

# Monitoring and Projecting Environmental Change in Fragmented Tropical Forest Landscapes

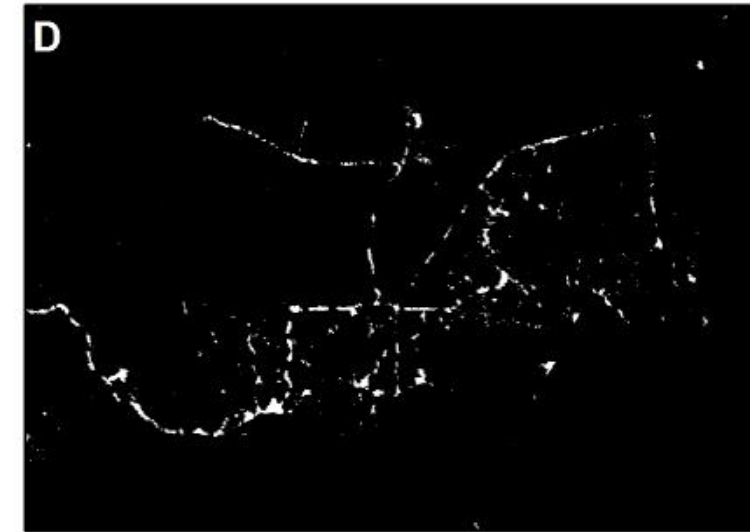
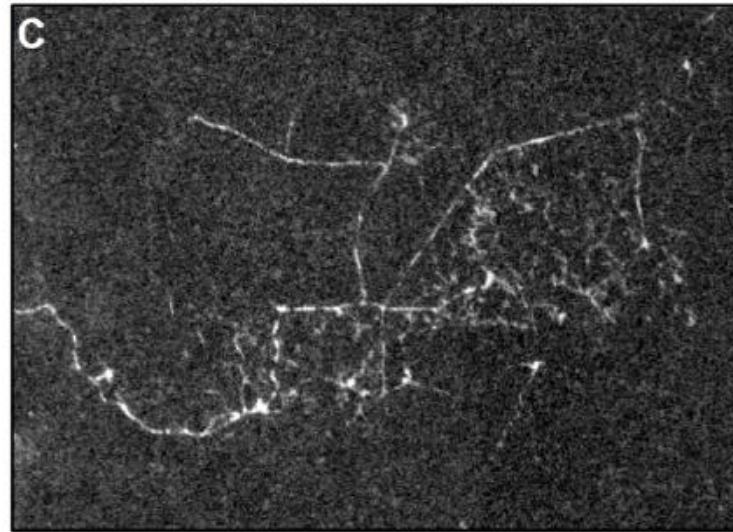
*Michael C. Wimberly, University of Oklahoma*

**Purpose:** Global monitoring of forest structure and disturbance history

**Study Objective:** Assess the usefulness of commercial imagery for extracting information about forest structure and disturbance history

**Imagery:** PlanetScope ortho scene imagery

**Findings:** Despite lower spectral resolution, absence of shortwave infrared band, lower radiometric quality, and insufficient quality cloud data mask, PlanetScope imagery extends existing tropical forest monitoring capability. Spatial and temporal resolution of the commercial imagery is a key factor. The PlanetScope imagery will allow us to better satisfy stakeholder needs, who often emphasize the need for better information on the drivers of forest degradation and loss, including fires, logging (legal as well as illegal), and agricultural encroachment.



Images of a logged area from a January 2019 PlanetScope image of the Subim forest reserve in Ghana. A) True color image, B) False color-infrared image, C) Normalized difference red-green index (NDRGI), with lighter tones indicating higher values, D) thresholded NDRGI index, with white areas indicating logging disturbance.