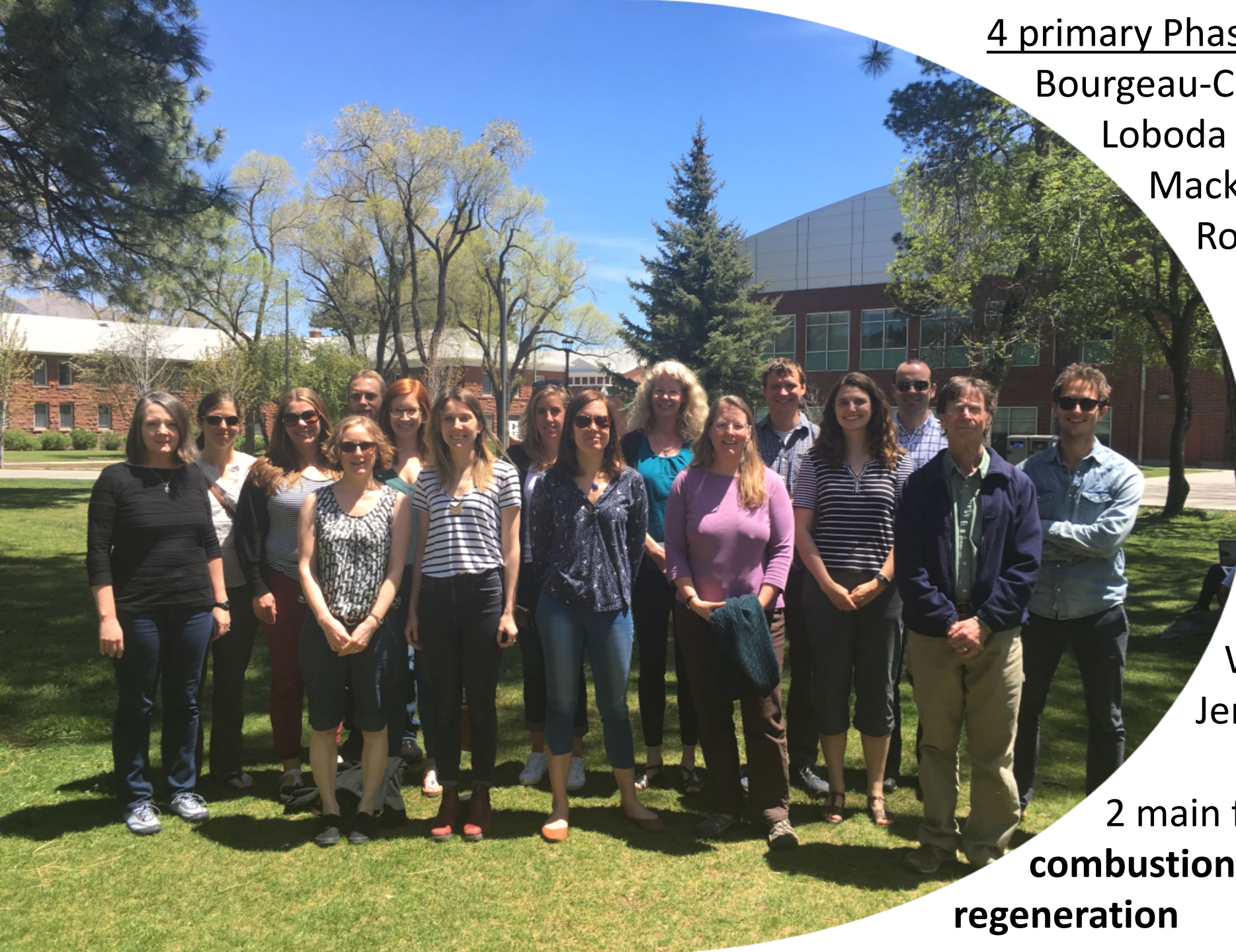




ABOVE Wildfire syntheses: past, current, and future

Brendan Rogers and the Fire Disturbance Working Group

6th ABOVE Science Team Meeting



4 primary Phase 1 Fire projects

Bourgeau-Chavez TE 2014

Loboda TE 2014

Mack TE 2014

Rogers TE 2014

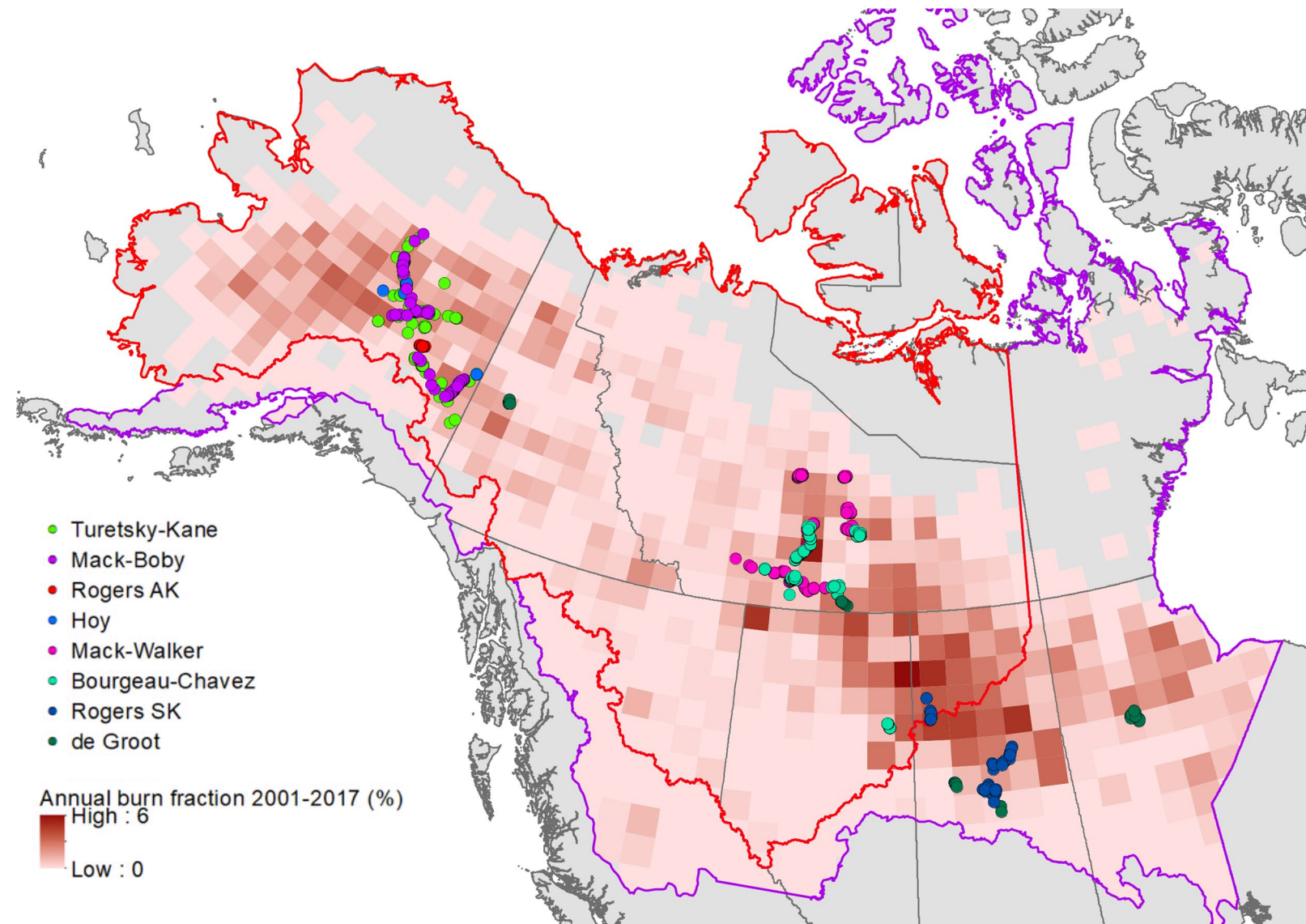
All contributed to
syntheses

2.5 day workshop in
Flagstaff organized by
Michelle Mack, Xanthe
Walker, Jill Johnstone, and
Jenn Baltzer

2 main foci:

combustion
regeneration

Combustion Synthesis



- 1172 total sites, 1019 burned
- Aboveground & belowground combustion, associated site characteristics, and Fire Weather Indices
- Archived on ORNL DAAC (Walker et al., 2020)

[DAAC Home](#) > [Get Data](#) > [NASA Projects](#) > [Arctic-Boreal Vulnerability Experiment \(ABoVE\)](#) > [Landing page](#)

ABoVE: Synthesis of Burned and Unburned Forest Site Data, AK and Canada, 1983-2016

Overview

DOI	https://doi.org/10.3334/ORNLDAAC/1744
Version	1
Project	ABoVE
Published	2020-05-07
Updated	2020-05-07
Usage	6 downloads

[Download Data](#) 703.0 KB

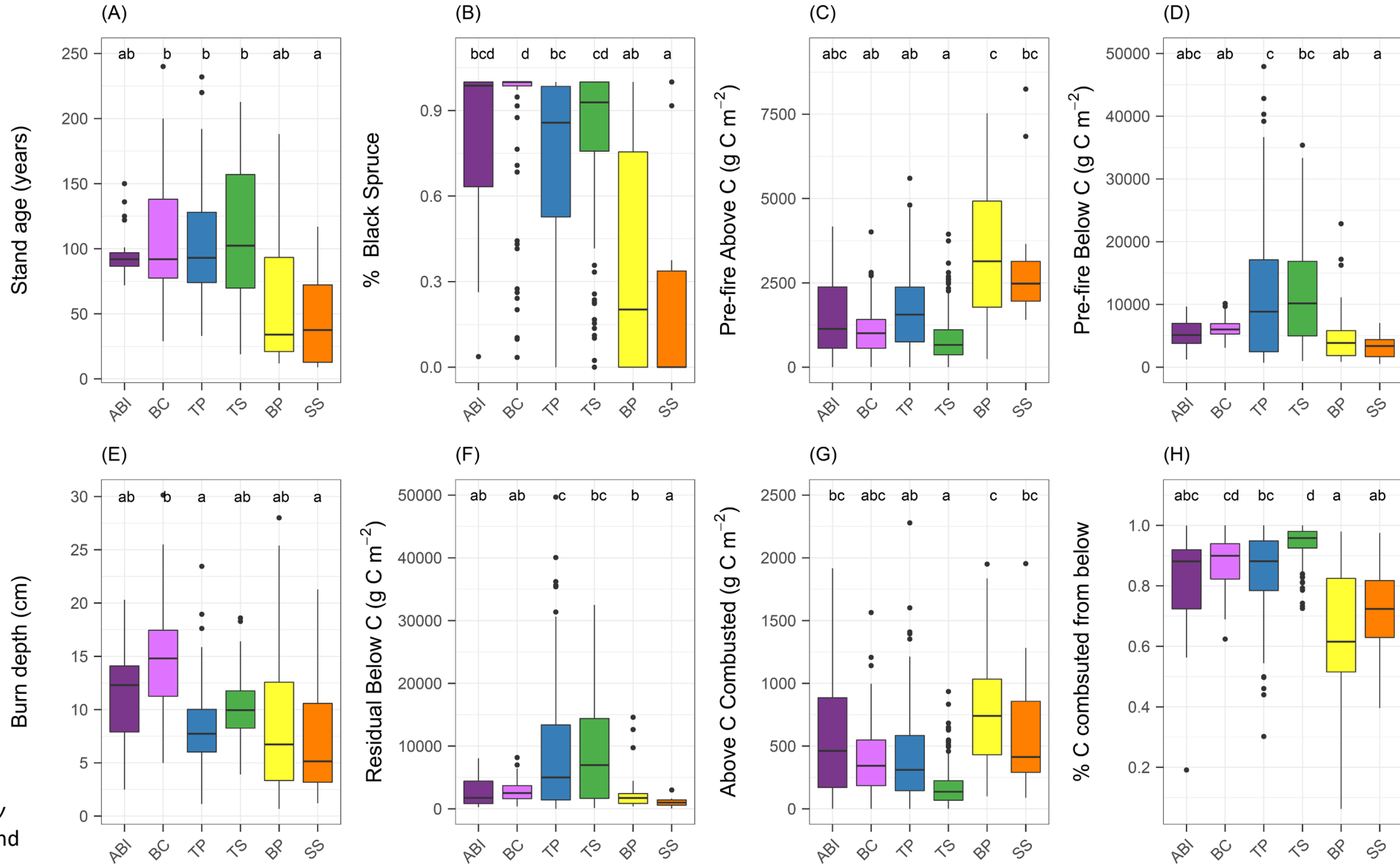
[User Guide](#)



