen have been collected form all the landscapes. More than 4000 species have been identified and still counting.



Ministry of Environment,  
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**NMHS**

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