



SPATIAL AND TEMPORAL PATTERNS OF FIRE ON SAIPAN

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Fire in Management Plans

5.8 Wildfire Profile

Wildfire

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One of the major impacts of drought that contributes to environmental, economic, and social impacts are wildland fires. In general, the three necessary ingredients for a fire to ignite include oxygen, a heat source, and fuel. Wildfires can be classified into several varieties. According to the National Oceanic Atmospheric Administration (NOAA), there are four types of wildfires: Ground Fires, Surface Fires, Crown Fires, and Spotting Fires. Ground fires burn the humus layer of the forest floor, surface fires burn forest undergrowth and surface litter, and crown fires advance through the tops of trees. Atmospheric factors such as temperature, humidity, and rainfall are important factors in determining the combustibility of a given natural habitat.

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So Many Questions!

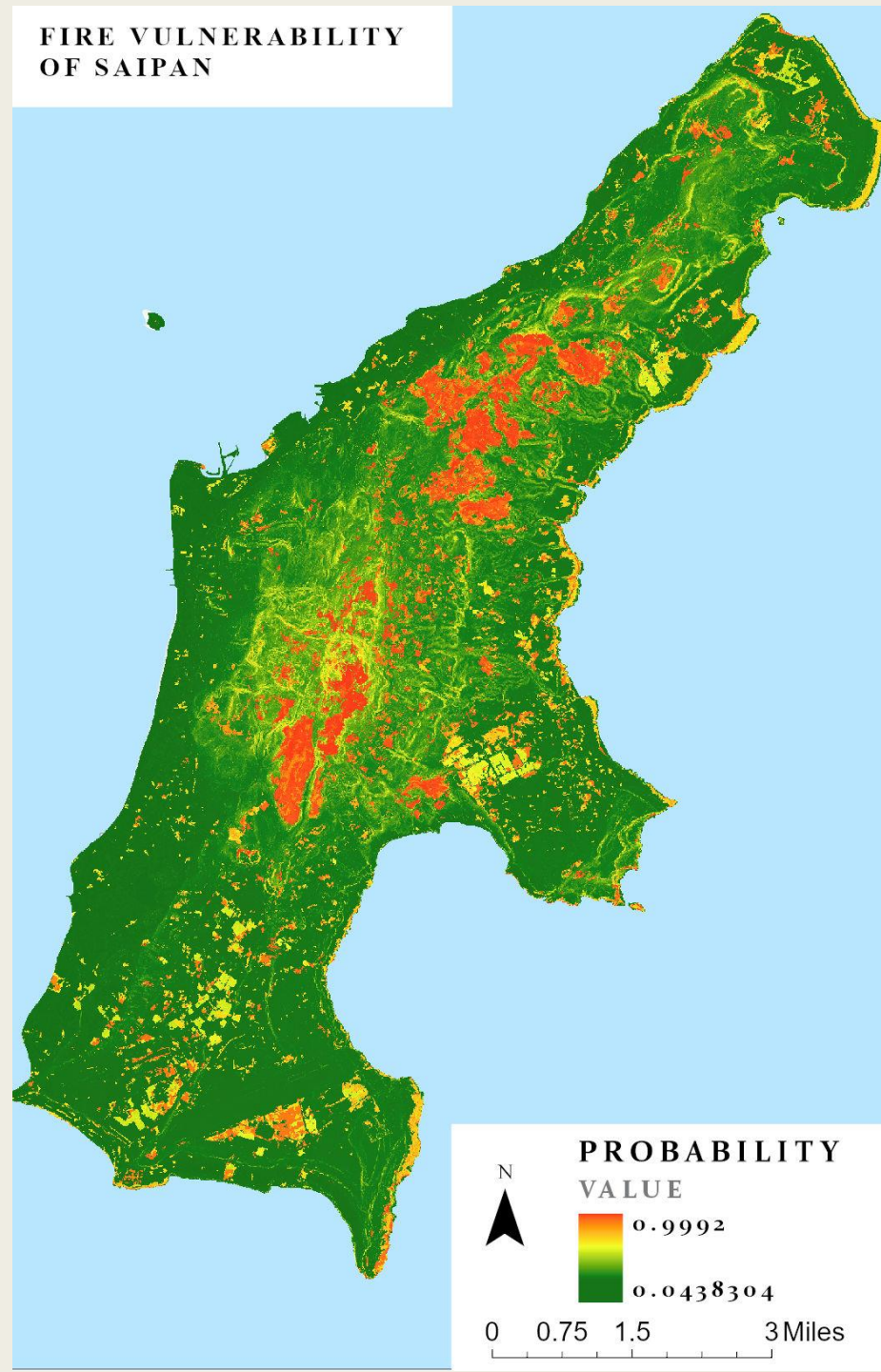
- How do fires impact watersheds?
- How do fires impact coral reefs?
- How can we prevent the spread of fires?
- What conditions lead to fires?
- How do we MANAGE fire impacted ecosystems?