Spatial Coverage

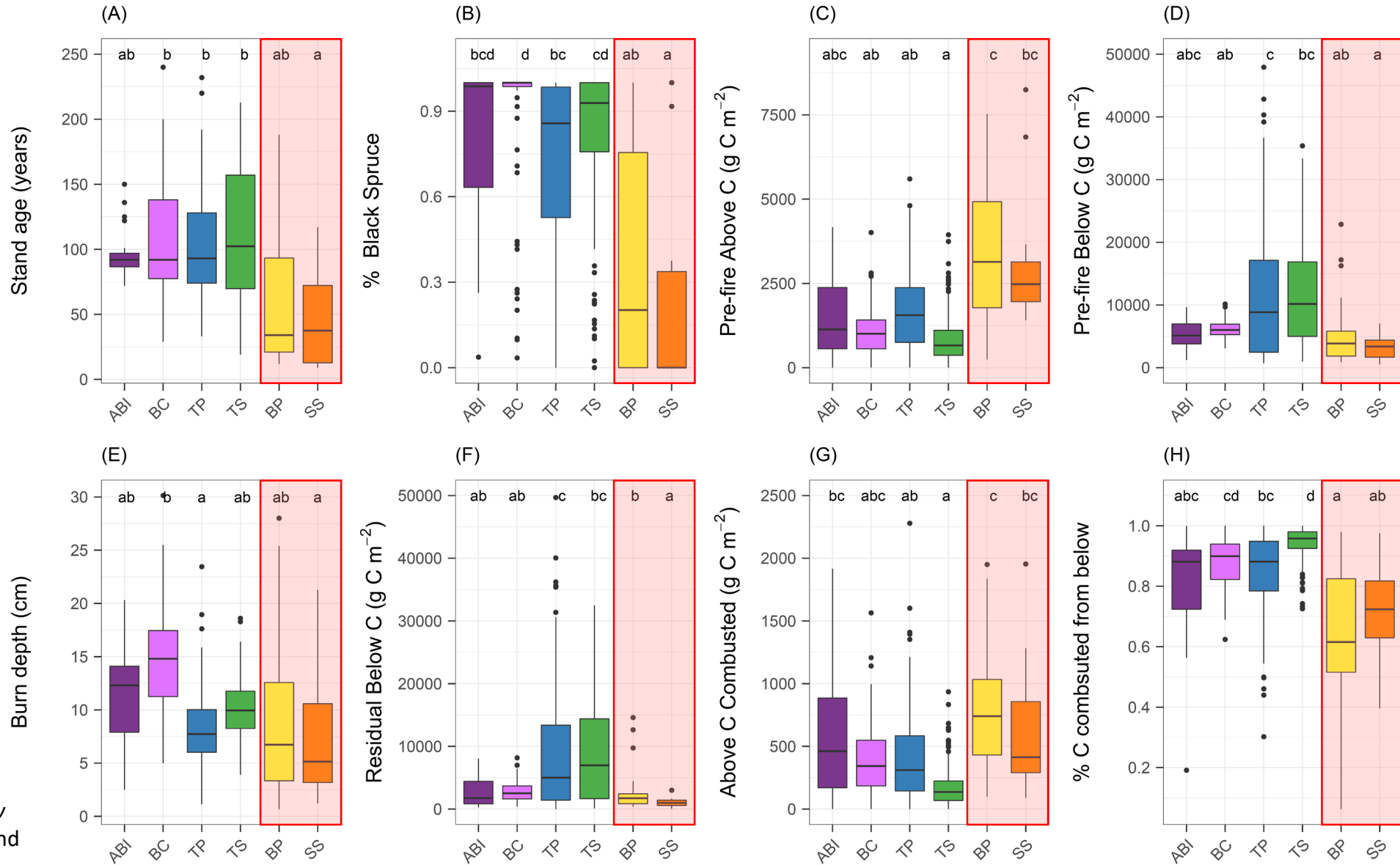
Combustion Synthesis: Site-level understanding

Alaska Boreal Interior
 Boreal Cordillera
 Taiga Plains
 Taiga Shield
 Boreal Plains
 Softwood Shield

