



Ministry of Forests



Funded in part by:
Financé en partie par :

Canada 

Low carbon
economy
fund

Stand growth after partial cutting and simulation with SORTIE-ND

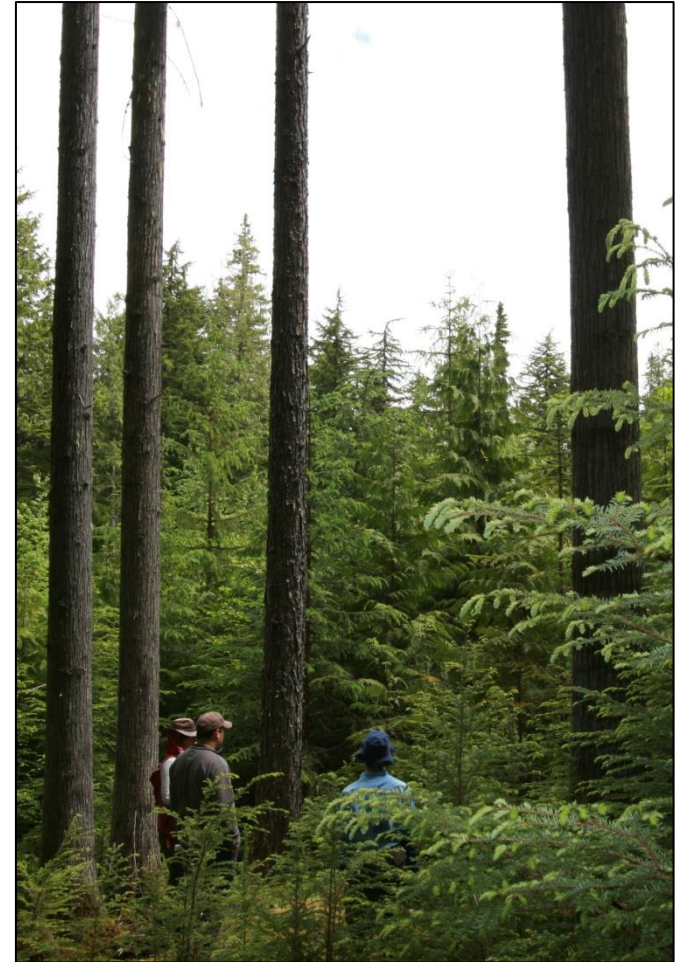
Presented by Erica Lilles

Contributors include: Alana Clason, Leah Walker, Dave Coates,
Caren Dymond, Michelle Venter, and Oscar Venter



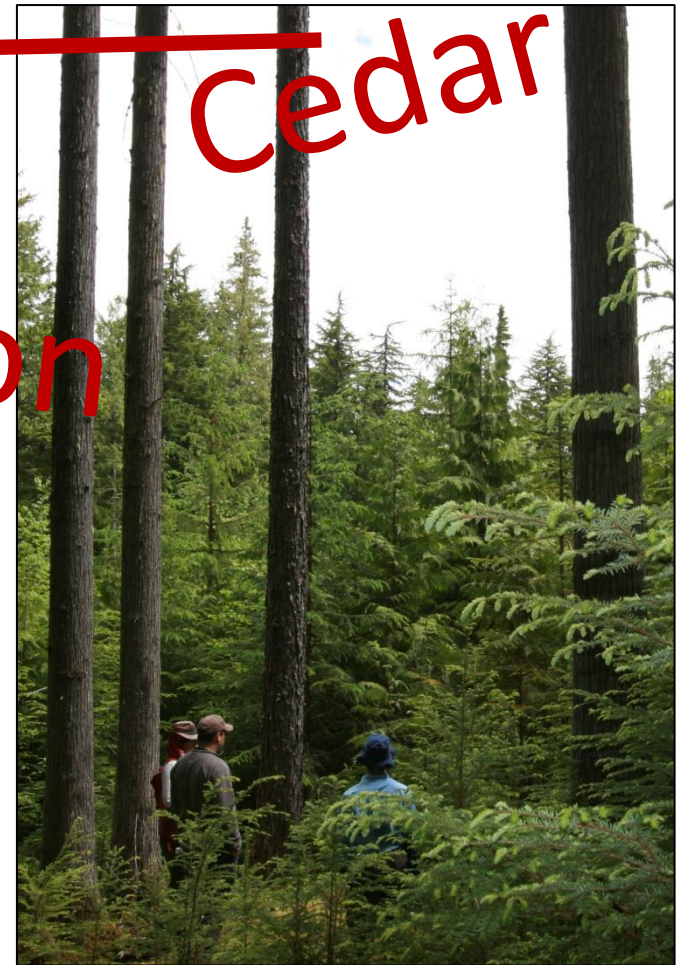
Barriers (Puetzman et al. 2015)