The Importance of Baseline Data

The Core Questions

1. Where do fires occur?
2. When do fires occur?
3. Are these patterns changing over time?

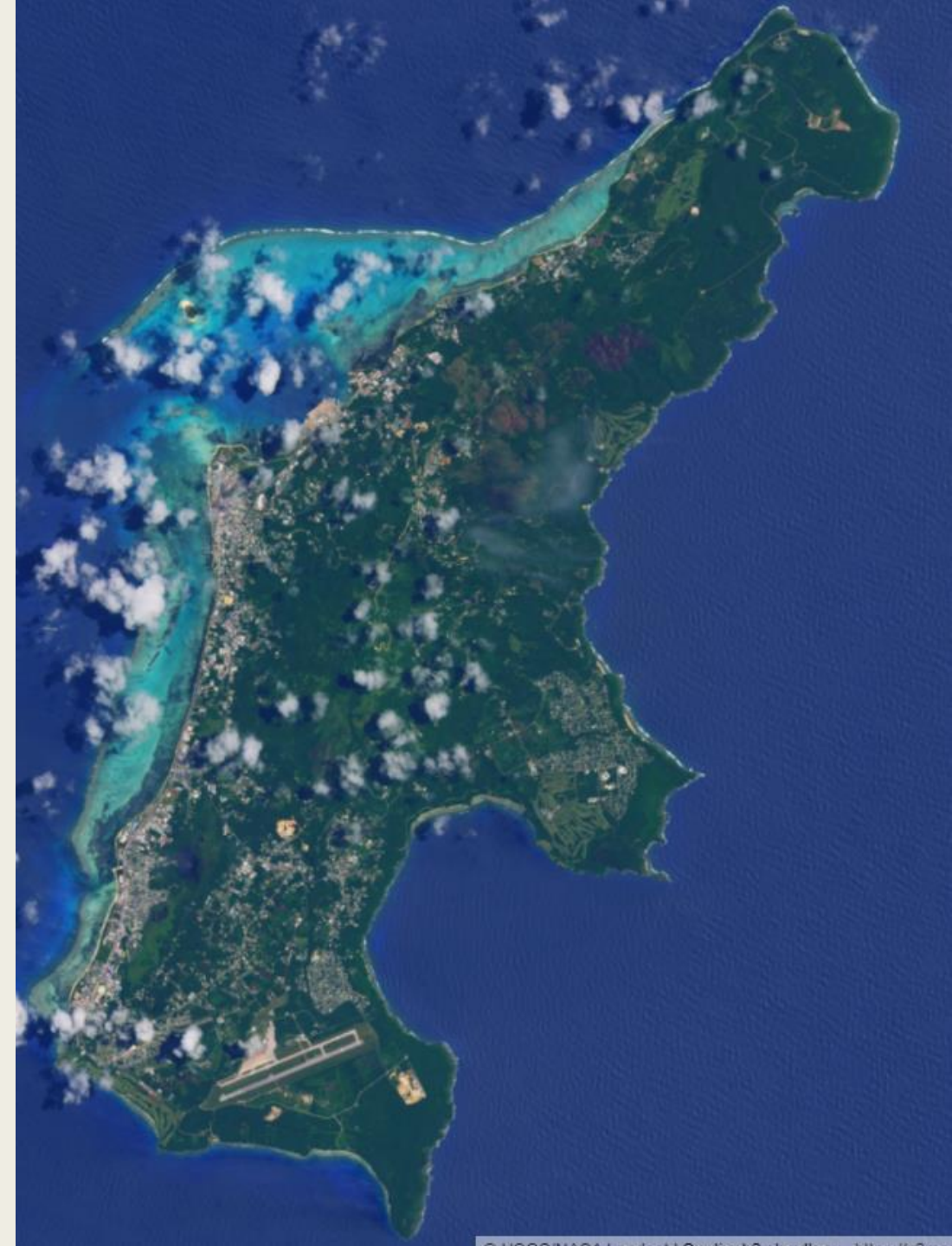
Data Products



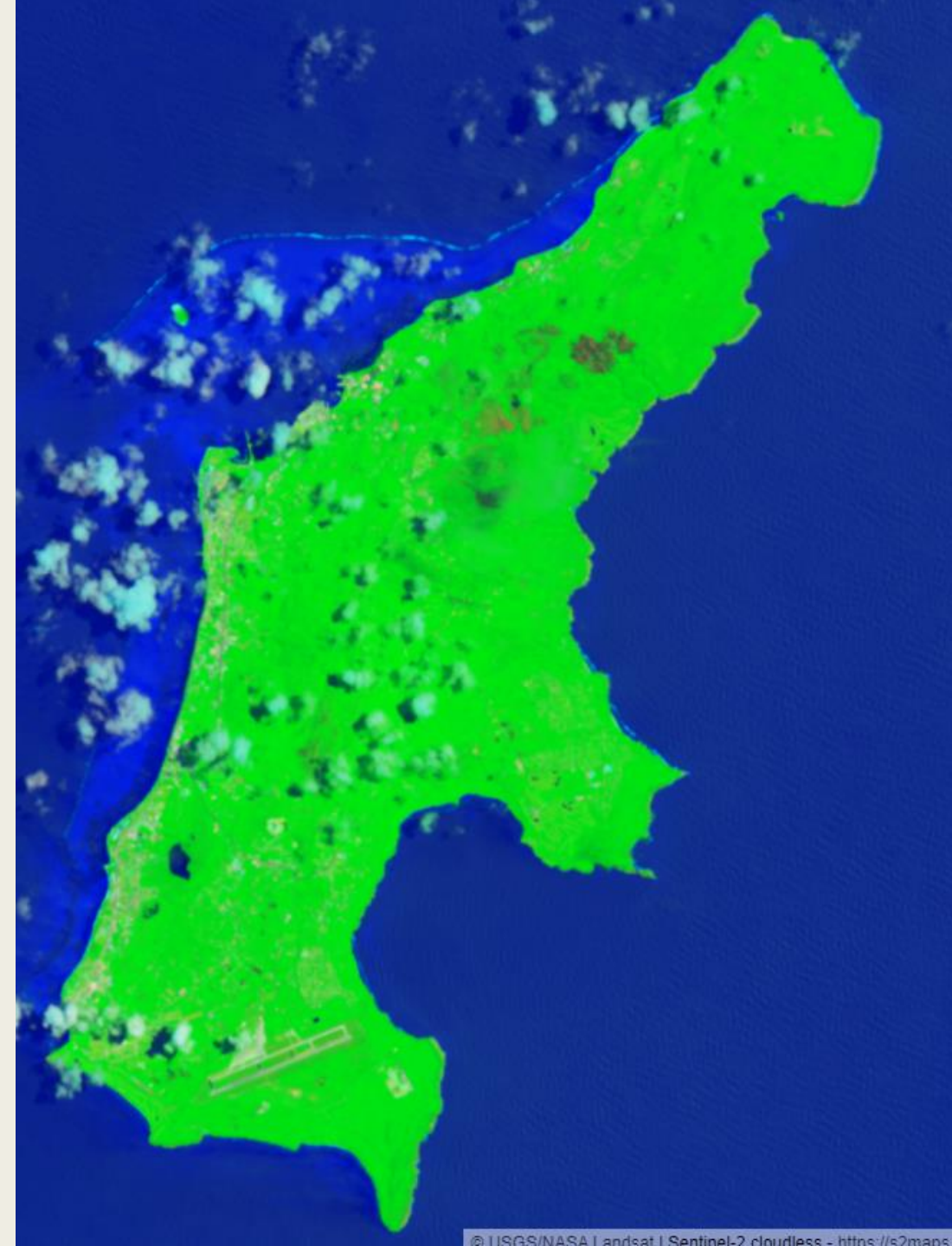
Remote Sensing to the Rescue!