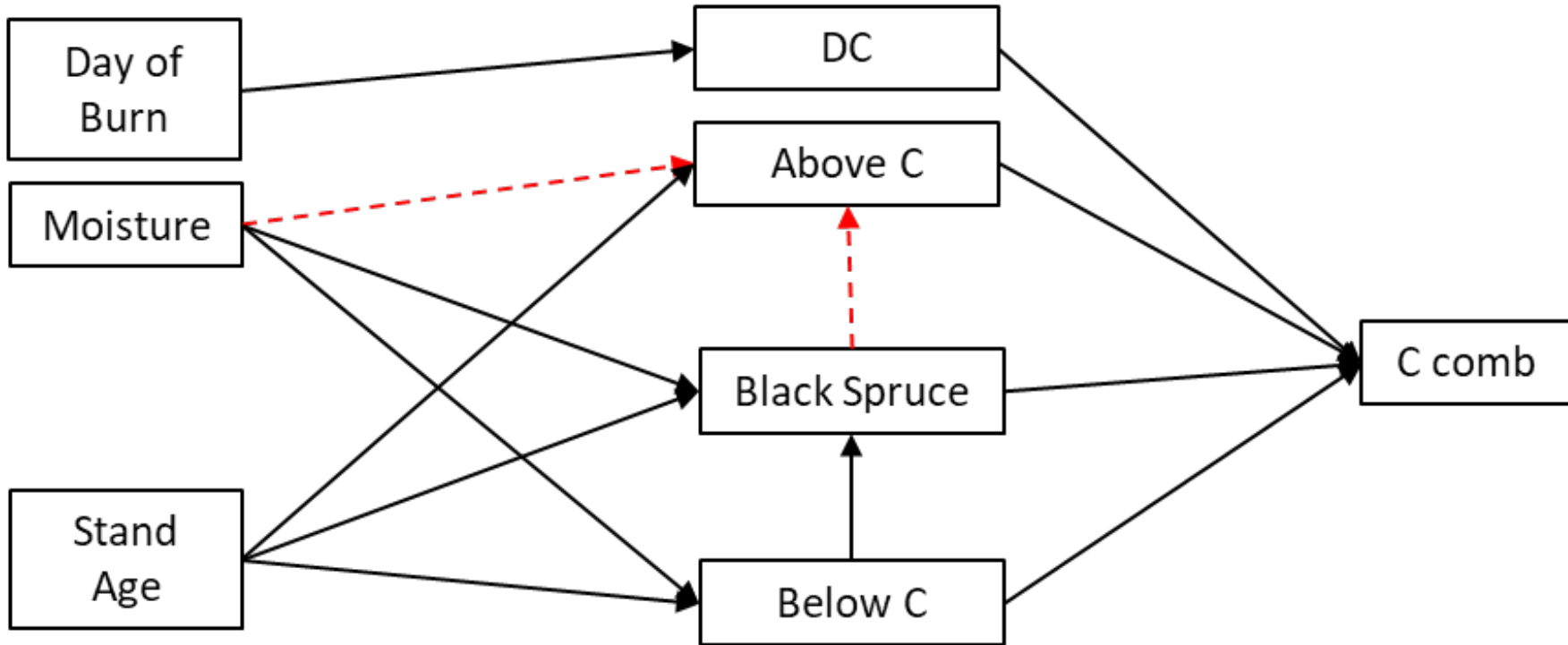


Combustion Synthesis: Site-level understanding

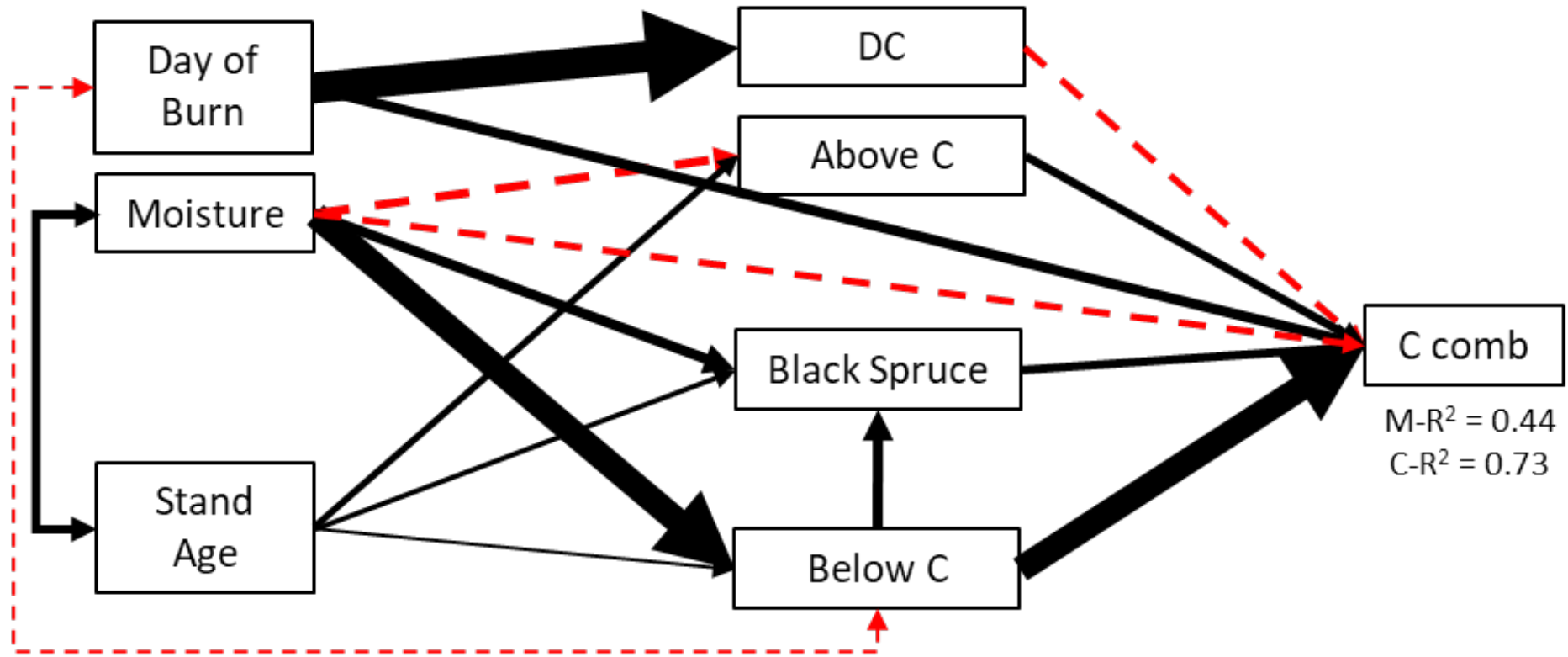
■ Alaska Boreal Interior
 ■ Boreal Cordillera
 ■ Taiga Plains
 ■ Taiga Shield
 ■ Boreal Plains
