High-resolution satellite imagery to identify mangrove areas

Mapping, restoration and blue carbon markets

FAO Mangrove team

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Remote Sensing Specialist for Monitoring Ecosystem Restoration,

Forestry Division and FAO-Indonesia Colleagues, FAO

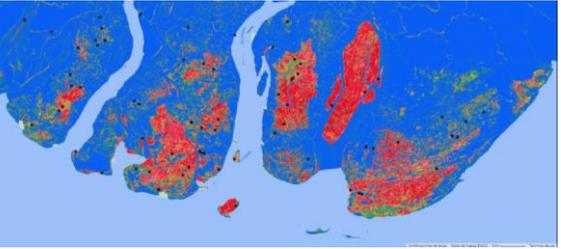# Mapping mangroves at national scale (30m)

UN-REDD TA - Integrating mangroves sustainable management, restoration and conservation into REDD+ Implementation in Myanmar
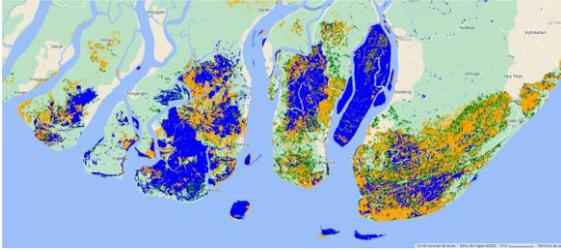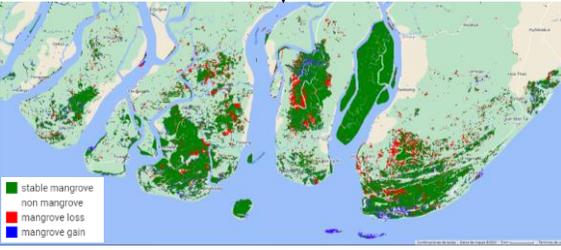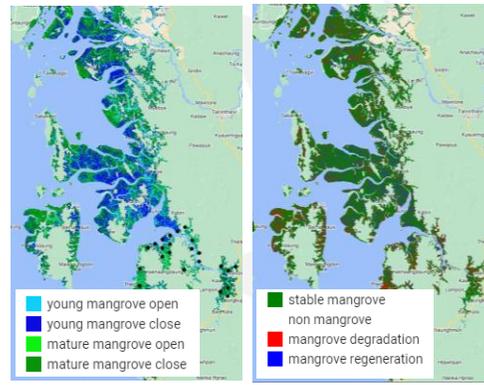

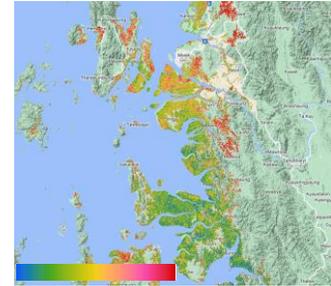Training data from global and national datasets

CCDC slices L8+S1

Probability map and training data over 'uncertain' areas

young mangrove open
young mangrove close
mature mangrove open
mature mangrove close

