

# Opportunities for long-term monitoring of mountain pine beetle effects using PSPs in Alberta

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# Background

## **230 MPB PSP**

Permanent sample plots in Mountain Pine Beetle affected areas

**2007**

The Foothills Pine Project Team (FFPT) started a study to monitor the impact of mountain pine beetle outbreaks in Alberta  
Funded by FRIAA

**2020**

- 1) MPB EP program to extend the MPB PSP network to Upper Foothills Natural subregions by adding 14 new PSPs  
FIRAA MPB Ecology Program partnering with FGrOW initiative
- 2) MPB PSP from Forest Rehabilitation Program re-measured  
Funded by FRIAA MPB Forest Rehabilitation Program

FFPT rolled into another initiative to create and remeasure at 5-year intervals a MPB PSP network  
Funded by FRIAA MPB Forest Rehabilitation Program

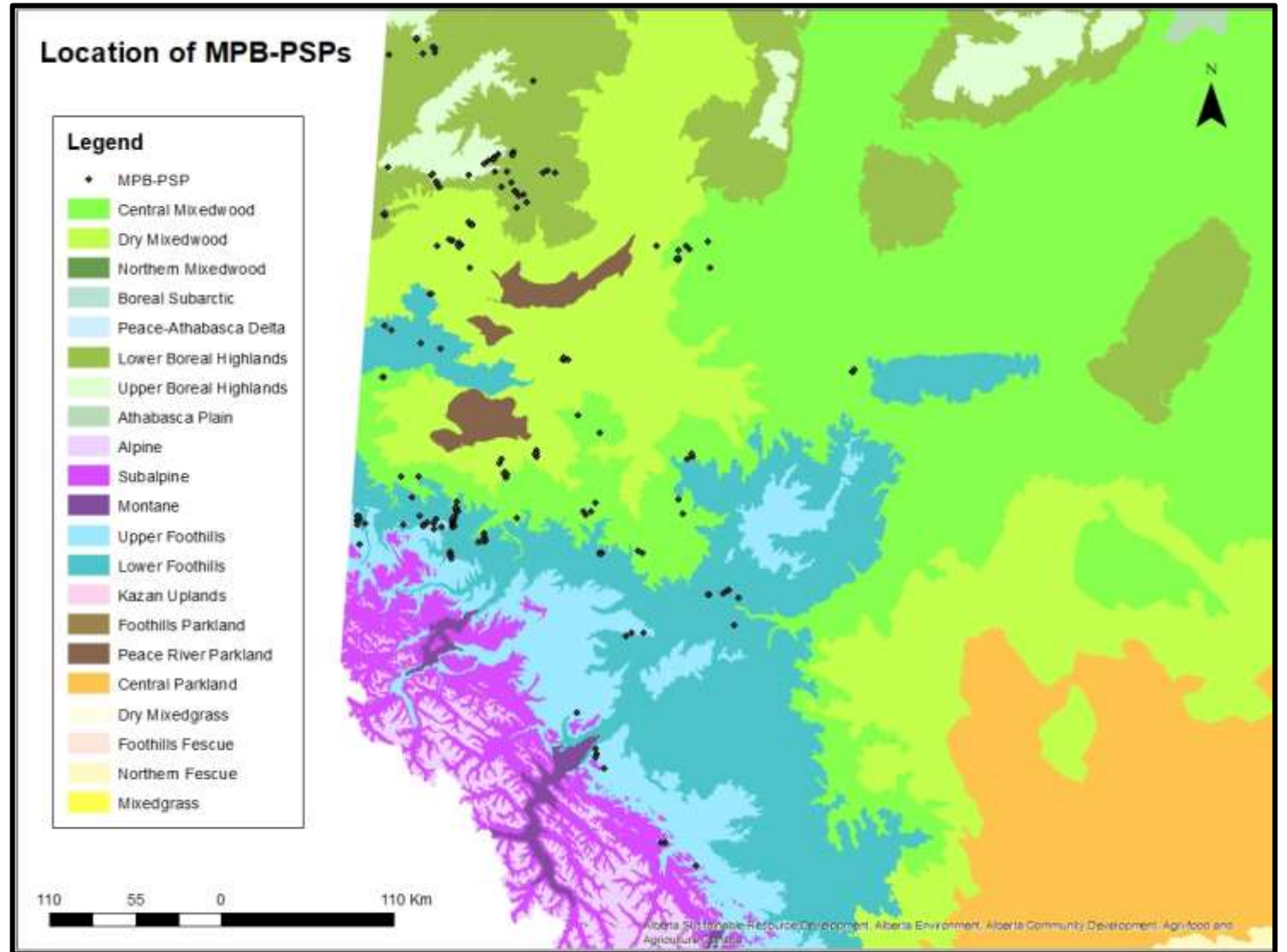
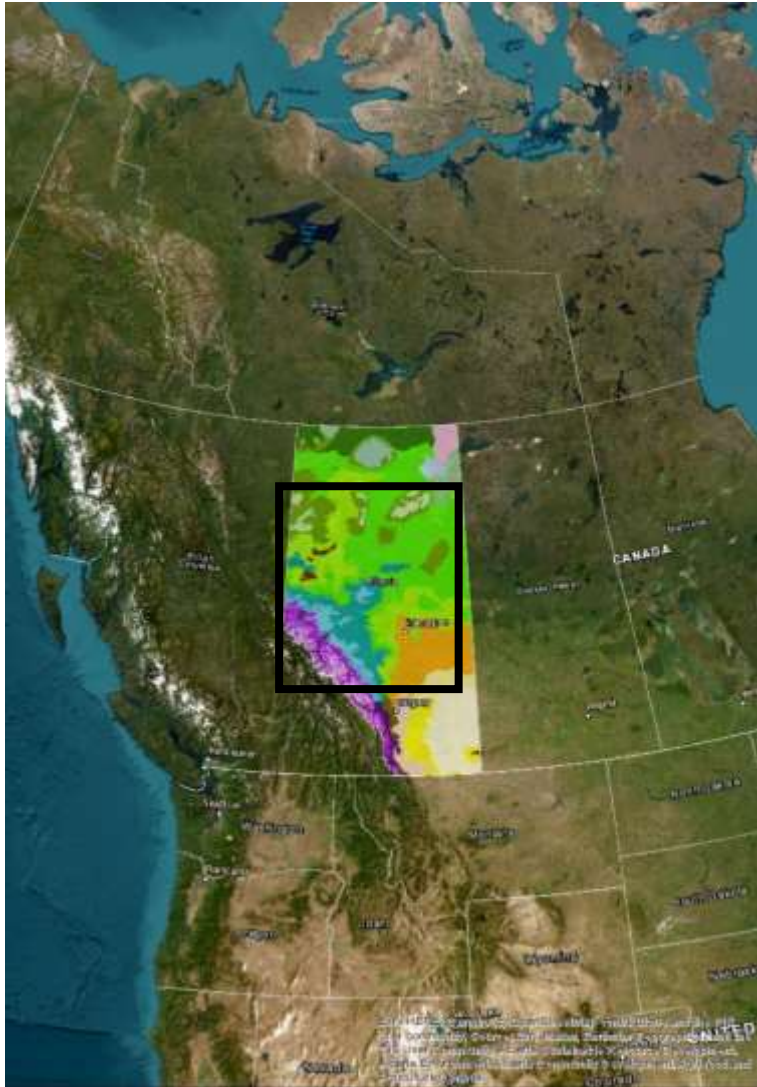
**2015–2016**