 ■ Softwood Shield



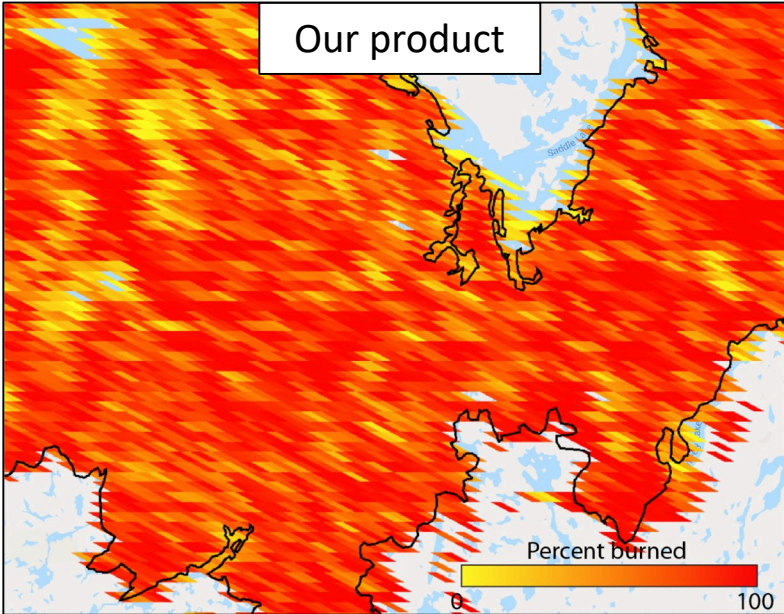
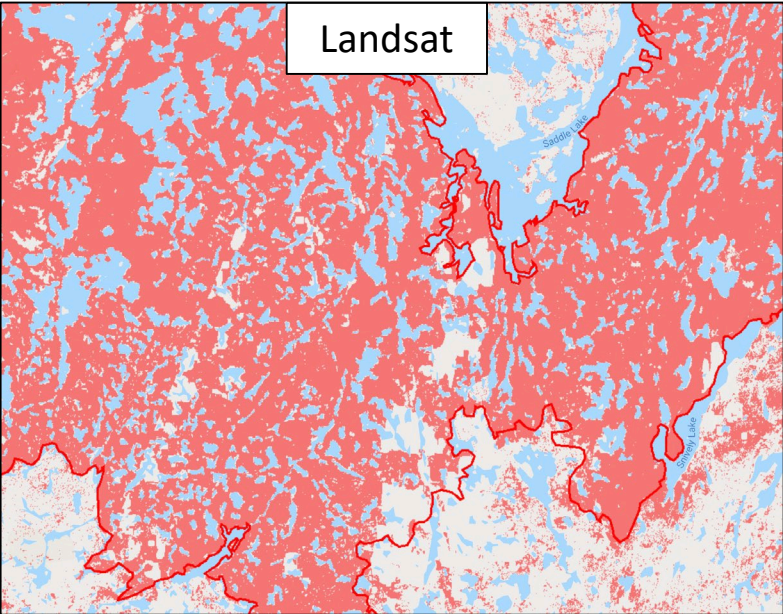
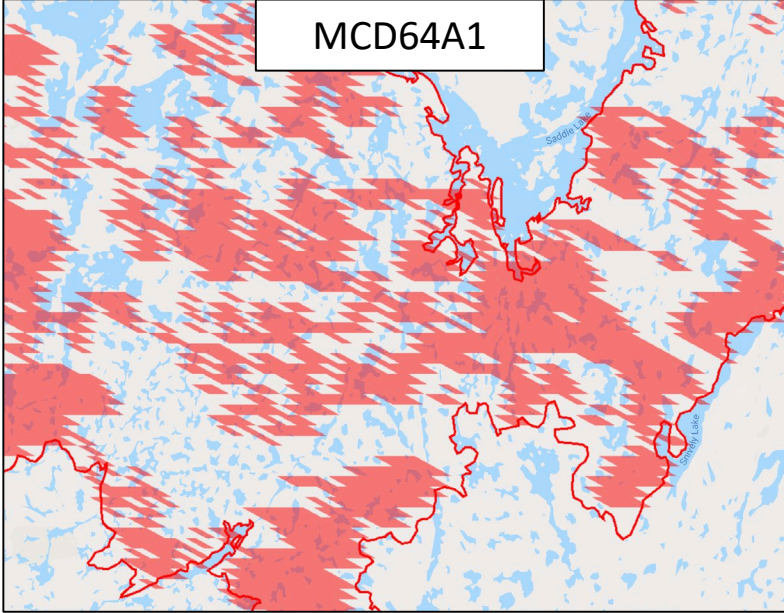
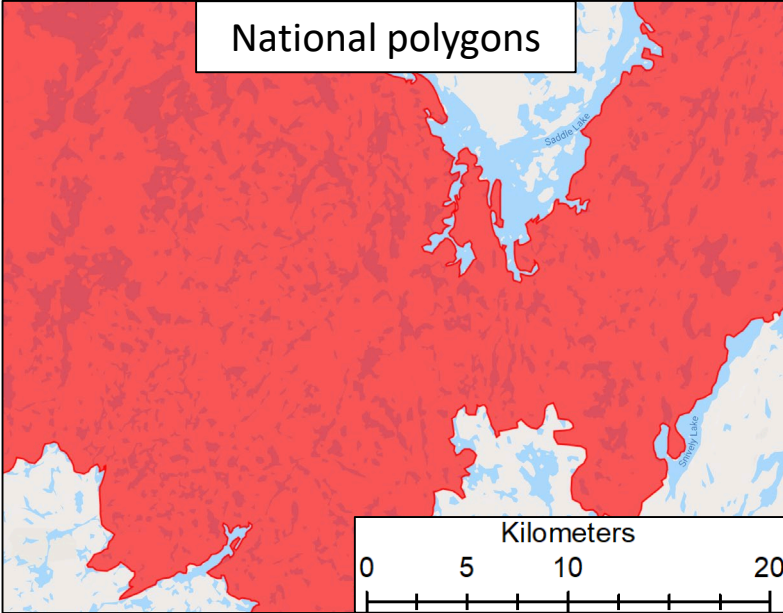
Combustion Synthesis: Site-level understanding



