

# Twenty-five years of community forestry: Mapping tree dynamics in Nepal

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# Background

- Forests account for upwards of 40% of Nepal's national land area (5.5 m ha).
- In 1988 the Department of Forests (DoF) identified 61% of the nation's forest that could be transferred to local communities for management.
- Today, Community Forests occupy near 23% of Nepal's total forest area and involve over 19,361 CF user groups.
- Hence force, I will speak of tree cover because the remote sensing does not separate fallow trees growing on private land and tree plantations from forest.



# Background

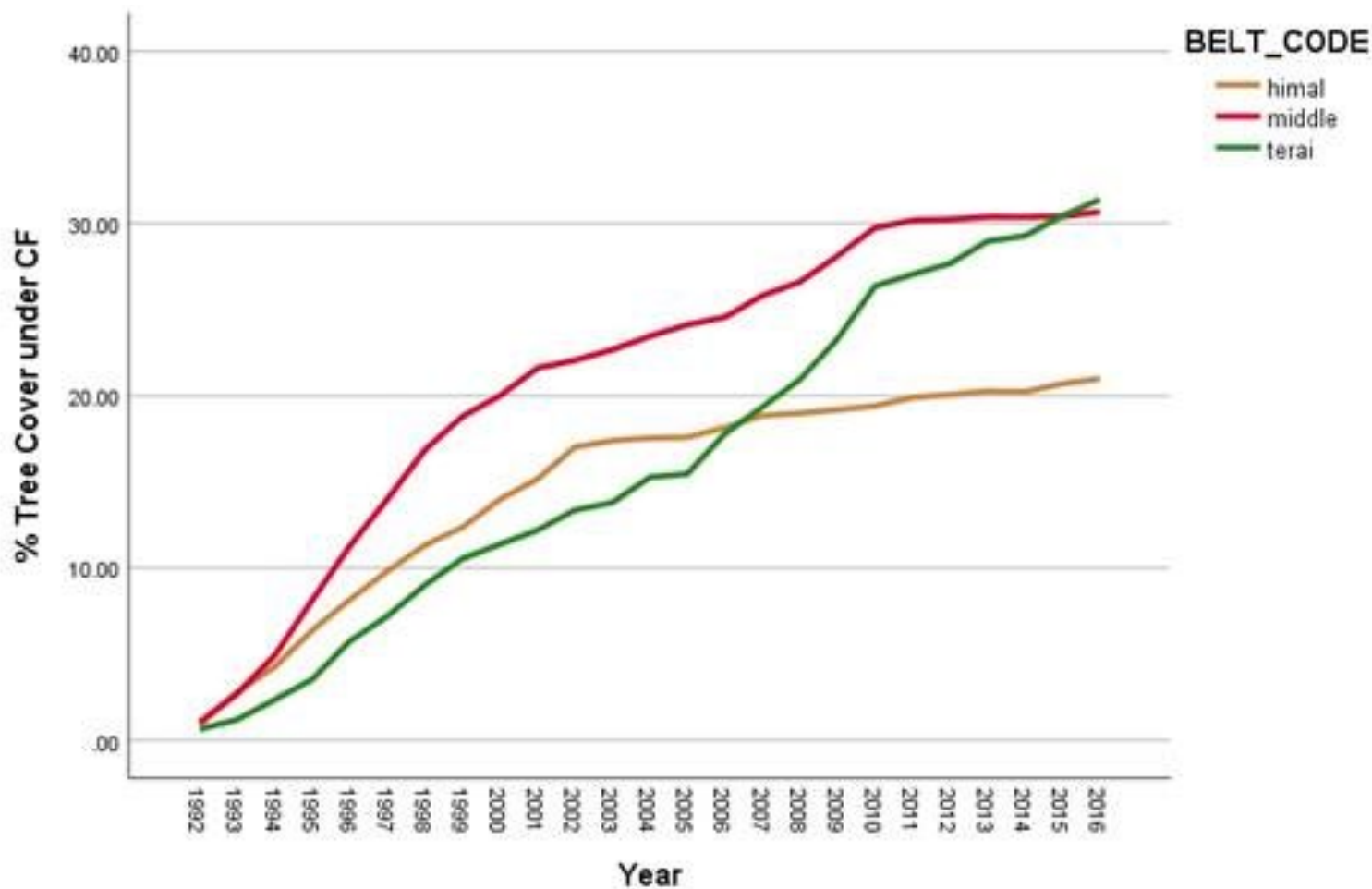
- In Nepal, out-migration from rural areas for improved economic opportunities is frequently cited as a driver of socioeconomic change.
- Today there are about four million migrants – one-third of the working male population – and foreign remittances constitute a quarter of the income of all households.
- In 2016, 32% of the GDP was drawn from remittances, a figure that does not include remittances from India and undocumented or informal sources.