New Remote sensing data Collection using TLS and UAV  
Funded by FRIAA and FGrOW

**2022-2023**

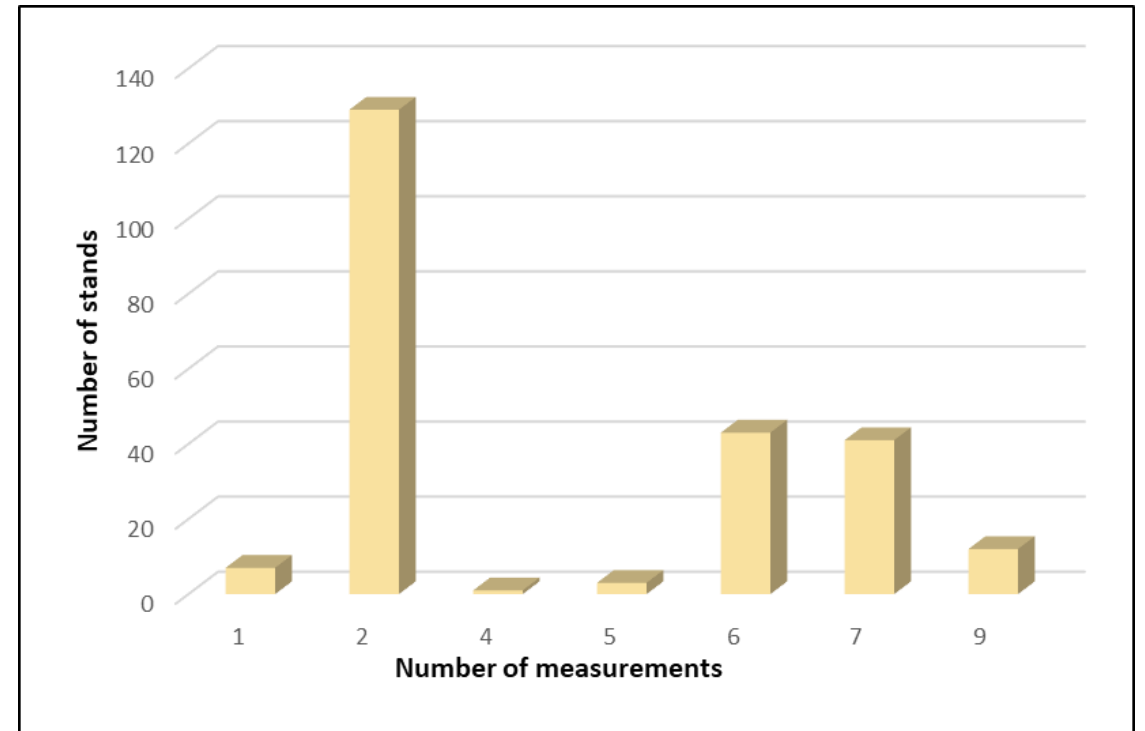
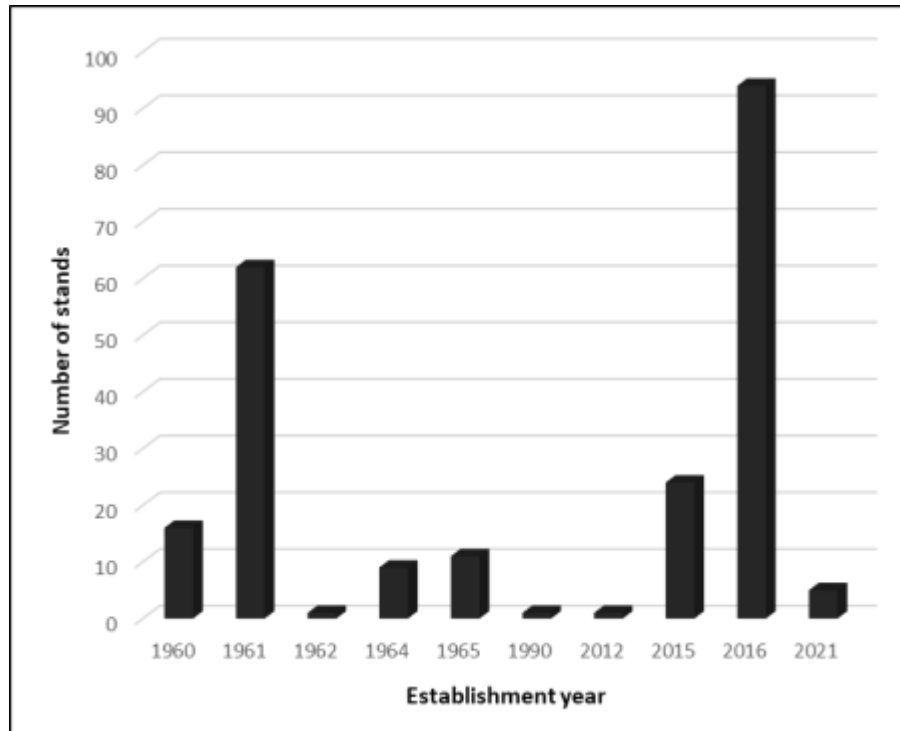


