**GIS final project**

Decide on topic. Sketch conceptual model. Sleuth major data sources. Start cleaning data (being sure to have a copy of the raw, unmodified data somewhere safe).

Hawaii fires over the last two decades.

Variables

Dependent variables

1. Fire perimeters 1999-2022
2. Hawai‘i Wildfire Ignition Points (2005 - 2020)
3. Hawai‘i Wildfire Frequency of ignitions
4. Hawai‘i Wildfire Probability of ignitions

Independent variables:

Larger-scale, intentional landscape burning caused by:

1. Cover land: development of agricultural economy
   * Management plant resources such as the native pili grass (Heteropogon contortus) for thatching, and other plants for food and animal fodder (McEldowney 1979, Kirch 1982).
   * Non-managed land Grasslands, especially invasive
2. Military installation – military exercises in the biggest island
3. Weather conditions – Temperature and precipitation
   * Precipitation

Maps

Cover land and fires in Hawaii main inland

**Sources:**

DOFAW

HWMO data sets

NLCD (Land cover) got it!

Fires (got it)

**Ideas**

Study Area: Just the big island of Hawaii

<https://geoportal.hawaii.gov/search?collection=Dataset>

-land cover: vegetation (example: native trees/grasses) - reference paper ([here](https://drive.google.com/drive/folders/1Jd-W8CSMhsR4zkU6p1sLNQ-mfssBkibI))

-non managed lands could contribute to fire (ignition)

-military base proximity, possibility to add military exercise locations

<https://files.hawaii.gov/dbedt/op/gis/maps/coast.jpg>

<https://planning.hawaii.gov/gis/download-gis-data-expanded/>

<https://files.hawaii.gov/dbedt/op/gis/maps/firerisk.jpg>

<http://rainfall.geography.hawaii.edu/downloads.html>

Questions for NAKOA / Jamie

Jamie suggested having priorities and use the PPT template. According to her this could be an interesting list:

1. Land cover and fire perimeters (About reclassification - wet / dry and also ask Nakoa)
2. Question about ignition points (they look more than expected and covering all the coastal areas) and fire perimeters. Answer: chose those with the largest area.
3. Precipitation. Answer: make a notes for the discussion caveats section
4. Fire stations and fire response zones (response approach)
   1. Travel time from fire stations to the ignitions (the largest). Use buffers
5. Military stations (preventive approach) . For Jamie, no need to focus, because there won’t be enough time for recommendations - 6 minutes.

NEXT STEPS

Reference map of Hawaii - Ivette All islands with the main island highlighted

Write up.

Cover land and fires perimeters - Ivette

Precipitation map final adjustments - Trace

Precipitation and fire ignitions - Trace

Questions for Jamie. We export layers as a file (.lyrx) and we can open them now