# Socioeconomic Hypotheses

- Tree-cover regeneration will be positively associated with CF
- Tree-cover regeneration will be positively associated with out-migration

# % VDC land under Community Forests





# Hypotheses

- Tree-cover regeneration will be associated with socioeconomic variables including income, source of income, number of people per household, education, gender, number of livestock, etc.
- Tree-cover regeneration will be associated with biophysical and spatial variables including aspect, slope, elevation, distance from markets, etc.



# Problem Statement

- The spatially-explicit impacts of this hypothesized transition in tree cover (forest transient) have not been documented in part because of the difficulty of mapping tree cover in mountainous environments.
- Topographic effects, e.g., shading, presence of clouds, snow, and ice, and inaccessibility for ground truth data collection.



# Project Objectives

Specific research objectives include:

- Build comprehensive database of changes in tree cover in the Nepal since 1990, and produce maps of these changes (disturbance and recovery) at district and Village Development Committee (VDC) scales.
- Integrate tree-cover dynamics data with demographic and socioeconomic data from the Central Bureau of Statistics to identify physiographic and socioeconomic variables associated with tree-cover dynamics at district and VDC scales.
- Quantify how the geographic distribution of economic migration and remittances are correlated with spatially-explicit tree-cover dynamics.



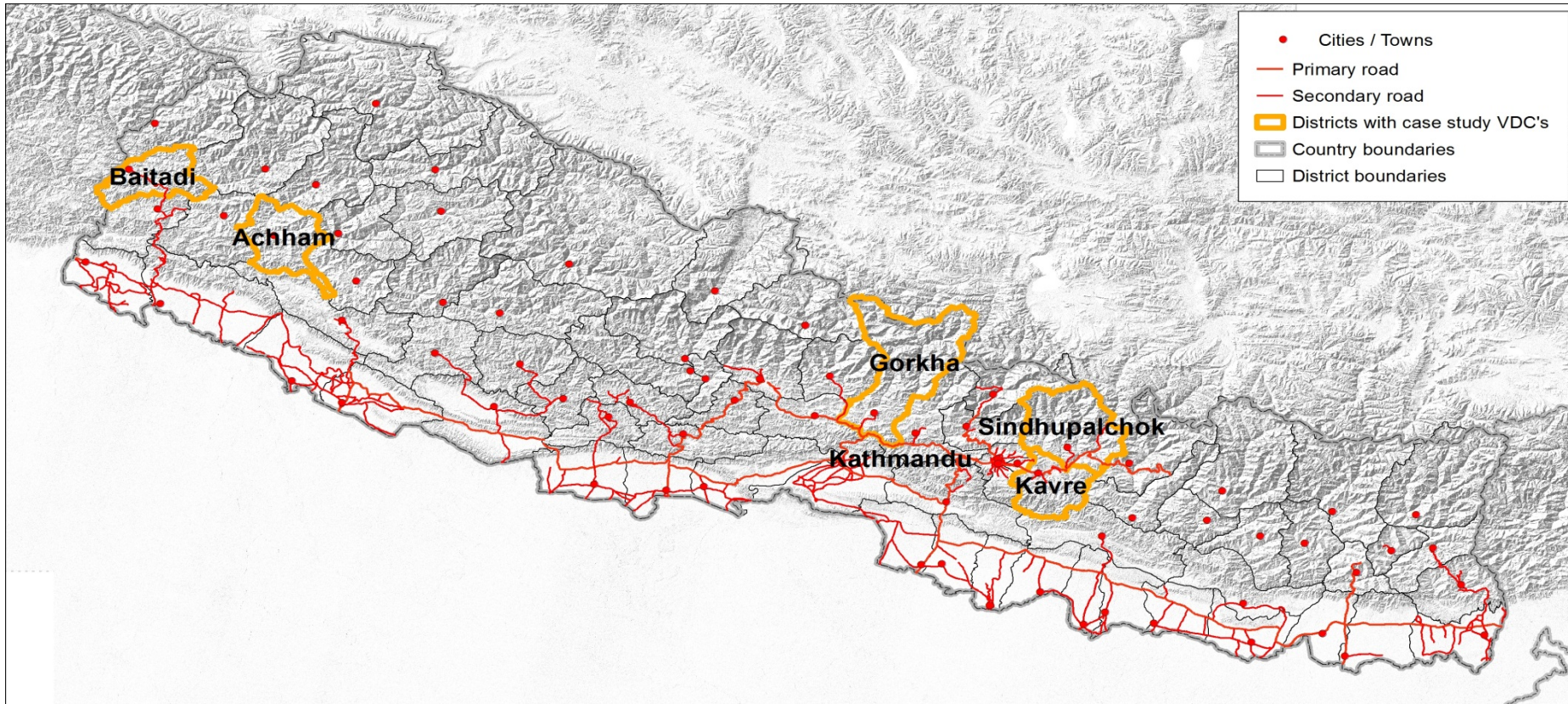


# Project Objectives

At the local scale, specific research objectives include:

