Land Classification Specific Assessment of Persistent Costa Rica Drought

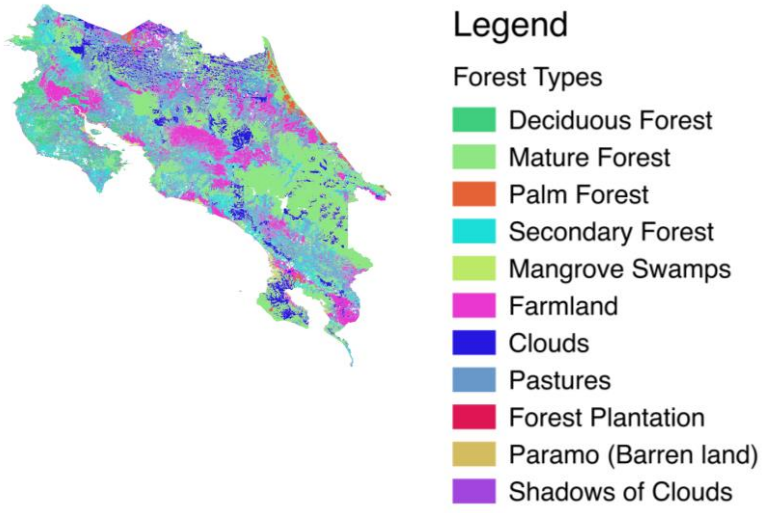
MOTIVATION

- Costa Rica drought occurred since 2013 and worsened by El Nino conditions in 2015
- Use remote sensing to monitor drought impacts specific to regions for adaptive water/agricultural management.

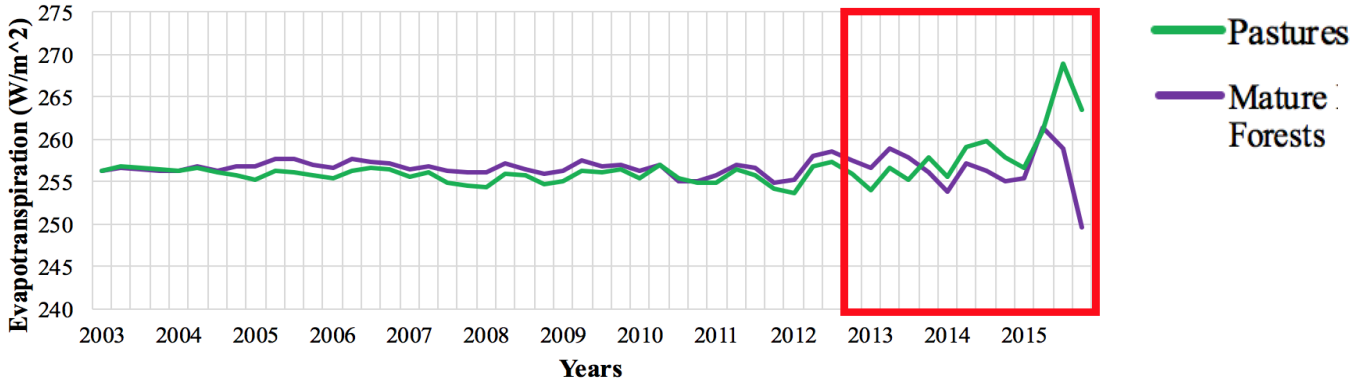
QUESTION

- How do different types of vegetation respond to drought, with respect to two different indicators (evapotranspiration and NDVI)?

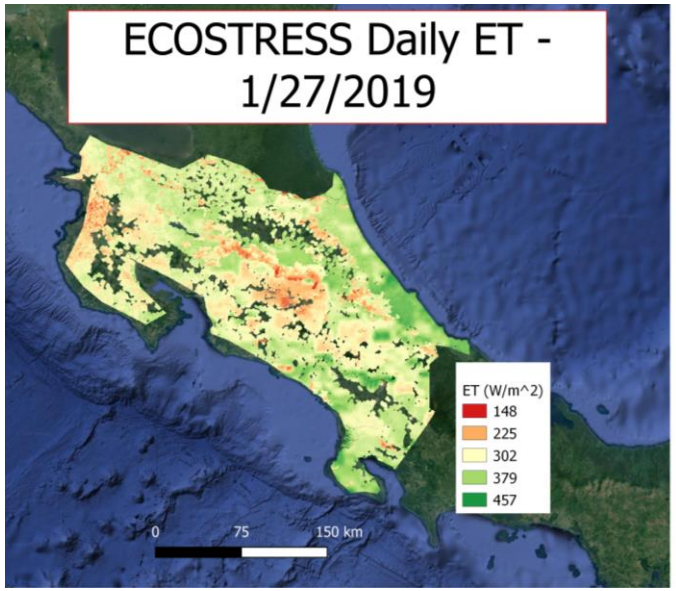
Land Classification with 5m Rapid Eye Spatial Resolution



Using Landsat-7, early results show that pastures respond differently than mature forests. (~55% of Total Area)



Future ET Extraction with ECOSTRESS



NEXT STEPS

- Leverage ECOSTRESS data and diurnal sampling to see if we can see vegetation-class specific patterns across Costa Rica
- Unique diurnal cycles that are being conducted on a global scale
- Compare NDVI to ET to determine lag time between the 2