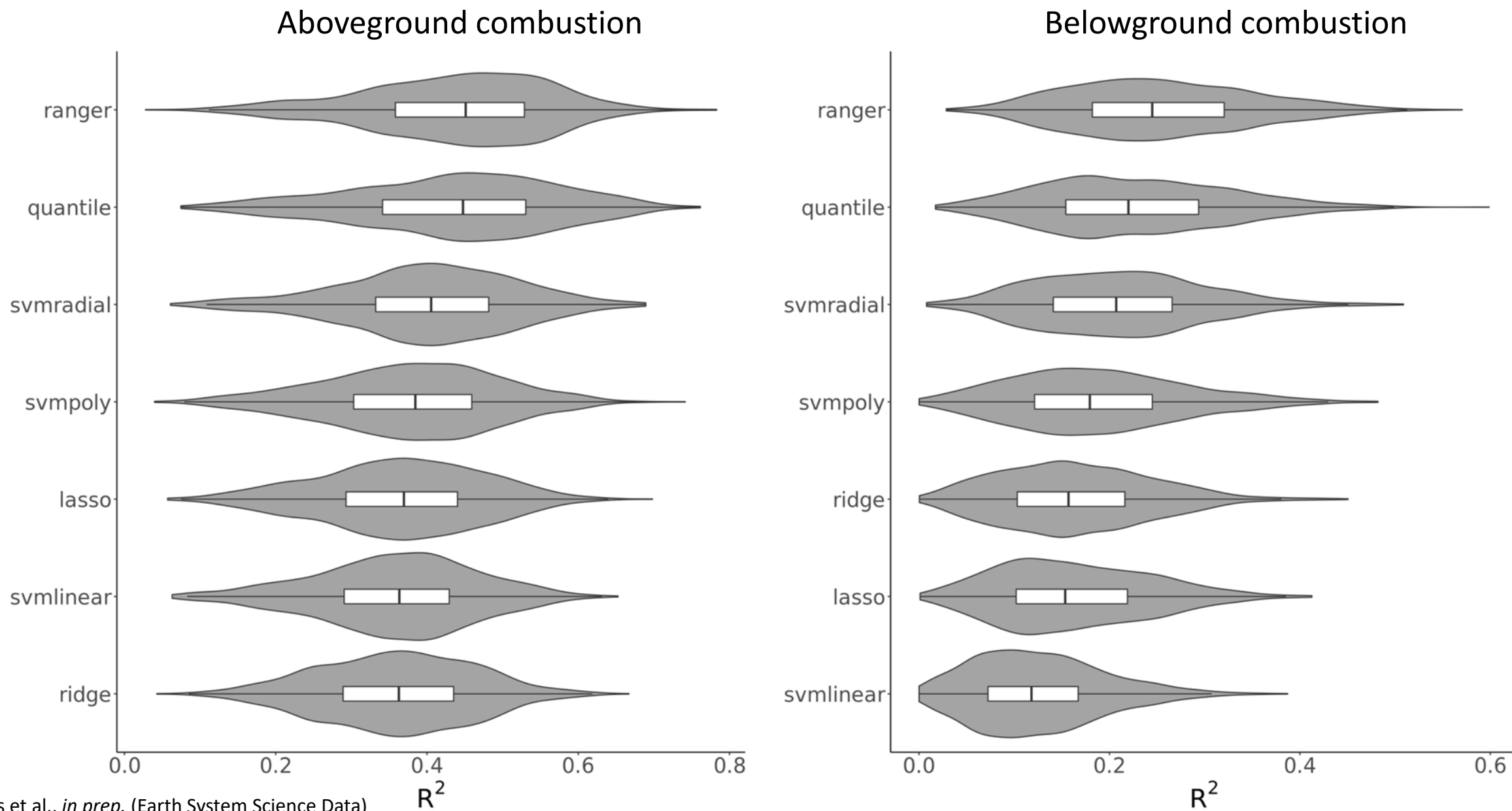
Combustion Synthesis: Site-level understanding



