



LONG TERM ECOLOGICAL OBSERVATORY (LTEO)

Human-induced climate change is now globally recognised as one of the primary drivers of ecosystem decline. Understanding how natural ecosystems respond to constantly changing environmental conditions is key to mitigating the impacts of climate change, especially in countries like India. However, the long-term impacts of climatic and other anthropogenic pressures on natural systems and, consequently, human societies remain poorly understood. Towards this, the Ministry of Environment Forests and Climate Change initiated the Long-Term Ecological Observatories (LTEO) Programme, a multi-institutional initiative that aims to understand the impacts of climate change and other anthropogenic disturbances on select ecosystems and taxa across India.

LTEO'S MARINE THEME

The marine theme of LTEO is headed by Dakshin Foundation and executed in collaboration with the Nature Conservation Foundation (NCF) and the Centre for Ecological Sciences, Indian Institute of Science (IISc). The marine theme is executed out of the Andaman Islands and involves monitoring coral reefs, seagrass meadows, sea turtles, reef fish and other abiotic parameters to understand their responses to climatic as well as anthropogenic disturbances, including overfishing, marine pollution and coastal development. Along with marine research, ANET is recognised as the primary field station for all the LTEO Programme activities in the Andaman Islands and will facilitate both marine and terrestrial research in the islands.

DAKSHIN LTEO RESEARCH

As part of the LTEO project, Dakshin Foundation carries out monitoring of ten long-term plots inside the Mahatma Gandhi Marine National Park in South Andaman. The goals of the programme are to collect long-term, fine-scale monitoring data on the benthic composition and cover of key organisms like corals, algae, and sponges from a select set of sites. The programme also aims to monitor reef fish using standardised protocols that can capture both benthic and pelagic fish. Overall, the project will help develop replicable and robust long-term monitoring protocols and generate knowledge that can inform climate mitigation policies.



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