

## **Project title**

Spatial Modelling of land use dynamics and its impact on fluxes and ecosystem services in Eastern Ghats, India in present and future climate scenario.

### **Abstract/summary**

The proposed research aims at understanding the Land Use and Land Cover dynamics and its impacts on in the EGs of India, using satellite remote sensing technology and comprehensive ground based investigations covering the selected sample plots. The objective is to develop high resolution dynamic vegetation model to predict the shifts in potential vegetation, changes in nutrient dynamics and its associated ecosystem services distribution patterns in light of climate (present & future) and LULC change.

The above major objectives of the research will be met through the following intermediate objectives

- Geospatial LULC Dynamics of Eastern Ghats using historical maps and recent remote sensing data, their transition and its impact on ecosystem services ;
- Climatological map preparation in GIS for monthly/yearly/decadal rainfall, temperature (present and future);
- Mapping landscape dynamics, biodiversity and ecosystem services (in consonance with International Framework such as DPSIR) and simulate in future climate scenario; and
- Dynamic Vegetation Model to study the impact of present and future climate on different ecosystems.