# Location of PSPs in Alberta



# MPB-PSPs- Ground data collection

- PSPs have between 1 and 9 remeasurements, time series from 1960 and 2021



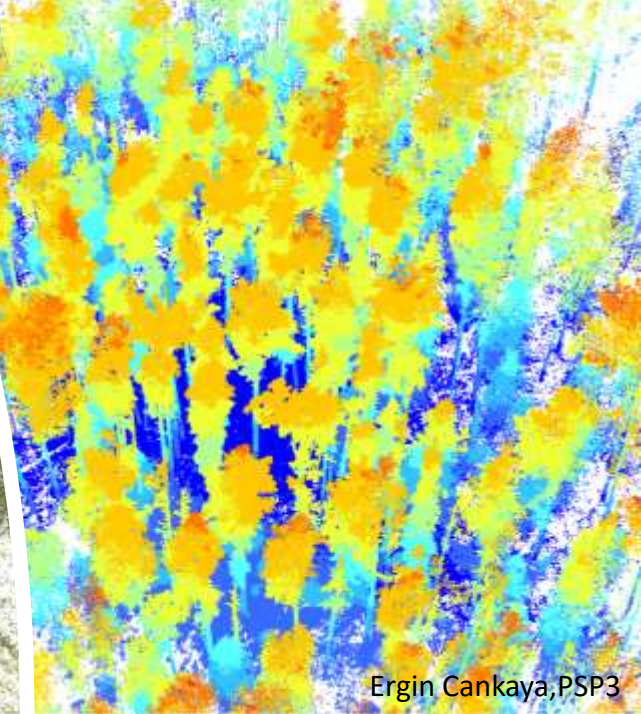


# MPB-PSPs- LiDARdata collection

TLS

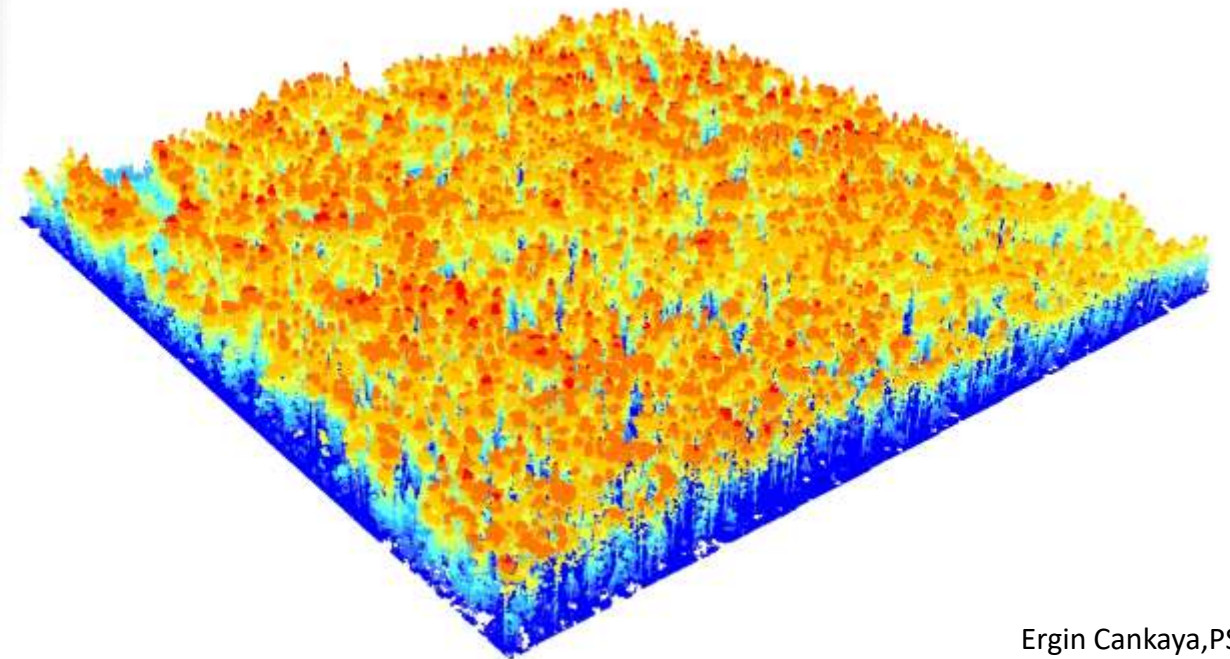


Ergin Cankaya,PSP2



Ergin Cankaya,PSP3

UAV



Ergin Cankaya,PSP9

# Scope and Research Questions

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1

## Using ground-measured data

- Empirical Analysis of Stand development and yield post MPB-attack
- Evaluate Growth Models pre – and post-MPB attack

2

## Pairing ground data with LiDAR data

- Investigate different options for Enhanced Forest Inventory using LiDAR technologies
- Explore Growth Models using LiDAR data







Thank you for  
your Attention

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