Project Update: September 2017

As it was planned, the research is making the best use of species occurrence data available at Department of Forest Research and Survey (DFRS), Nepal, National Herbarium and Plant Laboratories (NHPL), Kathmandu, and online floral databases, and freely available global environmental data.

Selection of species: Based on DFRS-Forest Resource Assessment (FRA) data, a suite of 148 species (108 indicator species, 15 species with special conservation significance and 25 liana species) representing all four major lifeforms (trees, shrubs, herbs and lianas) along the Himalayan altitudinal gradient were selected.

Compilation and processing of species occurrences: DFRS-FRA data served as main source of species occurrences. Additional species occurrences were compiled from online floral databases (GBIF, iDigBio, RBG-Kew and Edinburgh Herbarium Catalogues) and NHPL. Final cleaning and field verification of doubtful occurrences are in progress.

Compilation and processing of environmental data: WorldClim2.0 climate data, CGIAR-CSI aridity and evapotranspiration data, ISRIC-SoilGrids soil data, SRTM elevation data, HydroSHEDS river network data, and Global lakes and wetlands data were compiled and processed to obtain necessary environmental data.

Selection of environmental variables for Maxent modelling: Variables that are: important in limiting species distributions (ecological reasoning), least correlated (statistical reasoning), and changing significantly over the target years (climate change reasoning) are being used to select a set of environmental variables.

Obtaining and preparing species occurrences and environmental data are the most time consuming part of this research and I am towards the end of it. Therefore, I believe I should be able to complete this research within the planned timeframe.

Left: Castanopsis indica (Roxb. ex Lindl.) A.DC. one of the selected species, observed at Banpale forest, Institute of Forestry, Pokhara, Kaski, Nepal. Right: Digitizing NHPL herbarium specimens.