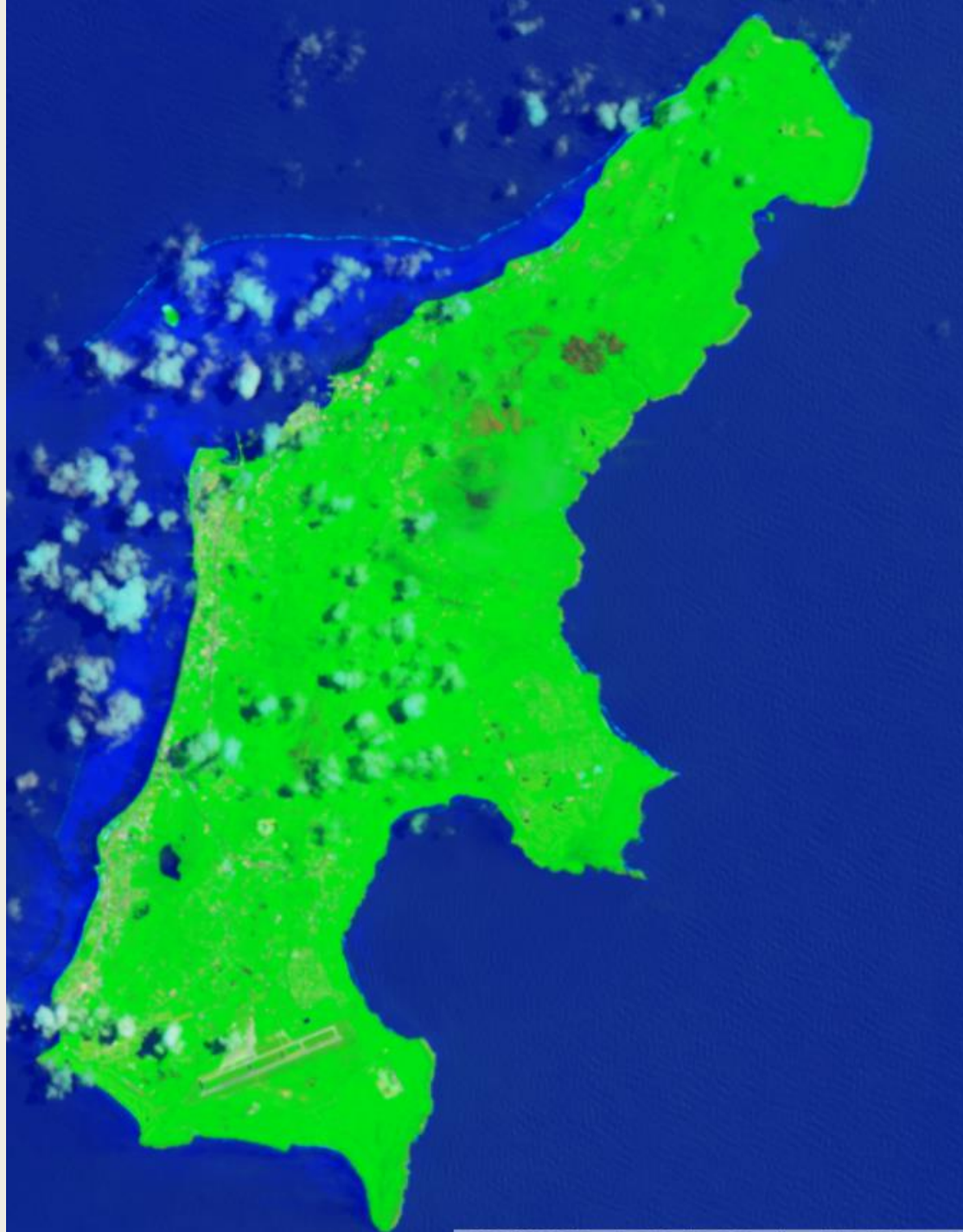
- Burn Area Index
- Three steps to process remote sensing image
 1. *Collect false color image*
 2. *Convert to BAI*
 3. *Extract Fire Locations from BAI*

