

Fire severity and carbon combustion from tussock tundra fires in Southwest Alaska

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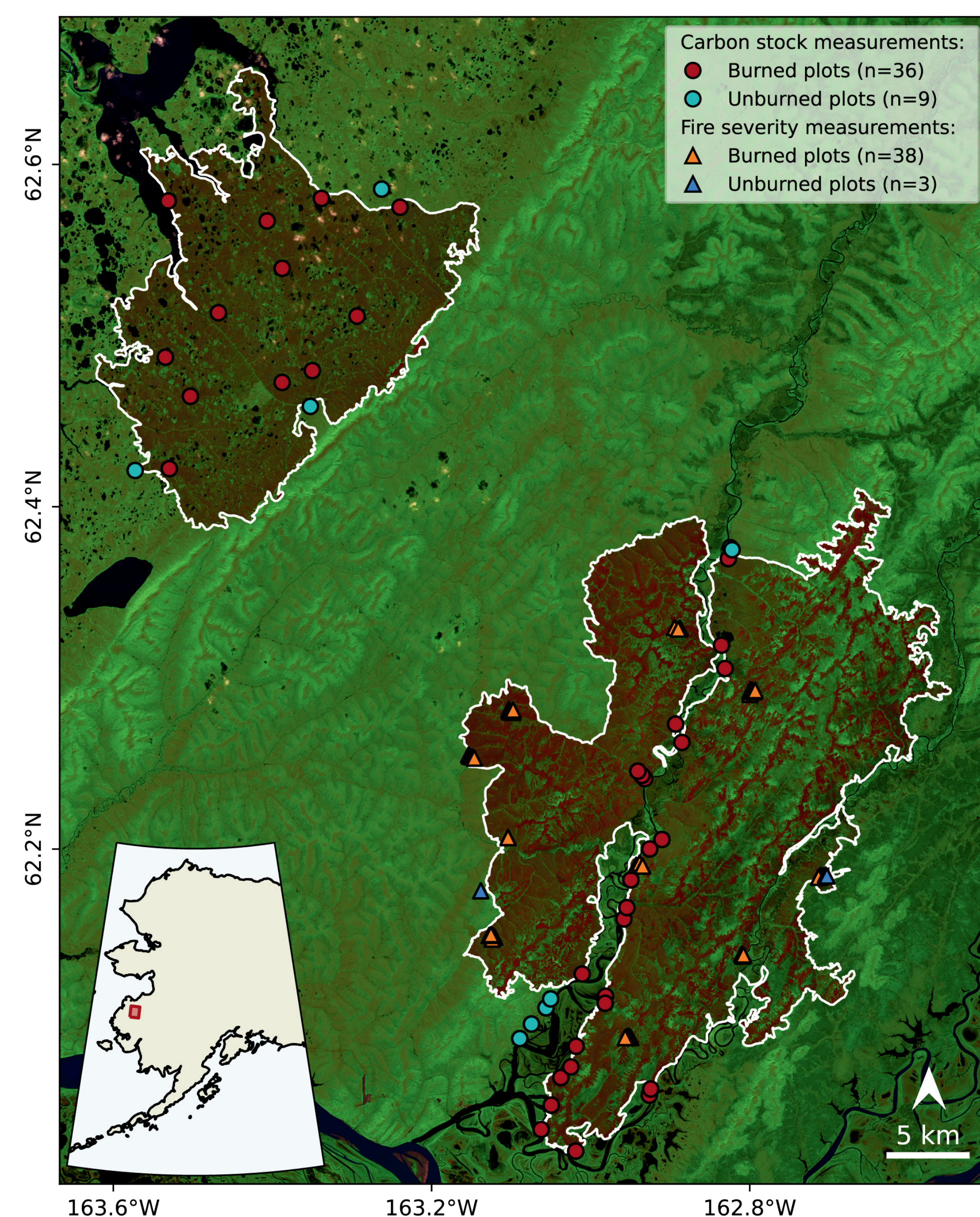
Background

Knowledge gaps for tundra fires:

