

Testing the report feature in LandMonitoR!

Features

Given a shape file (or a WKT polygon), can provide:

- Some default data streams on a dashboard
 - High-quality, nice-looking species list from GBIF/iN (from BioListR)
 - Also a "species pool" list given the radius from a central point
 - This can be based on the "biolistr" function, with arguments organize_by = family, order, etc.
 - Needs to be reconciled with modern taxonomy (possibly an issue with GBIF data)
 - Maps
 - HQ reserve maps with trails, etc. (use open street map)?
 - Topo
 - Satellite
 - Simple
 - Fire frequency (FIRMS data, especially relevant for CA)
 - Trees; some reserves have GPS points for all their trees
 - Camera trap/ARU locations & data
 - Ability to situate the reserve in a regional map (e.g., watershed, etc.)
 - Can plot biodiversity as a heatmap
 - Species Accumulation Curve (customizable by taxon)
 - Phenology charts by species (e.g., like iNaturalist histograms or eBird barcharts)
 - Trends (presented as time series)
 - Weather: Temperature, Precip, etc
 - Water flows
 - NDVI
 - Geology
 - Pheno-mismatch? Green-up - peak bird arrival. Reference Casey's Rshiny app?
- more...?
- Include a section on evidence synthesis for field stations. Lit searches, zotero databases, etc. Nathan mentioned this type of data as being really important for researchers. It makes sense!

Note: these functions pretty much all exist in other packages already. So this is basically a "meta-package," with the goal of removing equation altogether by making it a shiny app with downloadable outputs.

Also: Simpson's index for similarity, showing a list of place that are most similar to the fauna in your place, as well as an indicator of Phenology charts like iN has, but for your area! And/or pheno charts like that social plants app has (with boxes and elevation).

Next actions

1. Check what types of outputs are already available on GBIF
2. Check what dashboard data products are already available for the UC NRS reserves
3. Check Joanna's reports template (may need to ask her)
4. Figure out data sources
5. Look into what other data dashboards exist in other systems (like NPS, CA state parks, etc)
6. Make a cool logo