- Step 1 – False color image
- Notice cloud cover issues

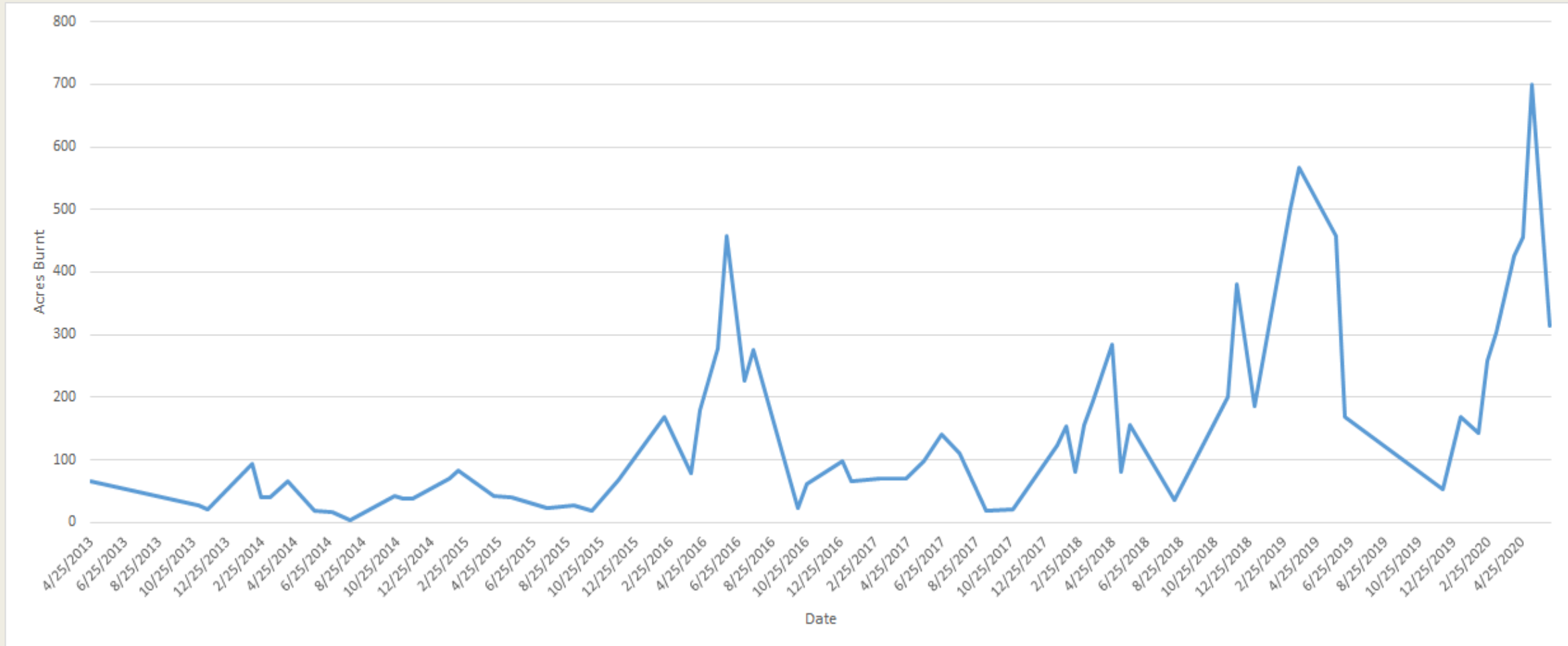