- Carbon emissions
- Relationship with remotely sensed fire severity indices

Approach

- Field-based carbon combustion and fire severity measurements
- Linking with Sentinel-2 imagery

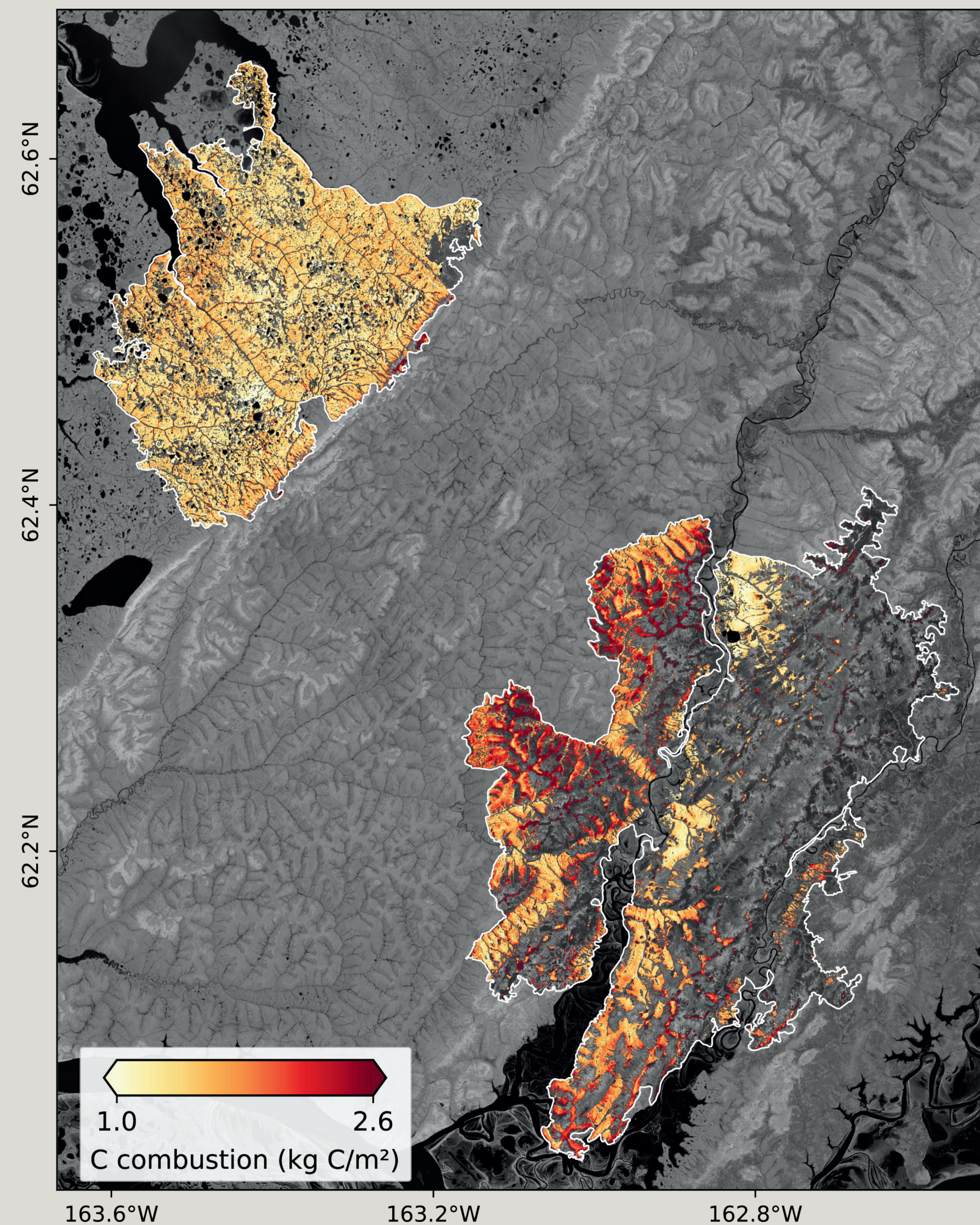


Tussock tundra carbon combustion

Burn depth: 6.9 ± 2.1 cm

C combustion rate: 1.6 ± 0.6 kg C/m²

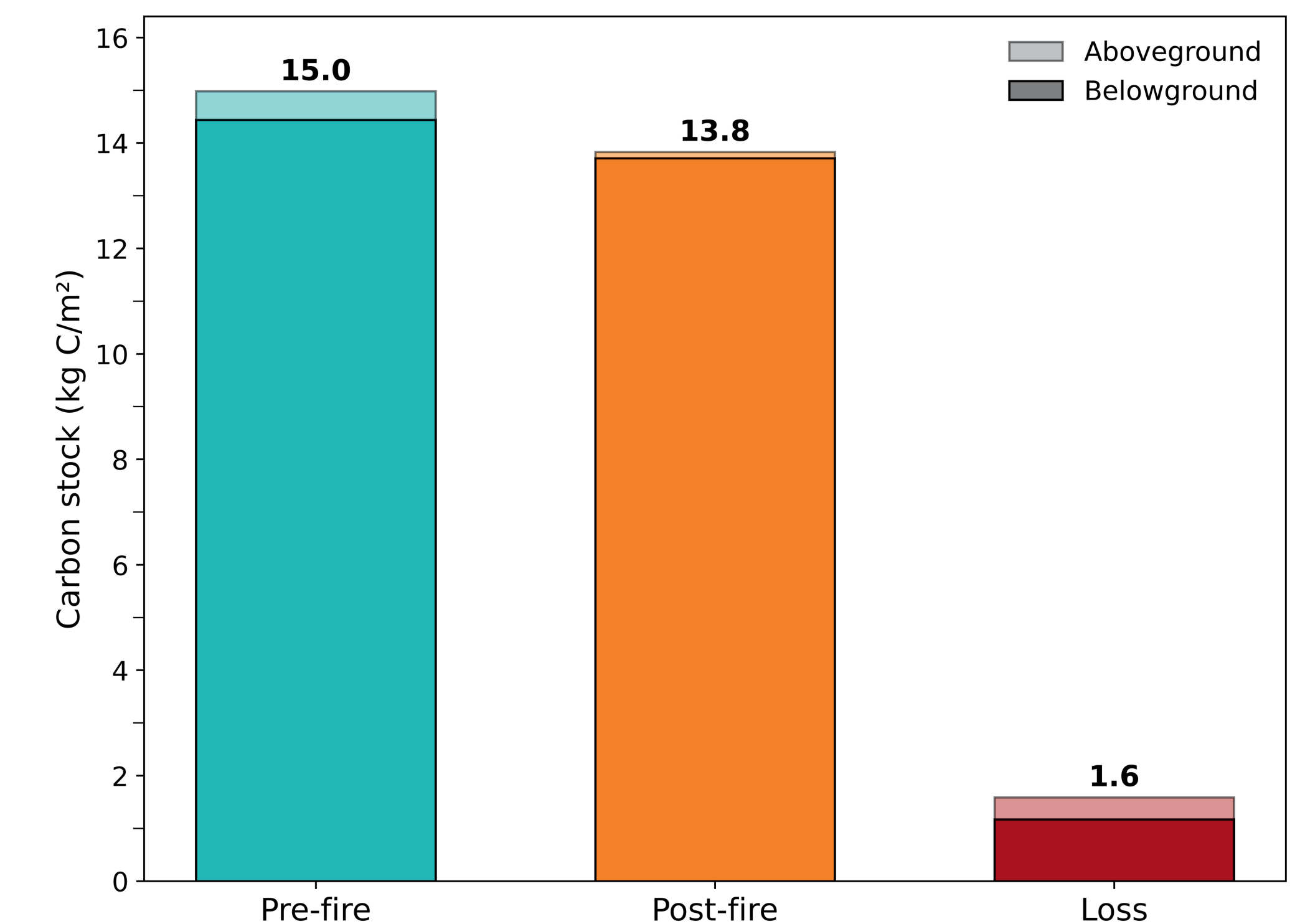
Total C loss: 0.7 Tg



