Workshop - Remote sensing from drones to satellites and ITEX

Subzone A highly dynamism is an artifact of snow cover variation.

Landcover types: Do maps for the sites/subsites to local PIs (Isla)
Fuzzy maps (Noemie)
Relate maps to permafrost distribution (Esther)

AVA data is not publicly available yet!! (Isla) Check with Gabriela (To do: Christian will ask)?
Arctic plot data vs. land cover types

ITEX sites for validation and ecological interpretation

HiLDEN sites for validation

Existing Landcover maps for validation:

Yukon Ecological and Landscape Classification (ELC)
https://yukon.ca/en/yukon-ecological-and-landscape-classification-and-mapping-guidelines

DGPs ITEX plots

How are we going to make progress on this in coming years?

Send high resolution imagery to get people to mark where plots are in the interim.

Get a DGPs team to visit sites where people don't have capacity to get plot-level coordinates

Potential land cover analyses that could be done with ITEX data:

- Comparing plot dominance with land cover types
- Could we use these land cover maps to look at ecological types within the tundra biome?

Geodata portal

ESRI site? Or an open source way to share spatial data?
Or could be at NASA/DOE at the ORNL DAAC (through Isla's research chair affiliation, or applying for ITEX affiliation directly)?
https://www.earthdata.nasa.gov/eosdis/daacs/ornl

Herbivory network: would be good to reach out to join species composition data

Phenocams: Where to place them to observe snow cover distribution and variation? Everywhere. Ideally one looking at the plants and at least one overlooking a larger area (Sarah)

Phenology: What have we learned about phenology this week? Temperature is stronger driver at beginning of the season, and light shuts down activity at the end of the season.

Phenology questions

- Is end of season phenology less variable than it used to be? Temperature could have been a more important cue of senescence in the past than now? (All)
- As climate warms, if co-limited by temperature and photoperiod, as things warm then plants could get photoperiod limited and we expect less variability in more recent warm years - of senescence, peak, green up? (Sarah)
- Is senescence really happening at pretty much the same time in early versus late years? Elise's analyses suggest that the initiation of senescence happens earlier in warmer versus colder microclimates, but that full senescence happens at a consistent time across microclimates. She also found similar results for warmer versus colder years for phenocam sites in Alaska (and Western Canada). (Elise and Isla)
- Landscape heterogeneity in phenology with warmer versus colder sites? (Isla)
- Shape analysis on greening curves to see if you can pick apart dif plant communities (Elise)