

Burnt Area Mapping In South/Southeast Asia using Multi-Satellite and Very High Resolution Planet data

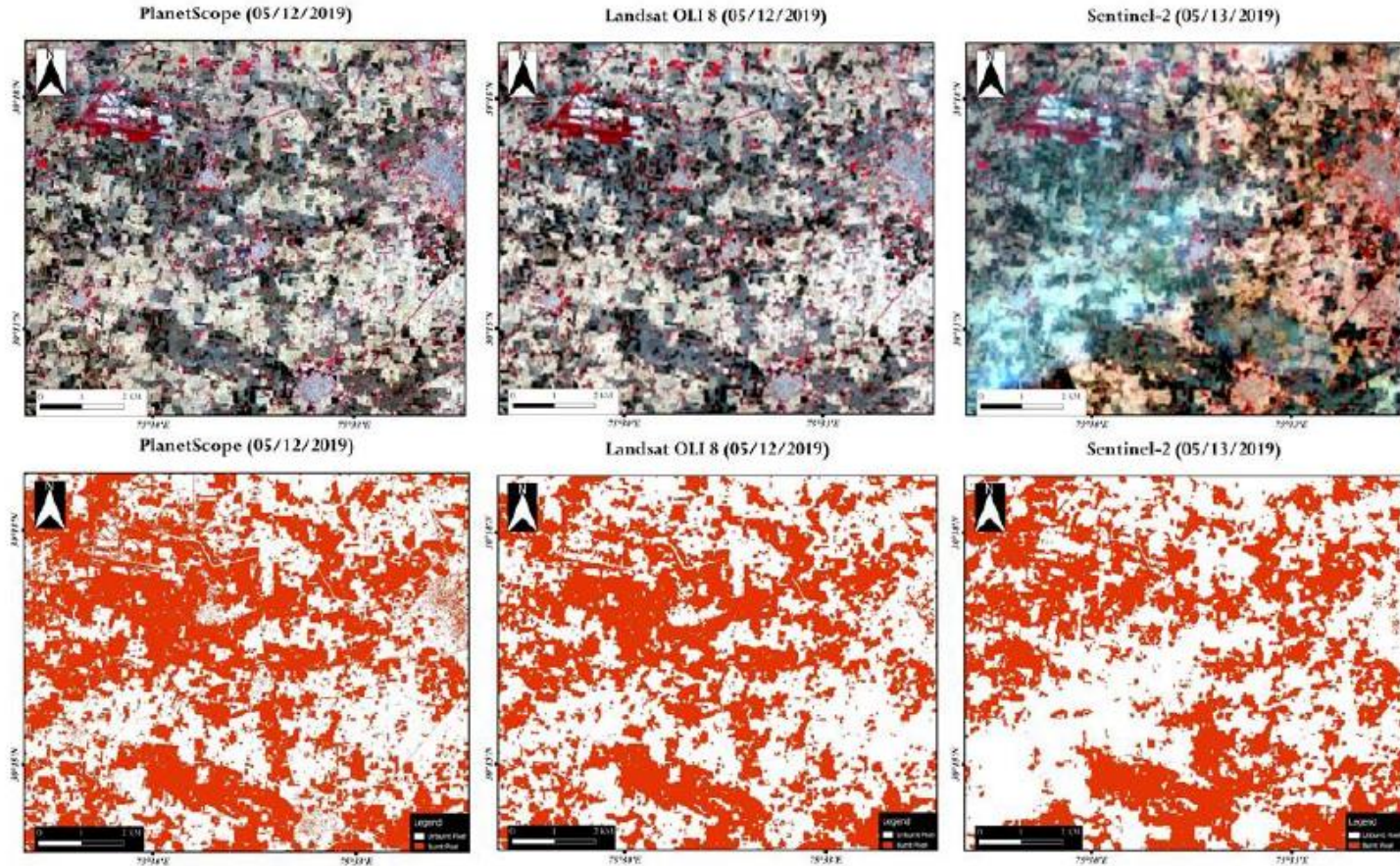
Krishna Vadrevu, Marshall Space Flight Center

Purpose: Global monitoring of burned areas for air quality and climate studies

Study Objective: Assess the potential use of PlanetScope imagery for monitoring of burnt areas in agriculture and forested regions of India

Imagery: PlanetScope, Landsat-8, Sentinel-2

Findings: The imagery allowed mapping of burnt areas and delineation of field borders. Using single date, 90% cloud free imagery from Planet, we were able to detect 5% more burnt area than Landsat, and 9% more burnt area than Sentinel-2. We employed a more robust atmospheric correction algorithm. Because of its higher spatial and temporal resolution PlanetScope imagery allowed a more effective capture of transient biomass burning events.



Visible imagery and burnt area extent derived from PlanetScope (left column), Landsat (middle column), and Sentinel-2 (right column) over Barnala, Punjab, India. Using a single date 90% cloud free imagery, PlanetScope was able to detect 5% percent more burnt area than Landsat and 9% more than the Sentinel.