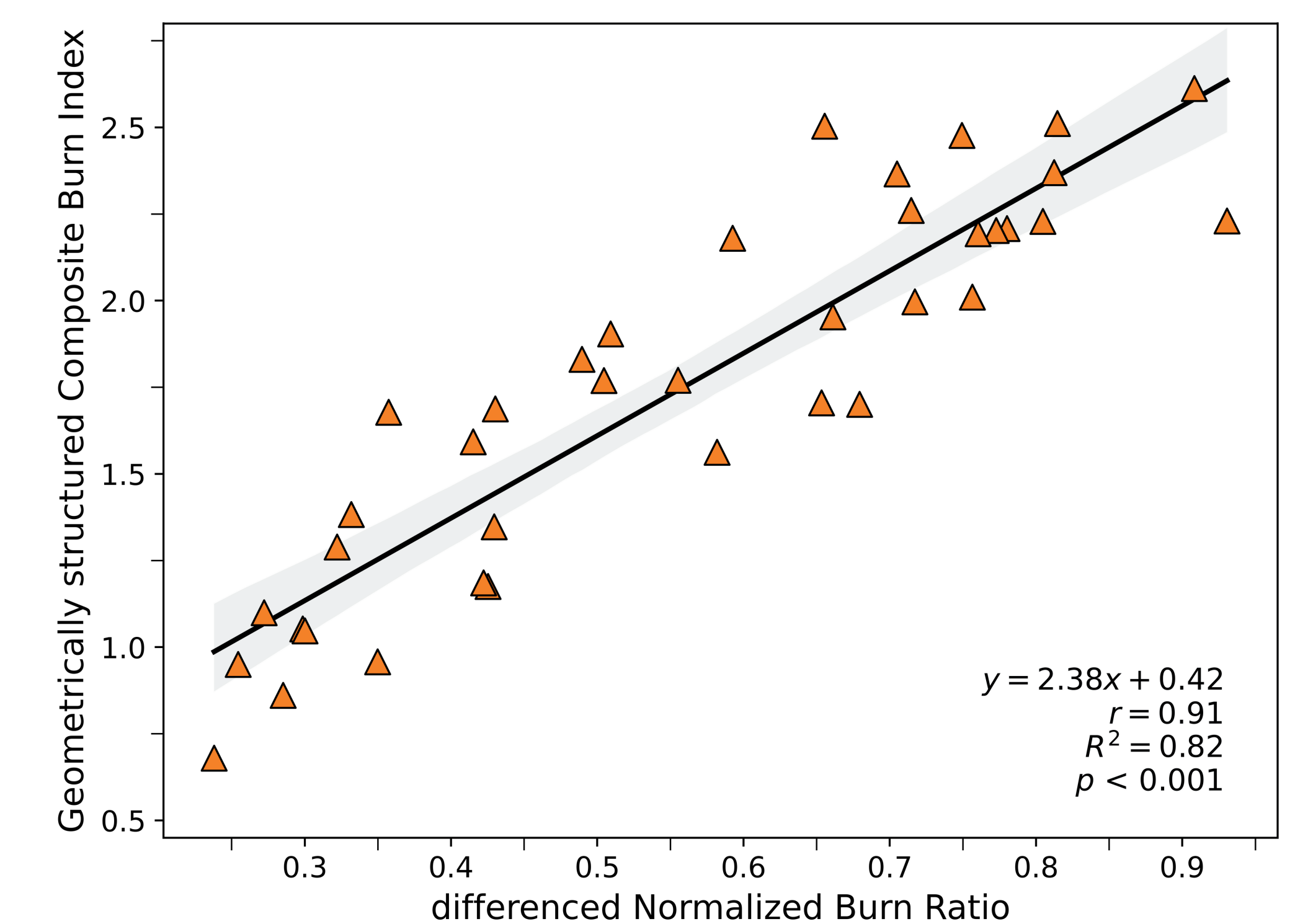
Upscaled using dNBR ($R^2 = 0.42$, $p < 0.001$)

Other findings

Carbon stocks and losses:



Fire severity:



Acknowledgments



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