- Lower economic returns
- Higher harvesting costs
- Inexperience and lack of specialized machinery for operators
- Uncertainty about forest responses in comparison with even-aged systems
- Professional and public perceptions, including expectations and desire for simplicity
- Biased policies



Barriers (Puetzman et al. 2015)

- Lower economic returns
- Higher harvesting costs
- Inexperience and lack of specialized machinery for operators
- Uncertainty about forest responses in comparison with even-aged systems
- Professional and public perceptions, including expectations and desire for simplicity
- Biased policies

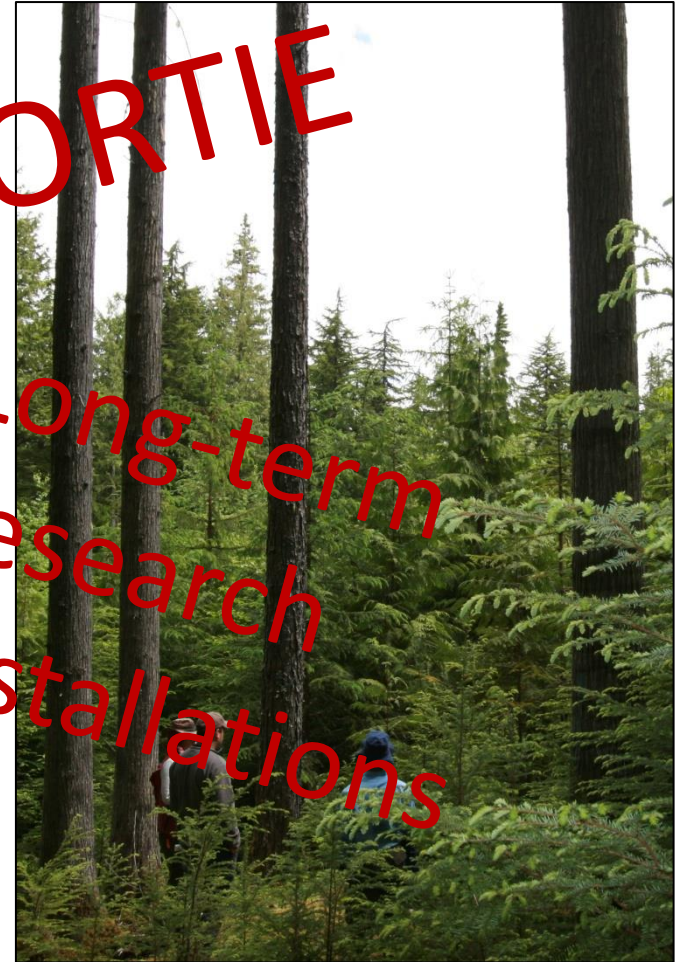


Barriers (Puetzman et al. 2015)

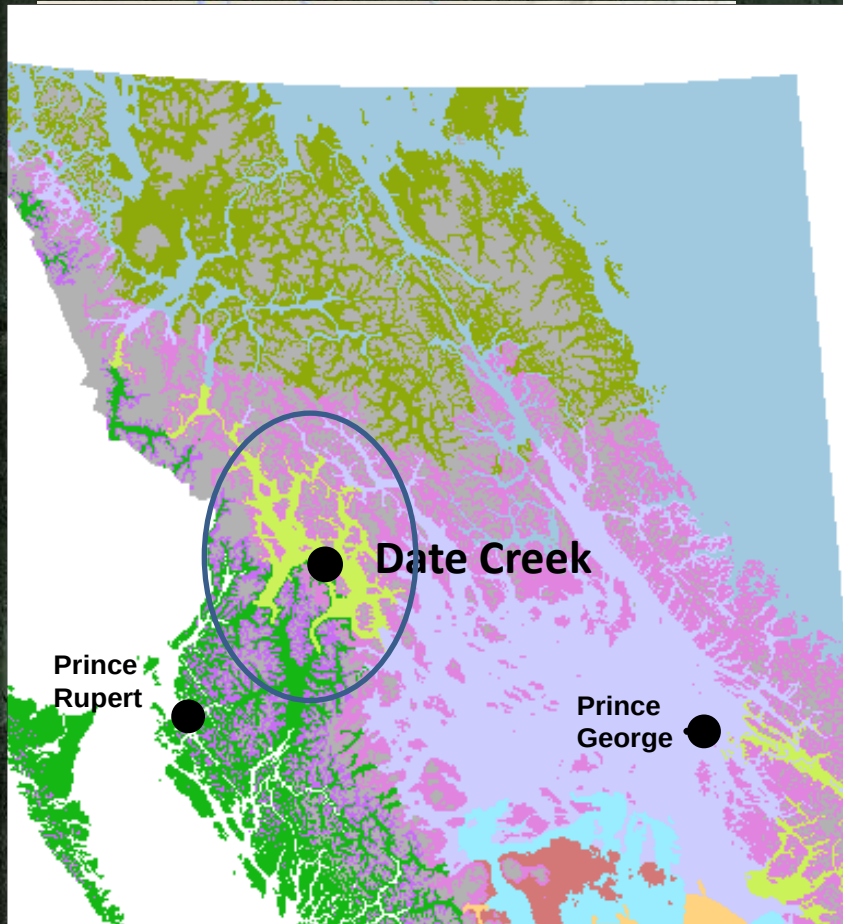
- Lower economic returns
- Higher harvesting costs
- Inexperience and lack of specialized machinery for operators
- Uncertainty about forest responses in comparison with even-aged systems
- Professional and public perceptions, including expectations and desire for simplicity
- Biased policies