- Burn Area Index
- Ranges from Green to Red
- Some noise from specific surfaces

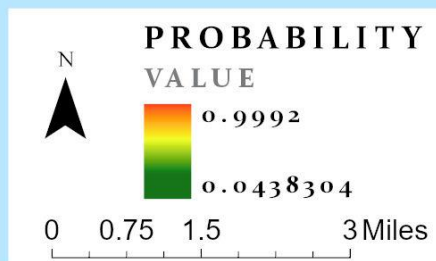
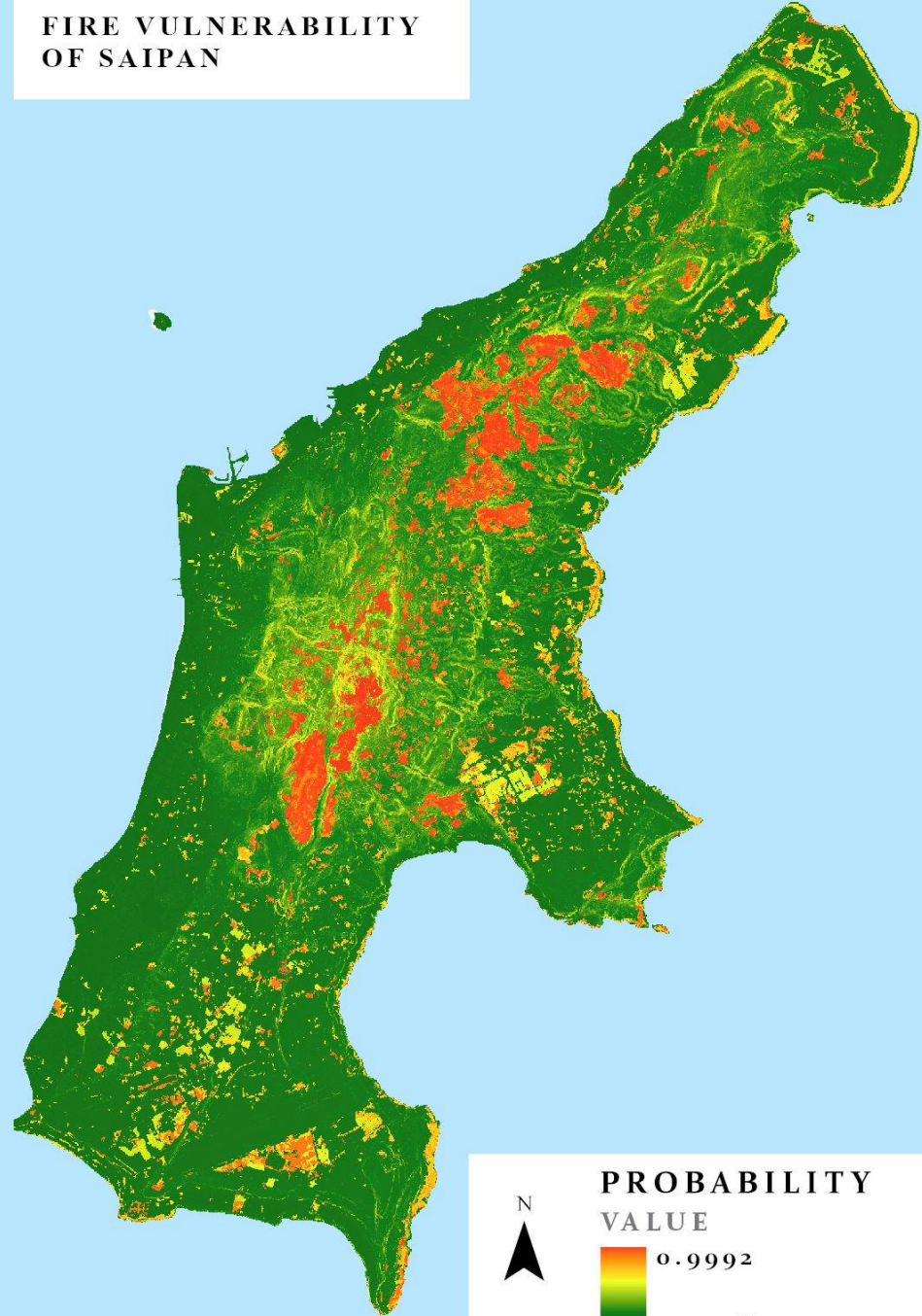
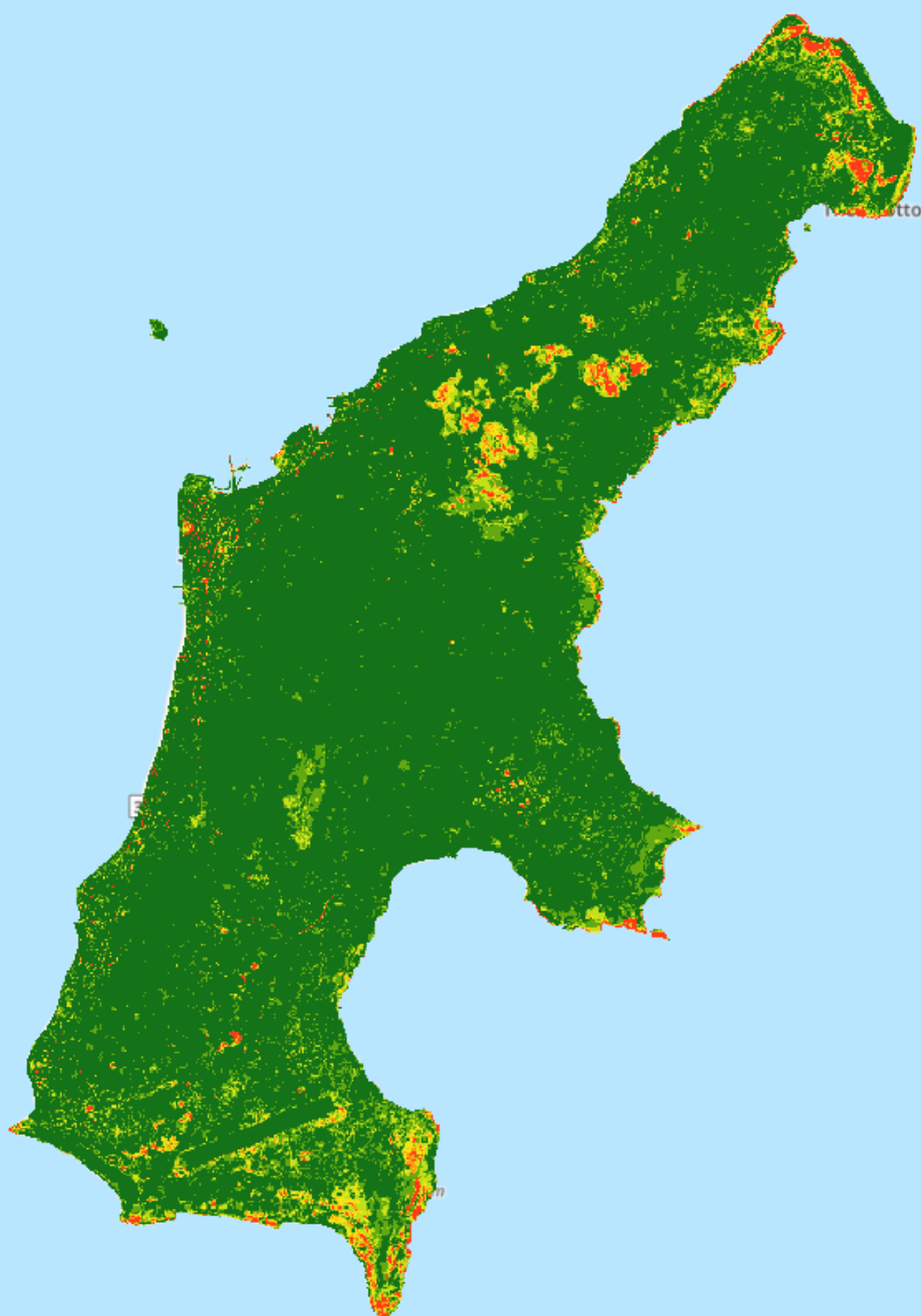