- Identify a sample of sites mapped as showing forest regrowth or stagnation through this period for more intensive study.
- Conduct focus group discussions and household interviews in these sample sites to examine how forest management practices, economic migration, and remittances have changed.

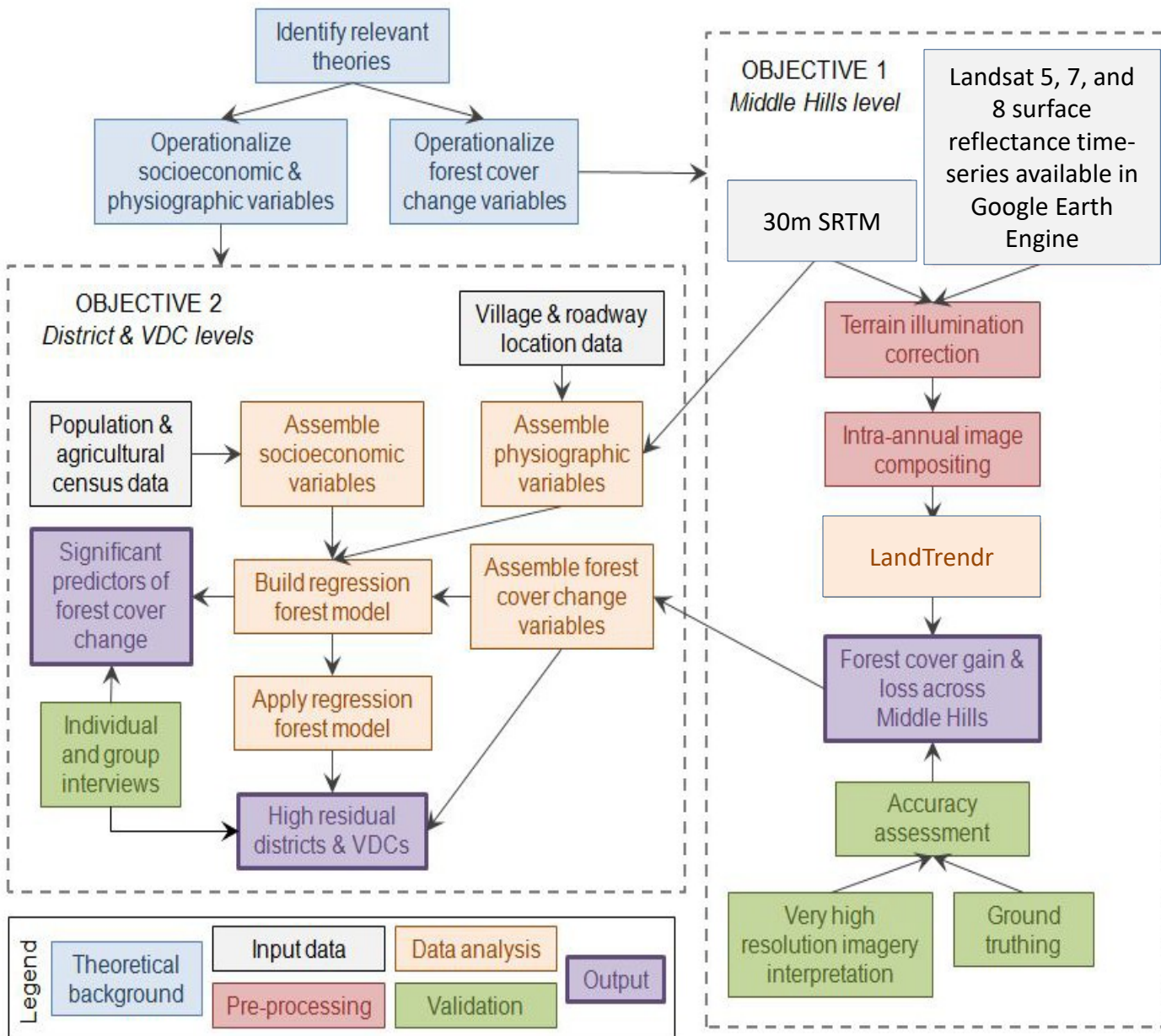
# Local Scale Field Work



Chhetri, R., et al. 1996. *Nepal Austral Forestry Project: Social Economic Impact Study*. Canberra: AusAid.