stable mangrove
non mangrove
mangrove degradation
mangrove regeneration

Classes, degradation and regeneration maps

stable mangrove
non mangrove
mangrove loss
mangrove gain

Mangrove extension and change maps

Basal area maps

NFI data + visual interpretation in CE
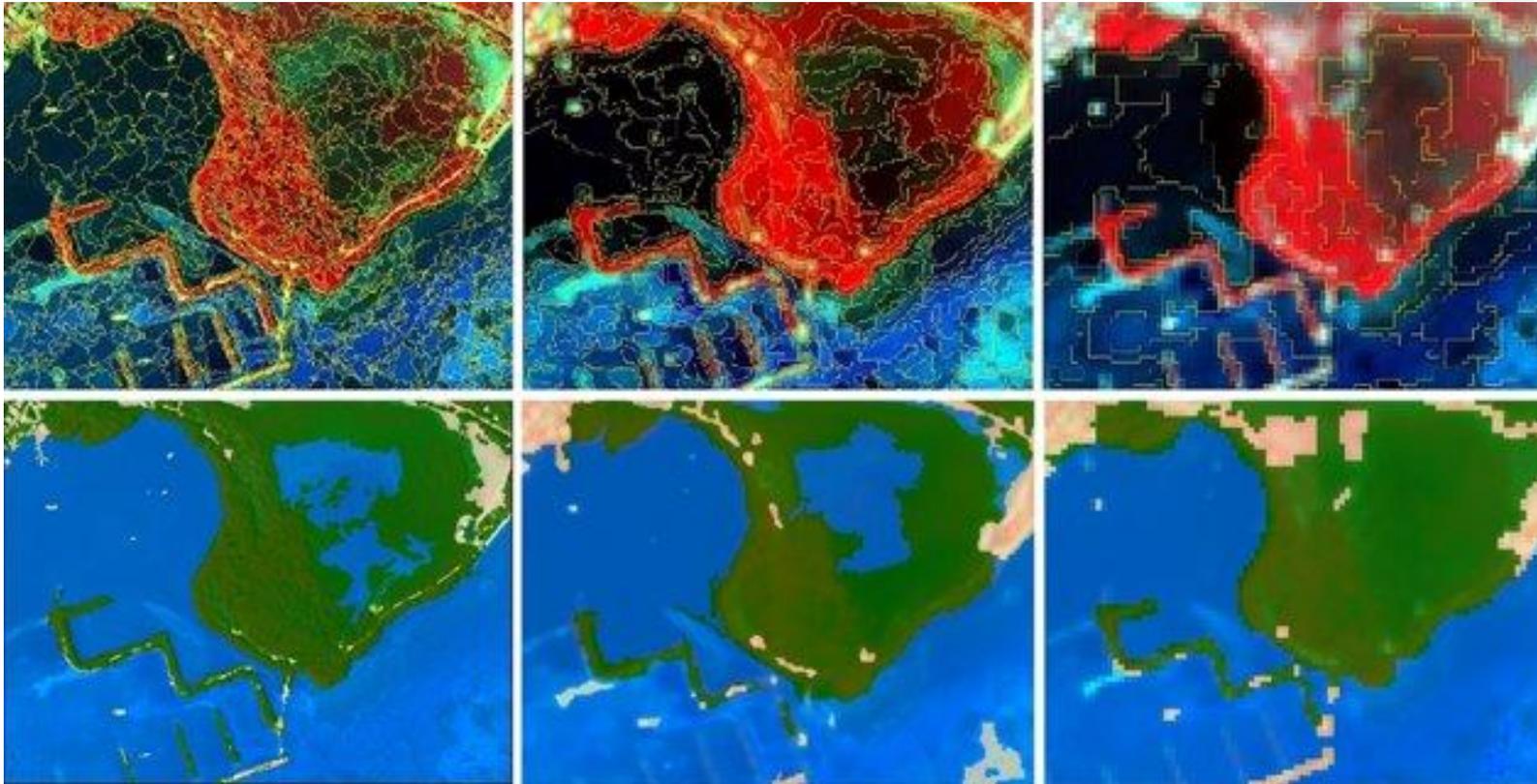

Mature close mangrove

Mature young close

Mature young open

Techniques for mapping and monitoring mangroves at fine scales (<5m)

A report by FAO and TNC

SkySat (0.5 m)   **Planetscope SuperDove (4 m)**   **Sentinel-2 (10 m)**

Use of PLANET data to monitor mangrove restoration opportunities

FAO and CIFOR

Indonesia Mangrove Restoration Opportunity

Mangrove restoration and rehabilitation across the world have often suffered low success rates and been applied at small scales. Here we present an indicative nation-wide map of mangrove restoration potential and opportunity in Indonesia. We reconstructed the past 20 years of mangrove loss and identified 193,367 ha that have the potential for mangrove rehabilitation program. We considered state forest land status, land use and biogeomorphology that are key factors moderating mangrove restoration success which have often been neglected in Indonesia in our data analysis.