SORTIE

**Long-term
research
installations**



EP 1219: Date Creek Research Forest



- Logged 1992
- ICHmc2
- BACI randomized complete block experimental design
- 3 scales
 - stand, gap, neighbourhood
- Blocked by soil moisture and stand age (140 and 350+)

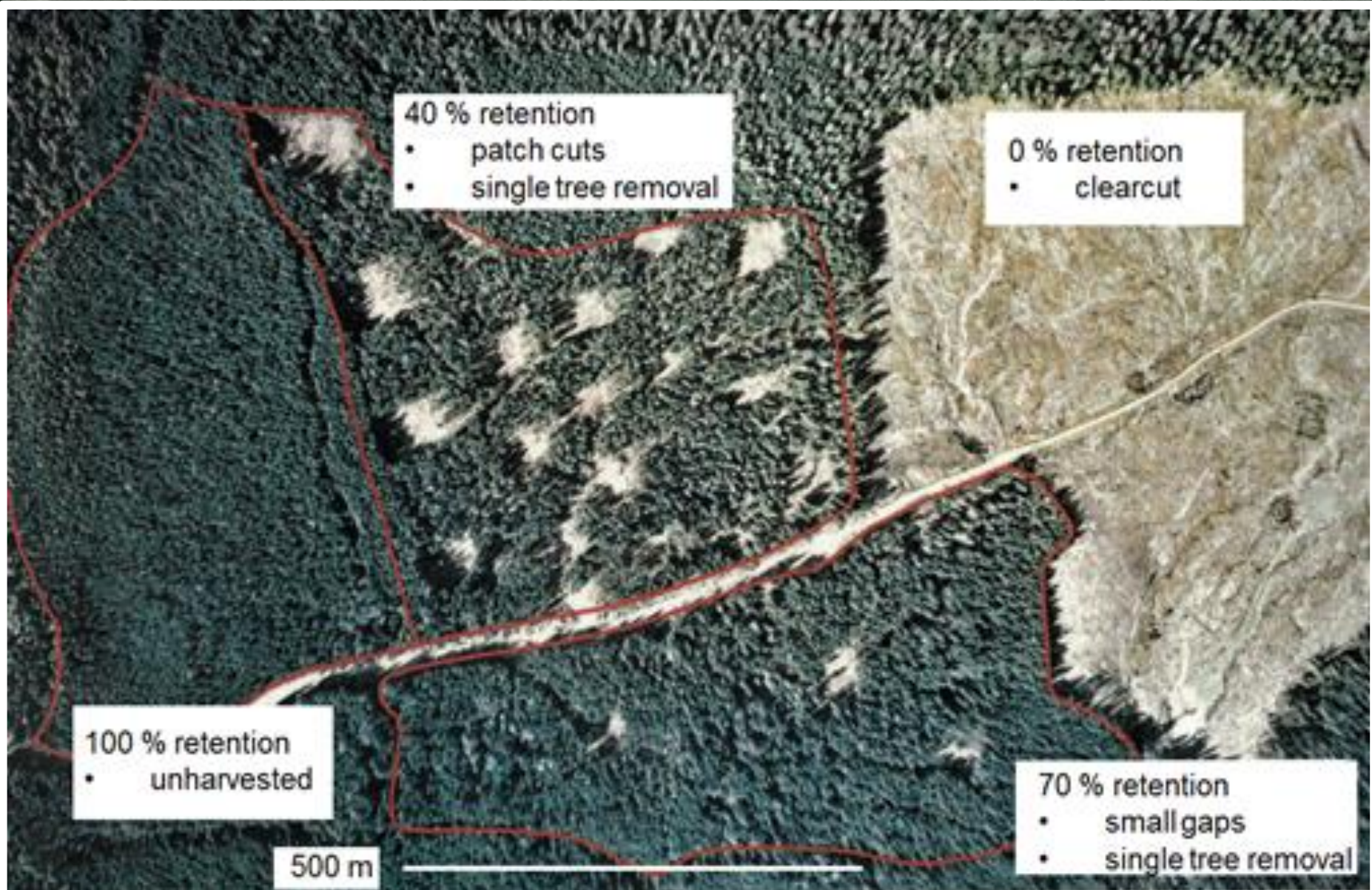
0%

100%

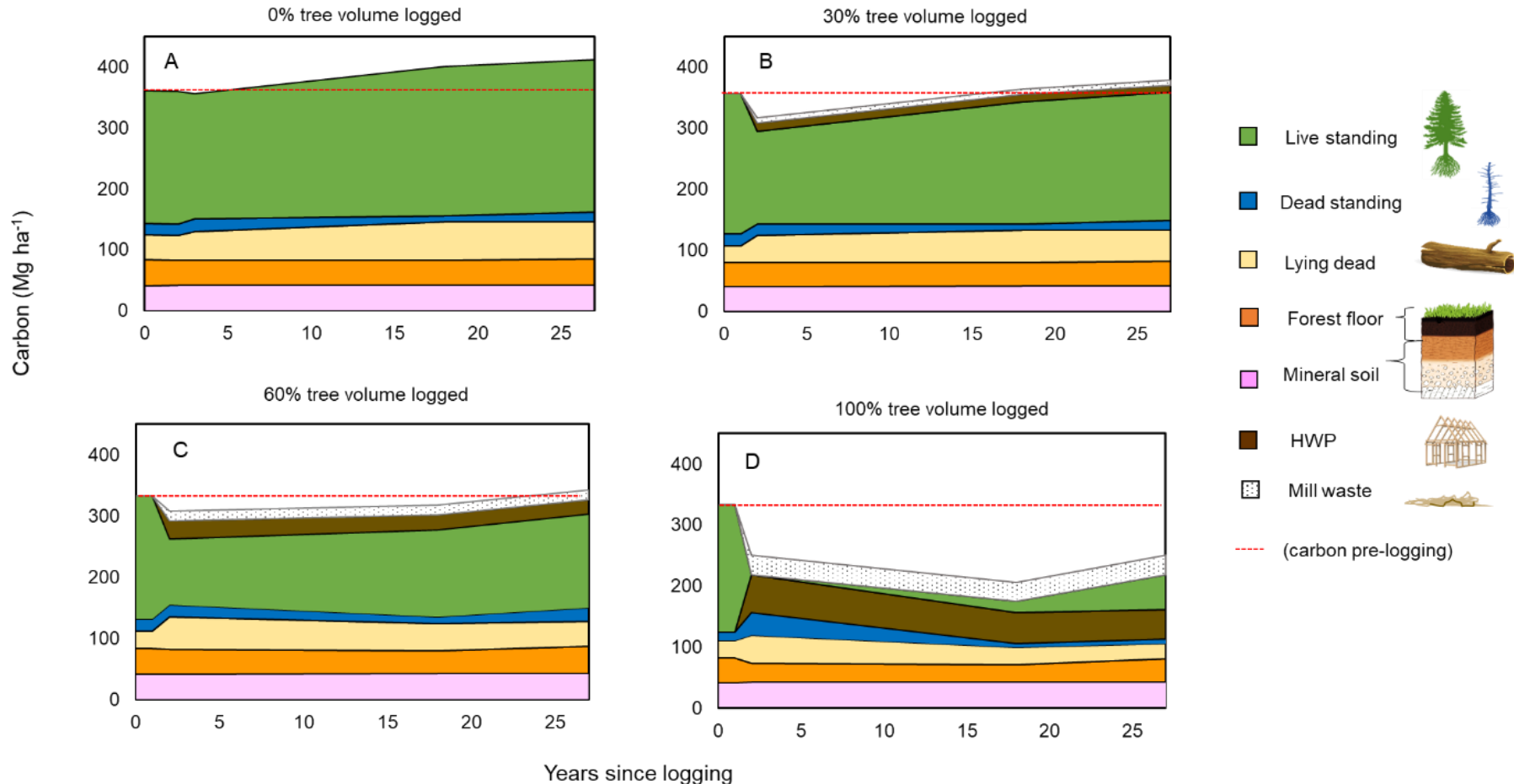
70%

40%

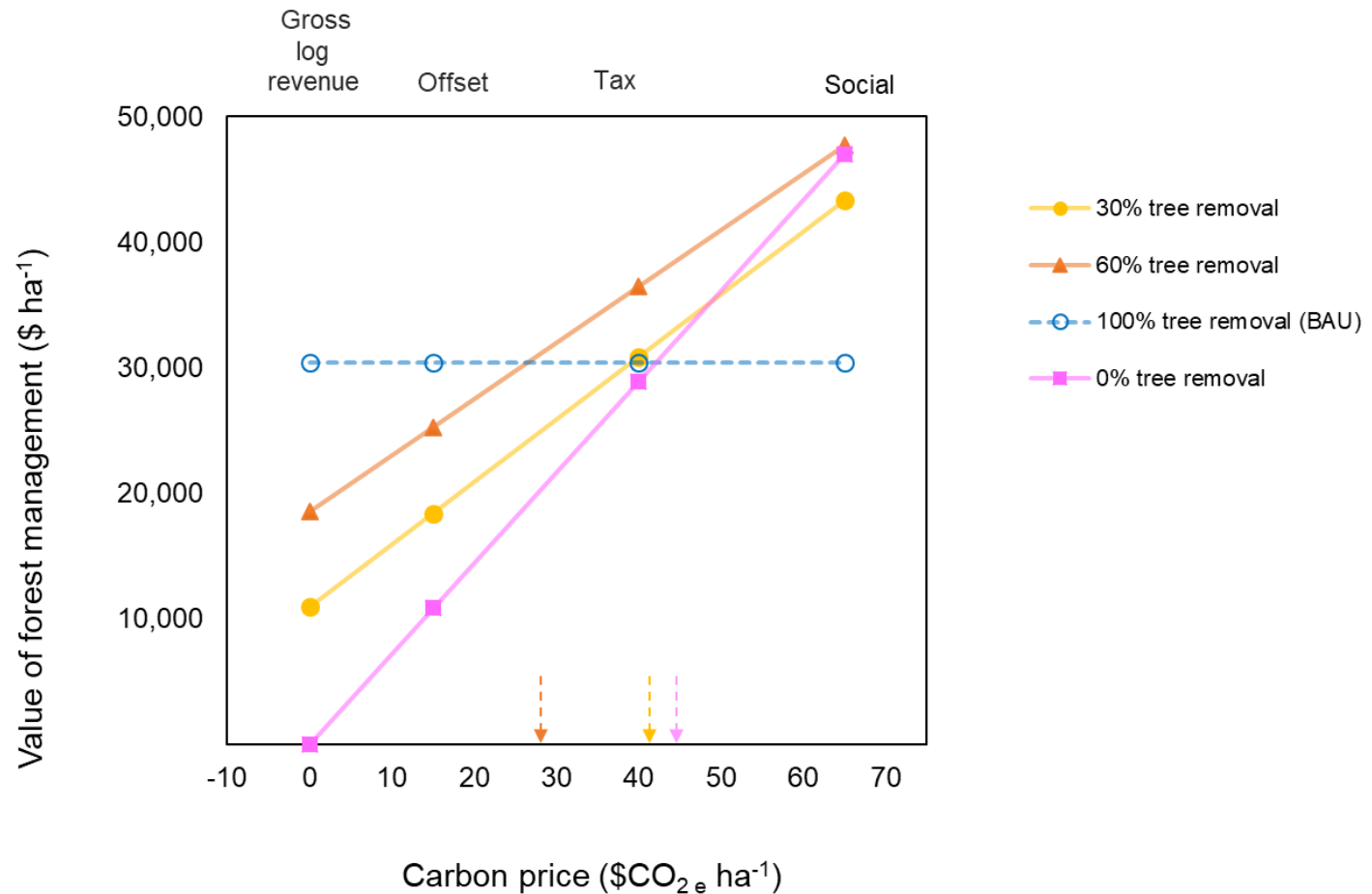
Mimicking small-scale disturbance



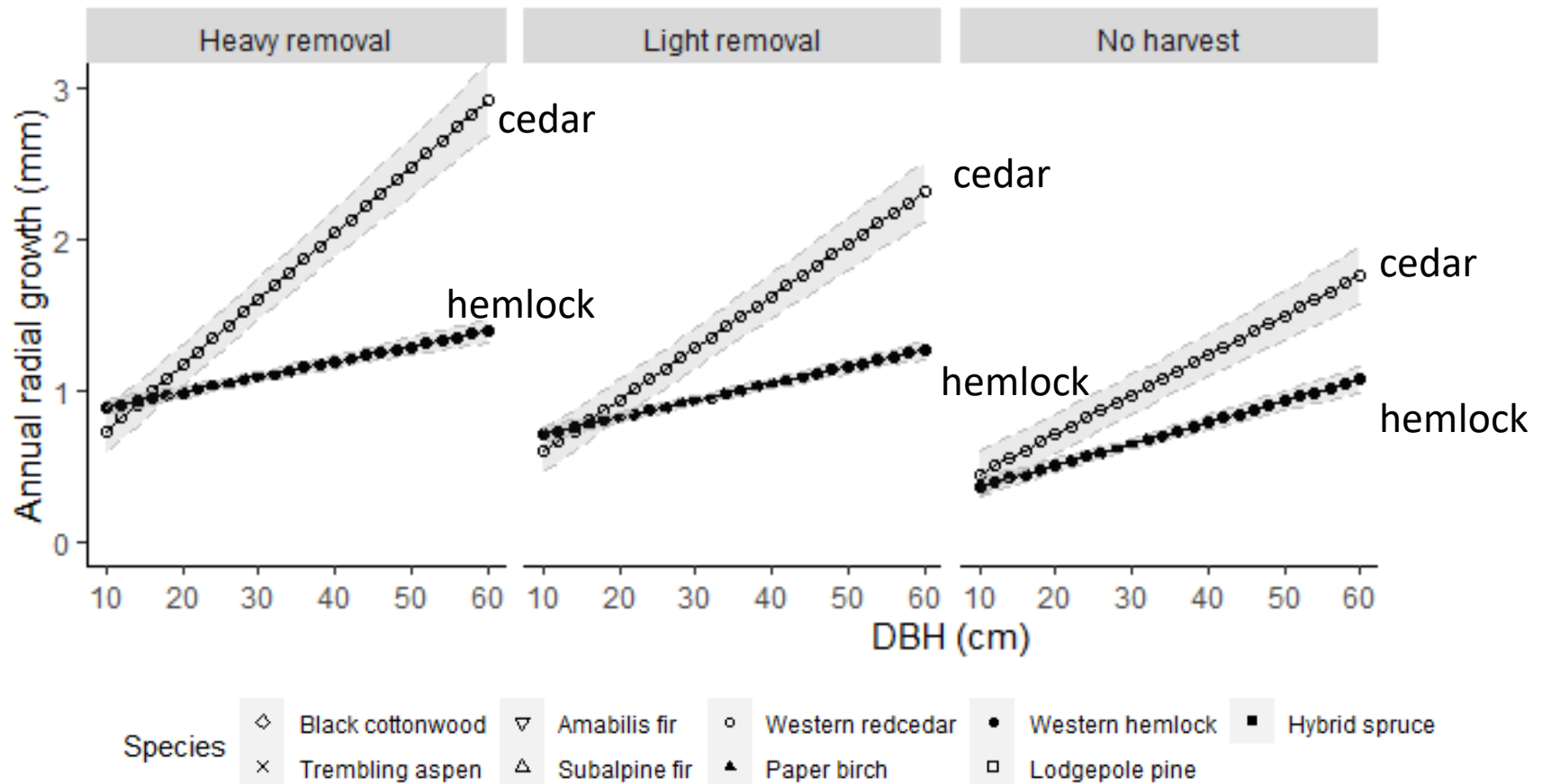