Combustion Synthesis: Spatial upscaling

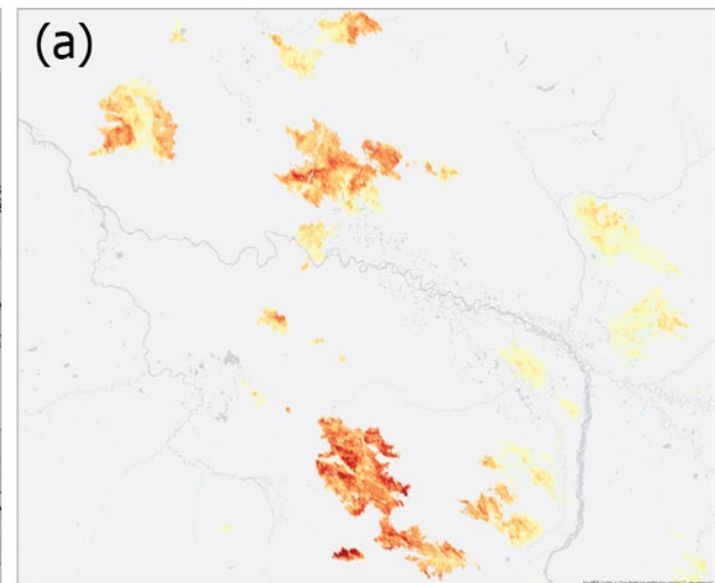
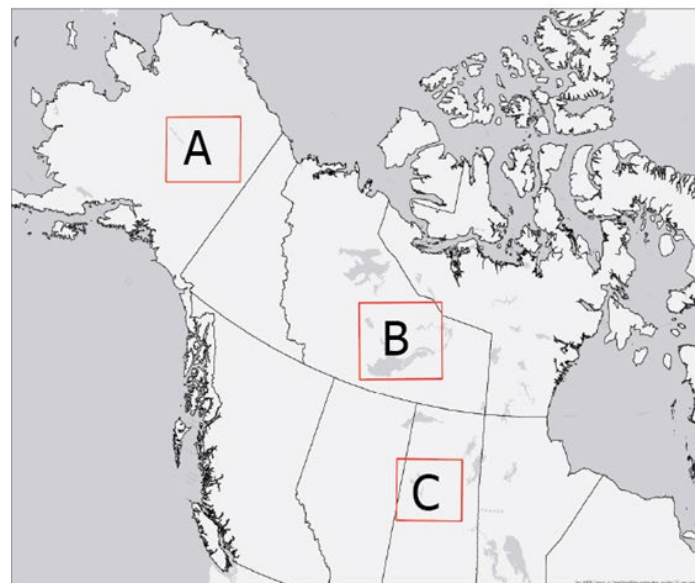


