

**Last updated - November 2025**

**Name:** Xavier Haro-Carrión

**Title:** Land-use / land-cover change and their impacts on biodiversity in a highly human-modified landscapes in Ecuador

**Description:** Overall, my research seeks to evaluate land and vegetation change over space and time and the implications of these changes for human well-being and biodiversity conservation. For these analyses, I rely on multi-spectral satellite data. Geographically, I focus most of my research in Ecuador but welcome collaborations in other systems. To see examples of student projects, visit [this page](#). Below are current research opportunities:

**1. Conservation Priorities for the New Bamboo Extractive Sector in Coastal Ecuador**

This project evaluates the contribution of bamboo to conservation efforts in coastal Ecuador. Watch [this video](#) to learn more about this project. While fieldwork has concluded, two analyses are still ongoing:

- Estimation of bamboo extent coverage using satellite imagery.
- Evaluation of bamboo's contribution to biodiversity conservation, using the map generated in Analysis 1 alongside ground inventories of primates, birds, and trees.

**Qualifications:** Remote sensing knowledge for Analysis 1; Knowledge of ecology and species diversity analyses for Analysis 2; Ability to work independently under my guidance for both.

**2. Integrating Local Perceptions and Satellite Observations to Understand Land Use and Environmental Change**

This project integrates qualitative and quantitative methods to assess environmental and land-use change. Household focus group data was collected in summer 2024 and is currently being analyzed to identify key themes related to land-use and environmental change. Once identified, we will attempt to quantify these changes using satellite imagery.

**Qualifications:** Completion of GEOG / ENVI 352: Remote Sensing of the Environment. Availability to resume this project in Spring 2026 by registering for GEOG 372 / COMP 272: Advanced Remote Sensing Analysis.

**Prerequisites:** See qualifications above

**Hiring Plans for Summer 2026:** TBD

**Other Information:** Given required qualifications, students should contact me directly if they are interested in working with me.