Partial cutting to sequester carbon



Partial cutting to sequester carbon



Partial-cutting to manage cedar



SORTIE-ND Evaluation



Methods

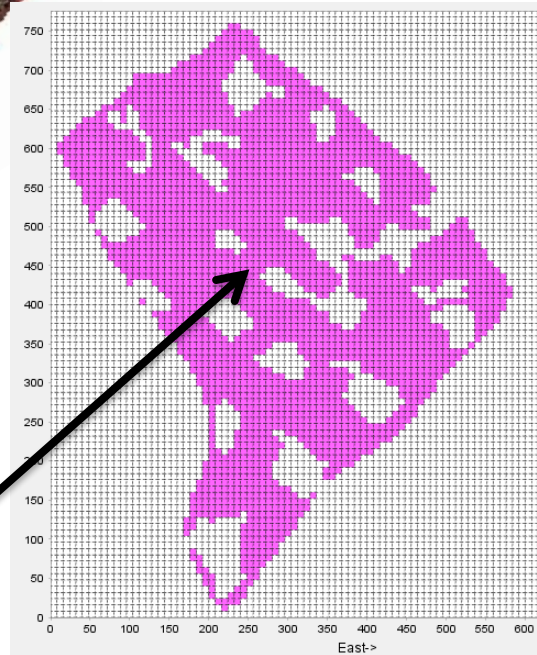
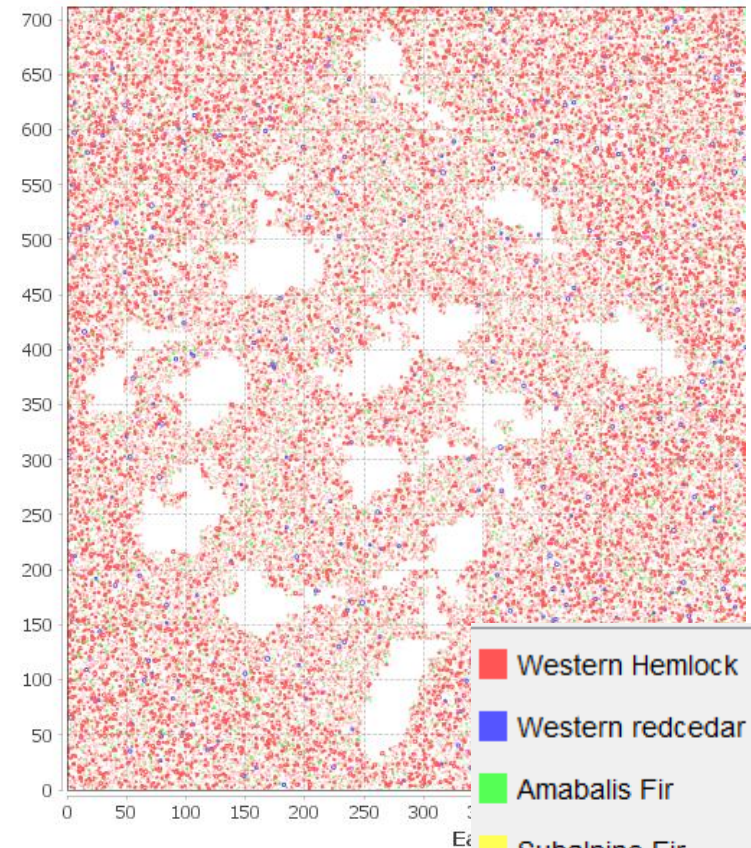
- The 16 Date Creek stands were simulated for 26 years pre- and post-harvest
- SPH by DBH class and species were inputted and SORTIE randomly assigned stem locations
- Modelled outputs were compared with field data