Combustion Synthesis: Spatial upscaling

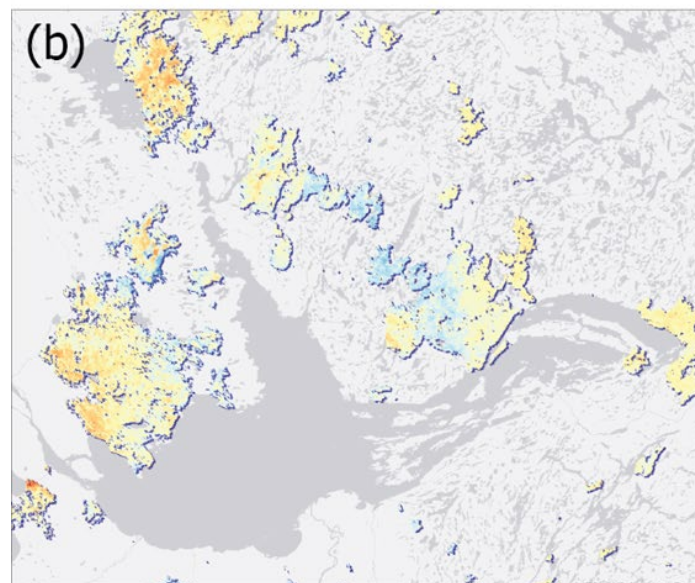


Combustion Synthesis: Spatial upscaling

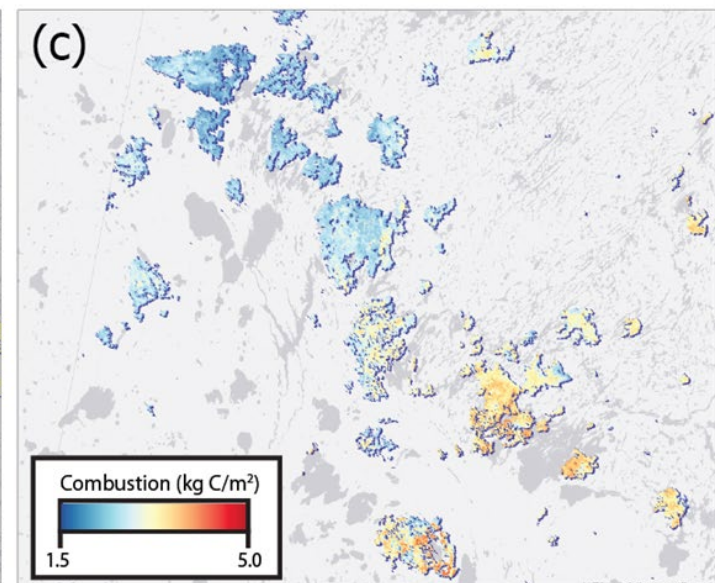
AK 2004



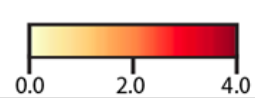
NWT 2014



SK 2015



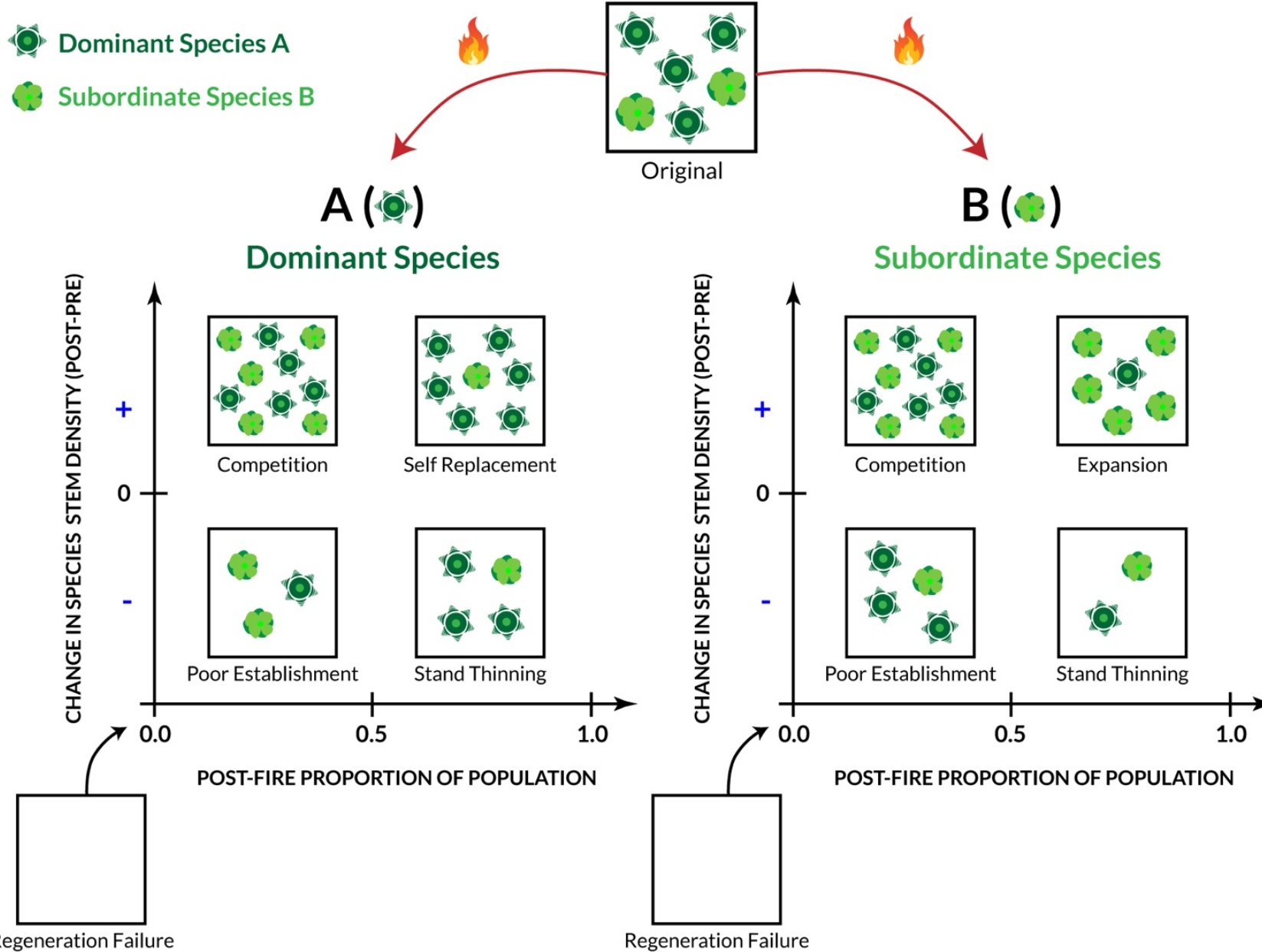
Combustion (kg C/m²)



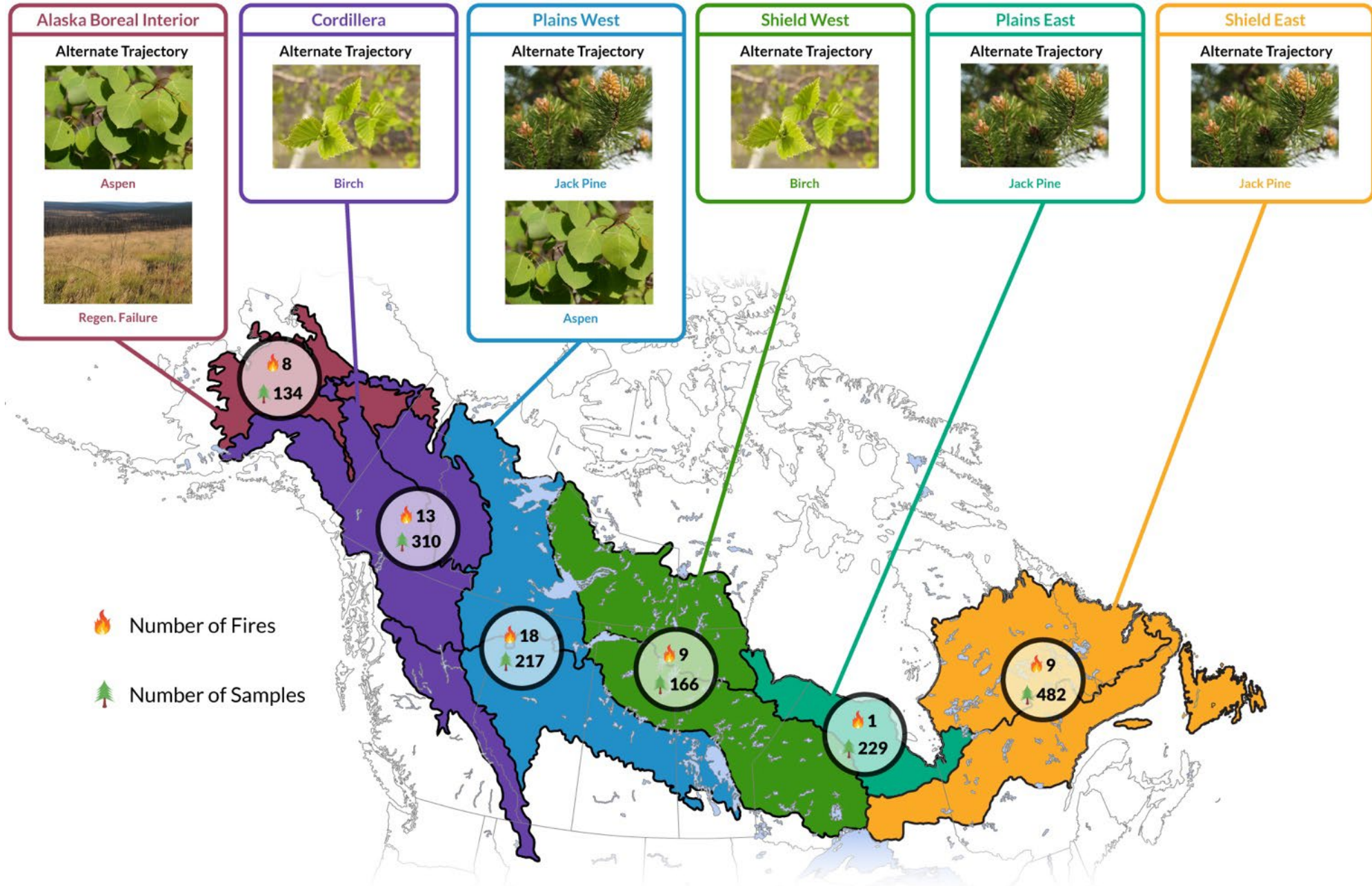
Combustion (kg C/m²)