Fox, J. 2016. Community forestry, labor migration, and agrarian change in a Nepali village: 1980 to 2010. *The Journal of Peasant Studies*.

Chhetri, R. and T. Pandey. 1992. *User Group Forestry in the Far-Western Region of Nepal*. Kathmandu: ICIMOD.



# Methodological Work Flow

A photograph of a man standing in a lush green forest. He is wearing a dark vest over a blue shirt and khaki pants. He is smiling and holding a small object in his hands. The background is a dense forest of green trees and bushes. The text "Thank You!" is overlaid in yellow at the top center.

**Thank You!**

**Dr. Ram Chhetri, Co-I  
Resources Himalaya**

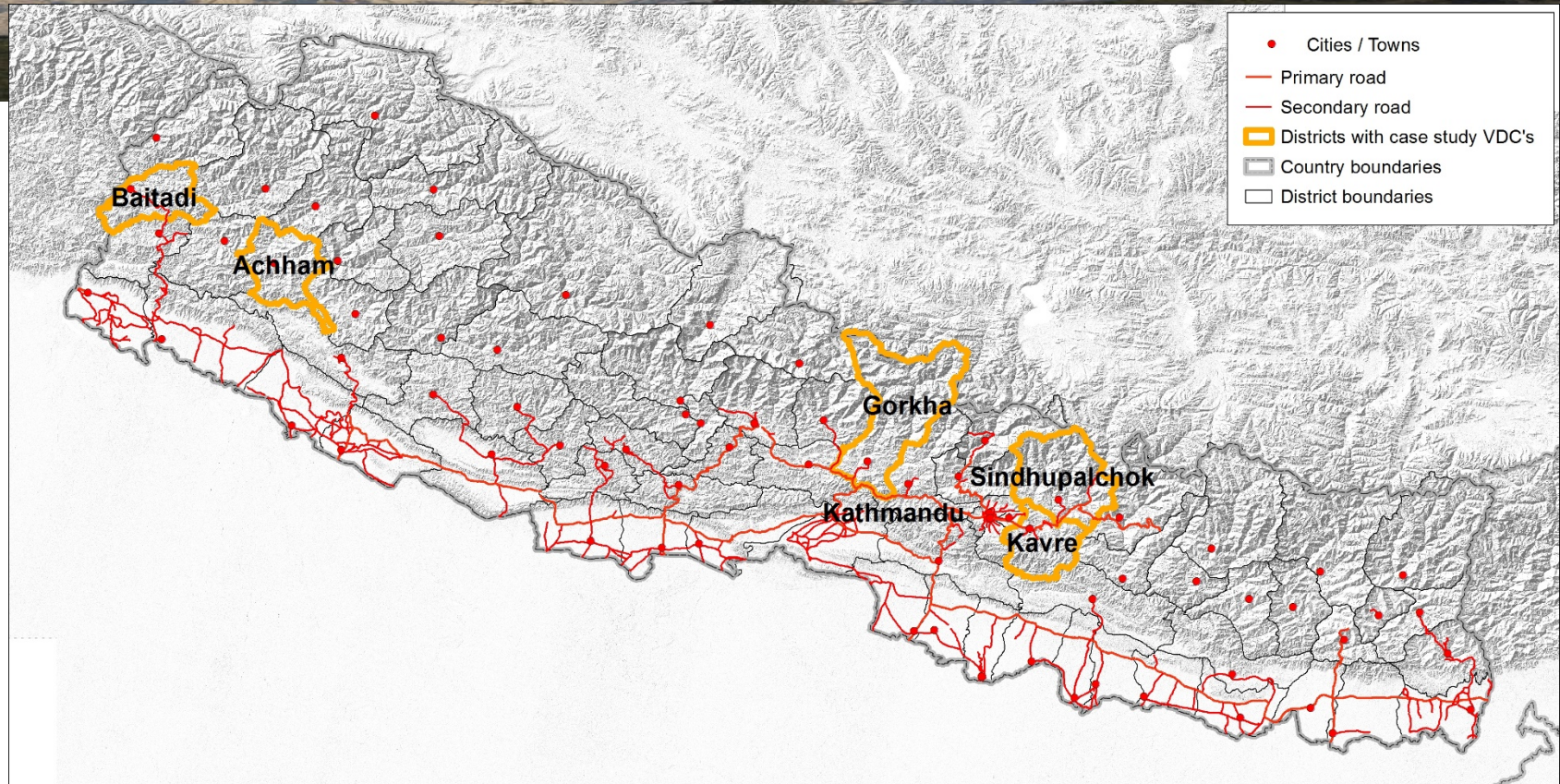
**[foxj@eastwestcenter.org](mailto:foxj@eastwestcenter.org)**