Fire Timeline

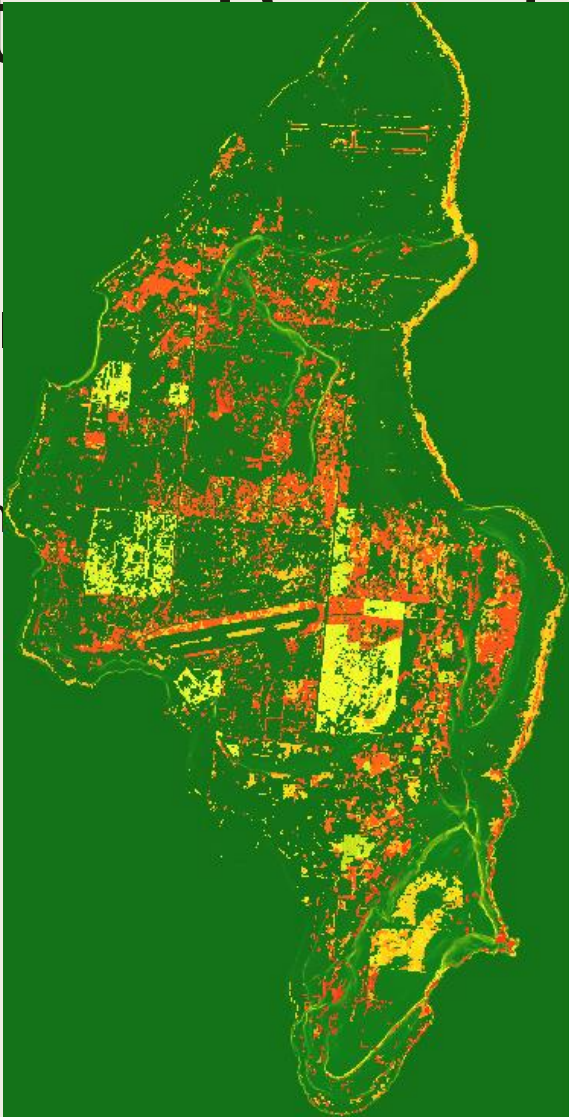


FIRE VULNERABILITY OF SAIPAN

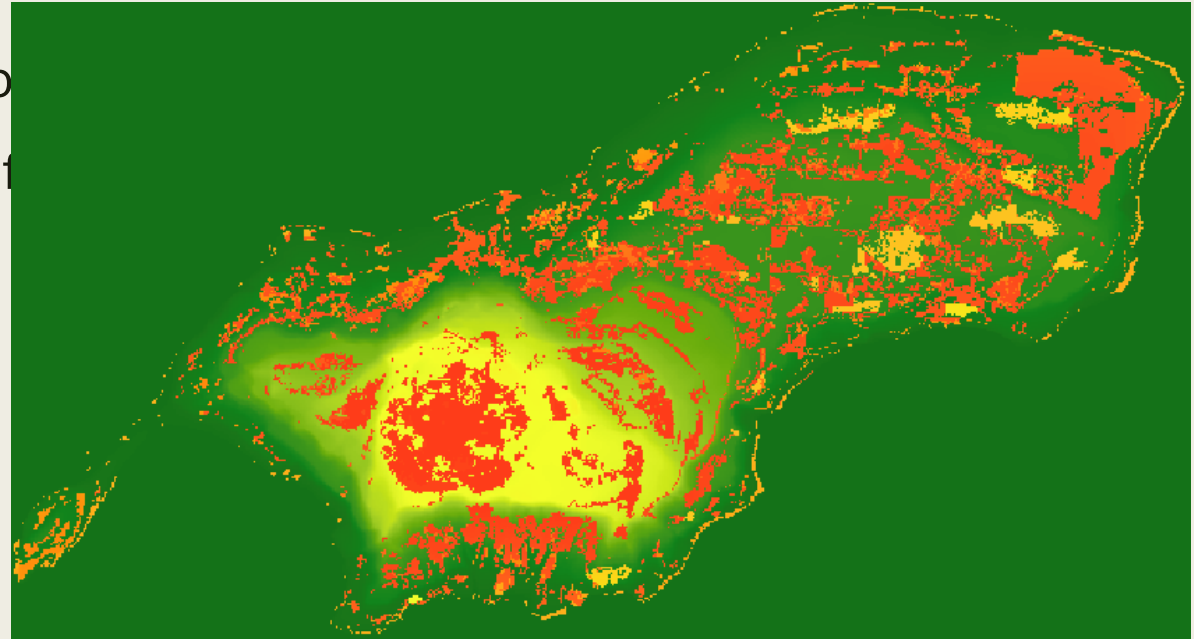


Future Developments

- Various types of land use
- Commercial and industrial
- Timber



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Thank you!