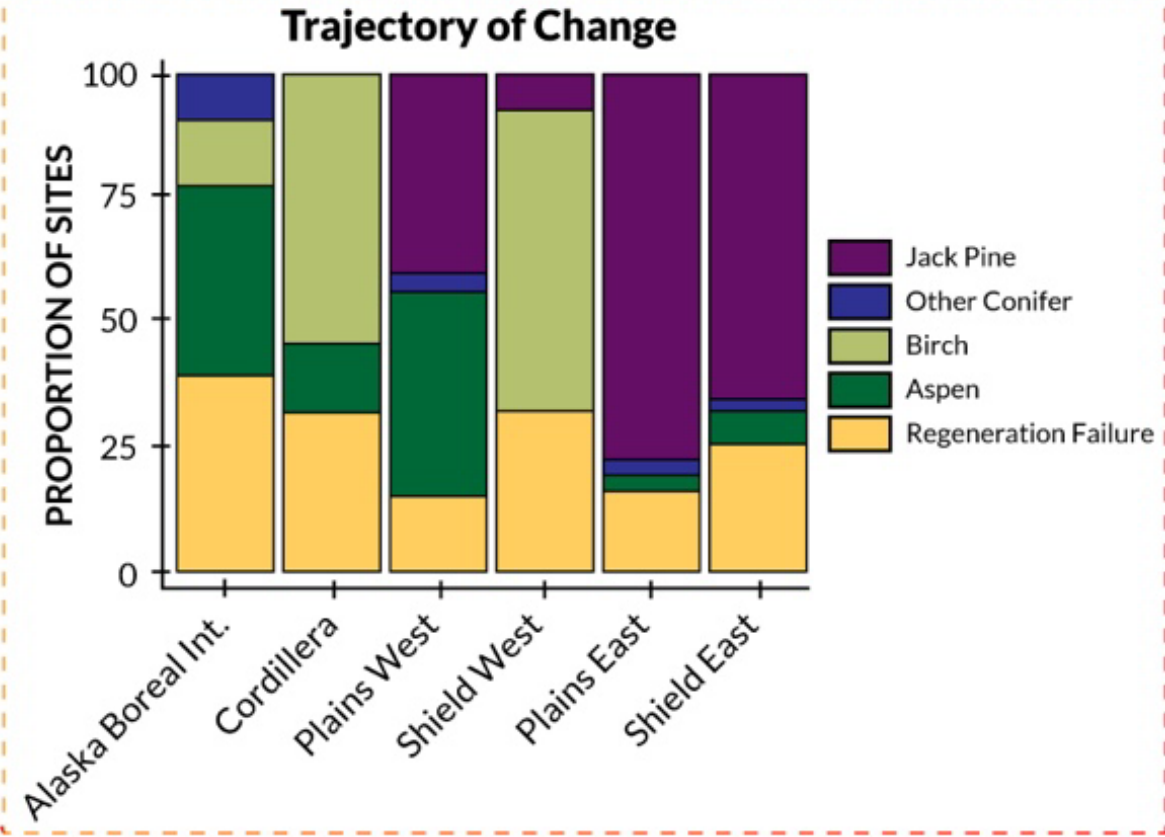
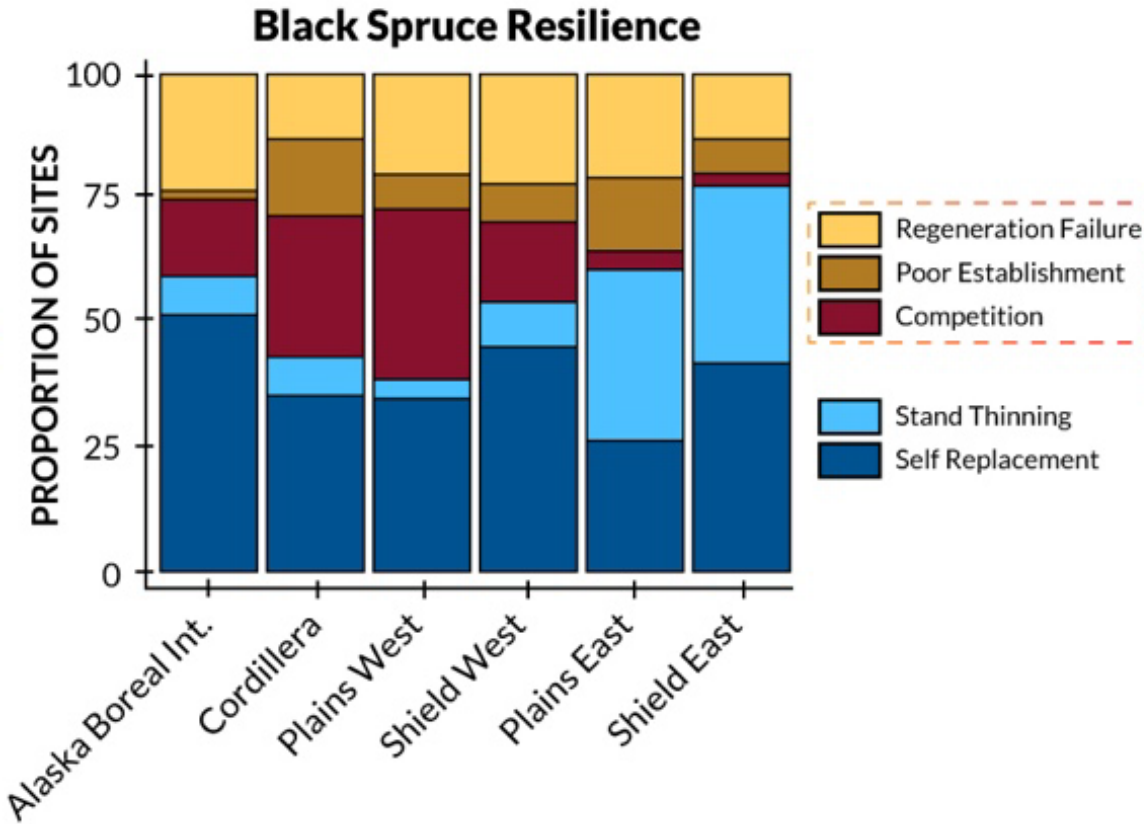
Regeneration Synthesis



Regeneration Synthesis



Regeneration Synthesis



Upcoming tundra fire synthesis



Possible focal areas

- Tundra fire resiliency framework
- Post-fire tundra vegetation (e.g., tussocks, shrubs, bryophytes)
- Tundra combustion synthesis
- Post-fire tundra hydrology (ALT, soil moisture, subsidence)

THANK YOU