Legend

- Restoration opportunity scenario : Low
- Restoration opportunity scenario : Medium
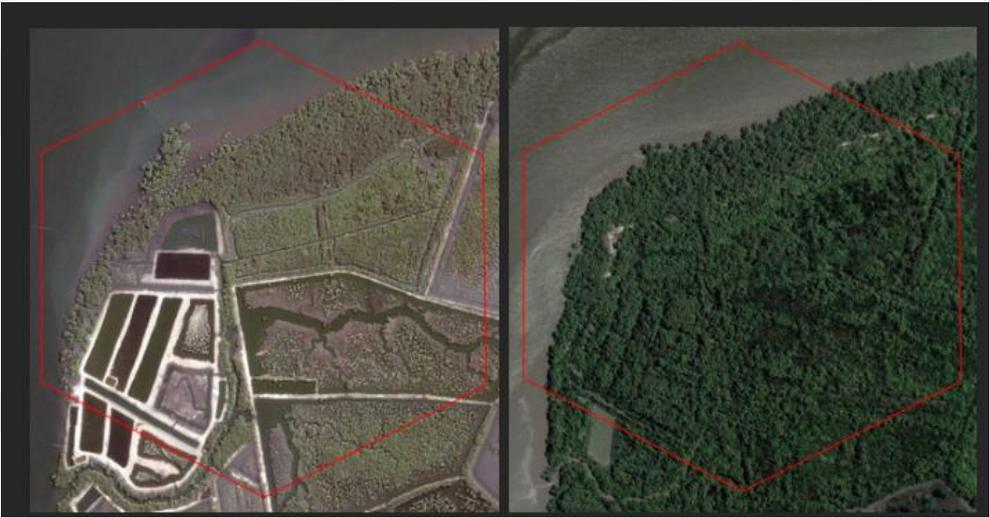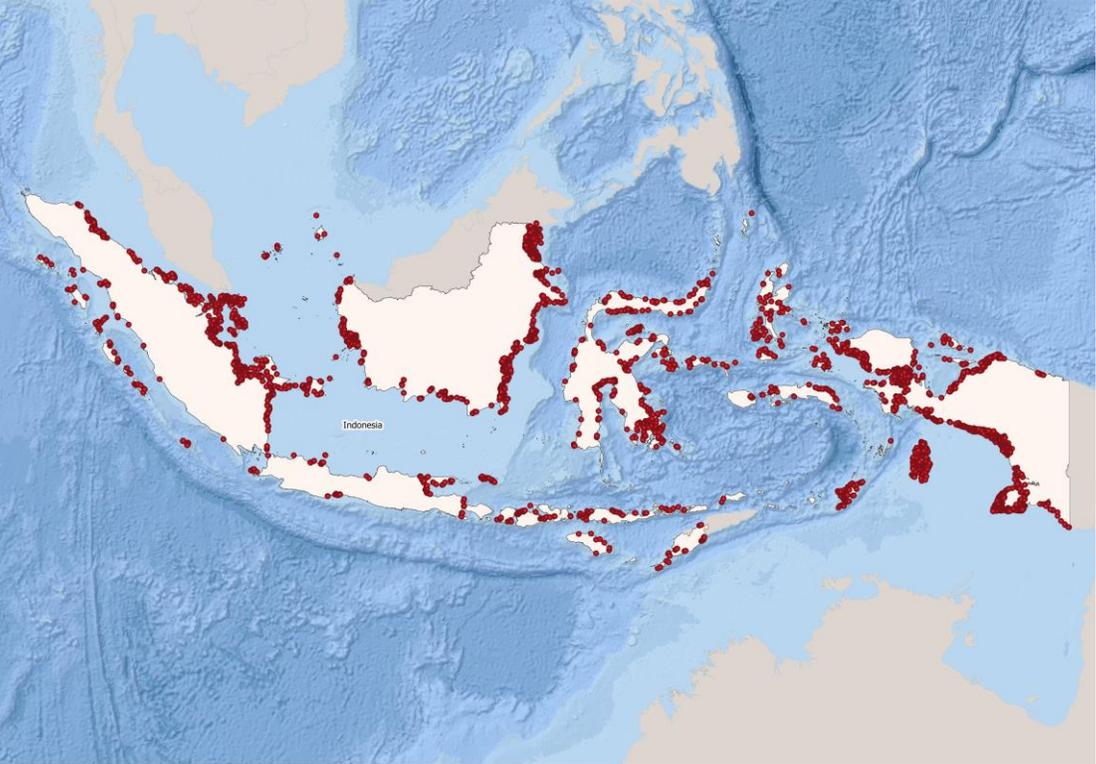- Restoration opportunity scenario : High
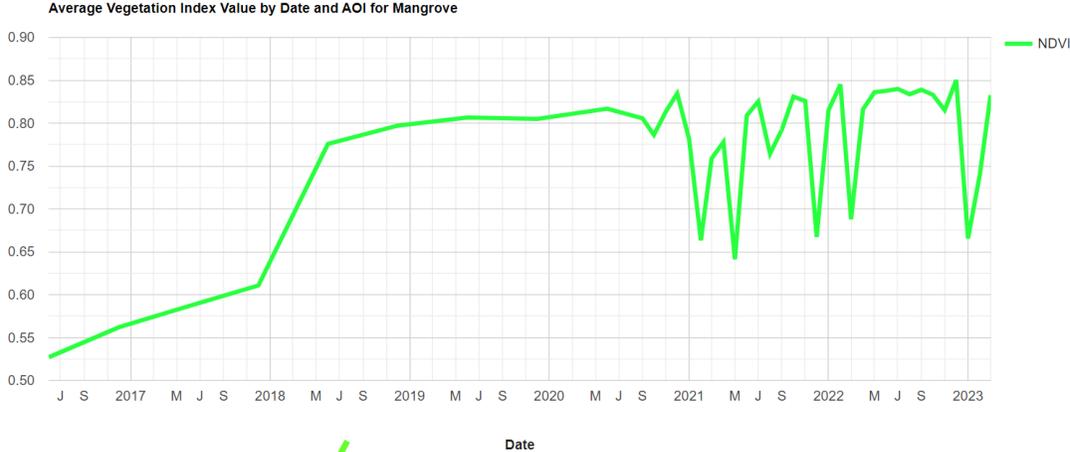
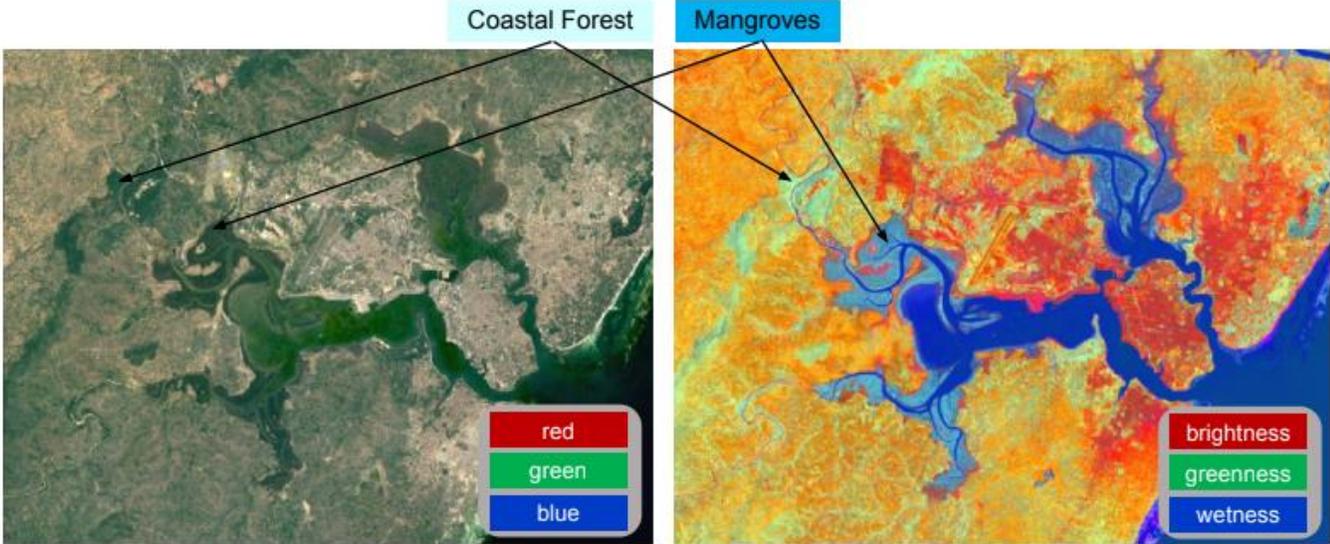**PLANET 2017 (4.7 m)**   **PLANET 2022 (4.7 m)**