# Background

- In February 1996, the Unified Community Party of Nepal (Maoist) started a bid to replace the parliamentary monarchy with a people's new democratic republic, through a Maoist revolutionary strategy.
- In 2008, the monarchy was formally abolished; by 2012, fighting had ceased and Maoist military units were integrated into the Nepali army.
- In the post-Maoist period elections for local governments were not held until 2018. During this period the VDCs were forced to rely heavily on their Government-appointed secretaries.

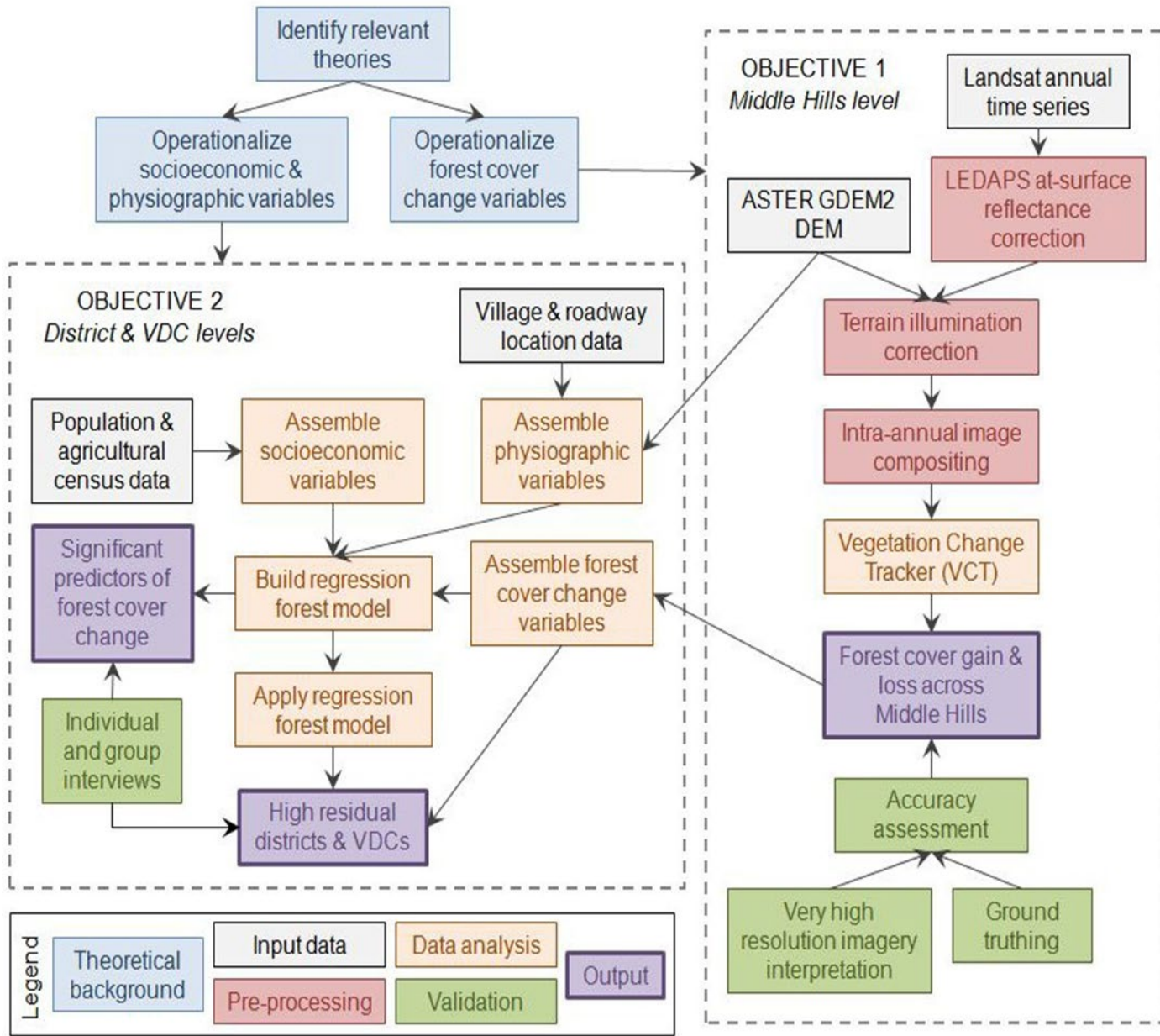
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