SORTIE-ND Evaluation



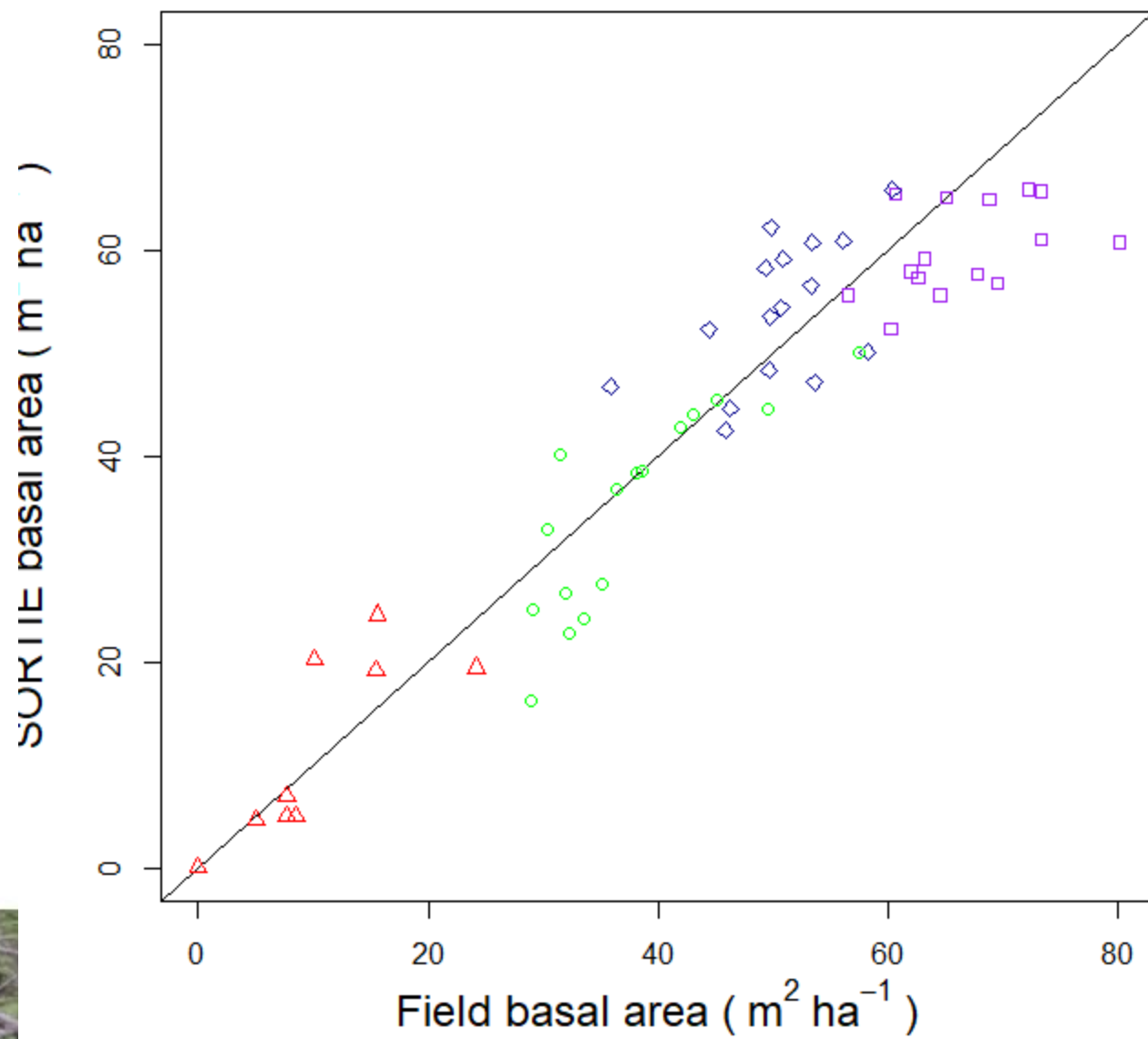
Actual &
simulated
harvests

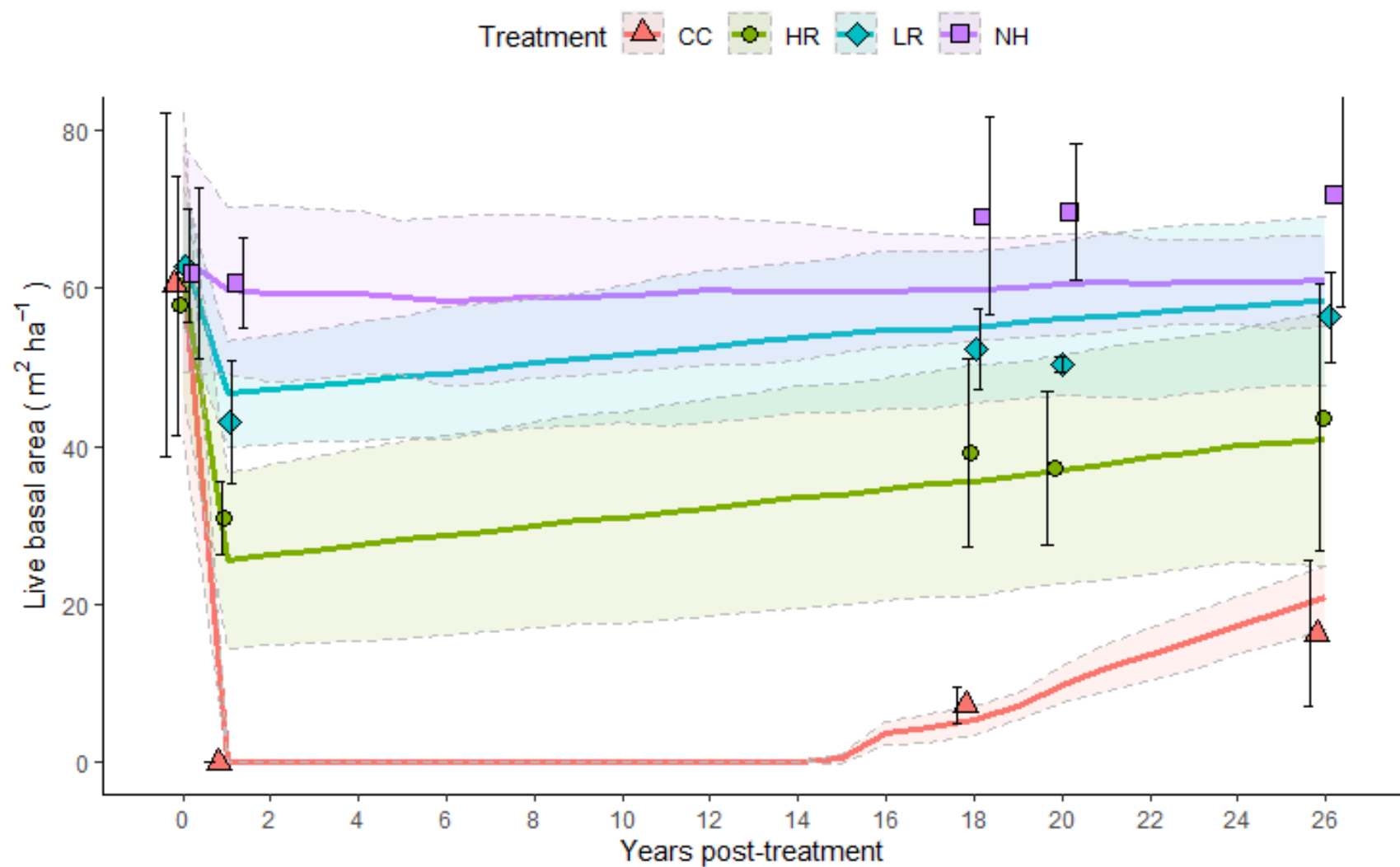


- Western Hemlock
- Western redcedar
- Amabilis Fir
- Subalpine Fir
- Hybrid spruce
- Lodgepole Pine
- Trembling Aspen
- Black Cottonwood
- Paper Birch



Treatment CC HR LR NH





Date Creek Conclusions

- Partial cutting can keep more carbon out of the atmosphere by 2050
- Carbon pricing could help with the economics of partial-cutting
- We know a lot about how stands in the ICH will respond to partial cutting
- Western redcedar can release nicely after partial cutting
- SORTIE is a great tool – Let's use it!

Small gap





Thank you Wilp Ma uus for hosting the research forest on their Laxyip