FRA Monitoring mangrove change in Indonesia 1990-2022

A contribution of "The world's mangroves, 2000-2020" will be released by FAO this year

Separation of mangroves from coastal forests

IMPRESS project in Kenya

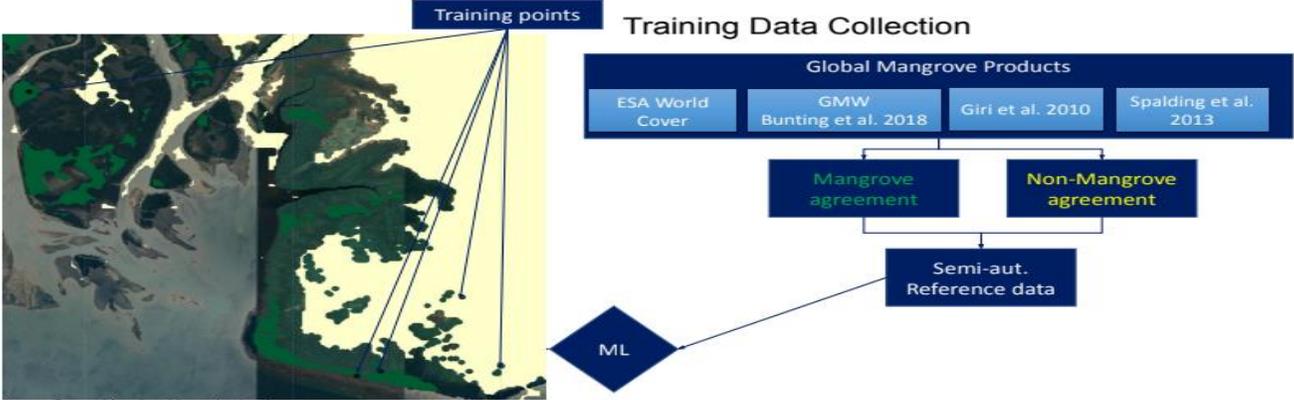Landsat RGB composite around Mombasa

Landsat Tasseled Cap composite around Mombasa

Mangrove classification

Training Data Collection

Thank you.