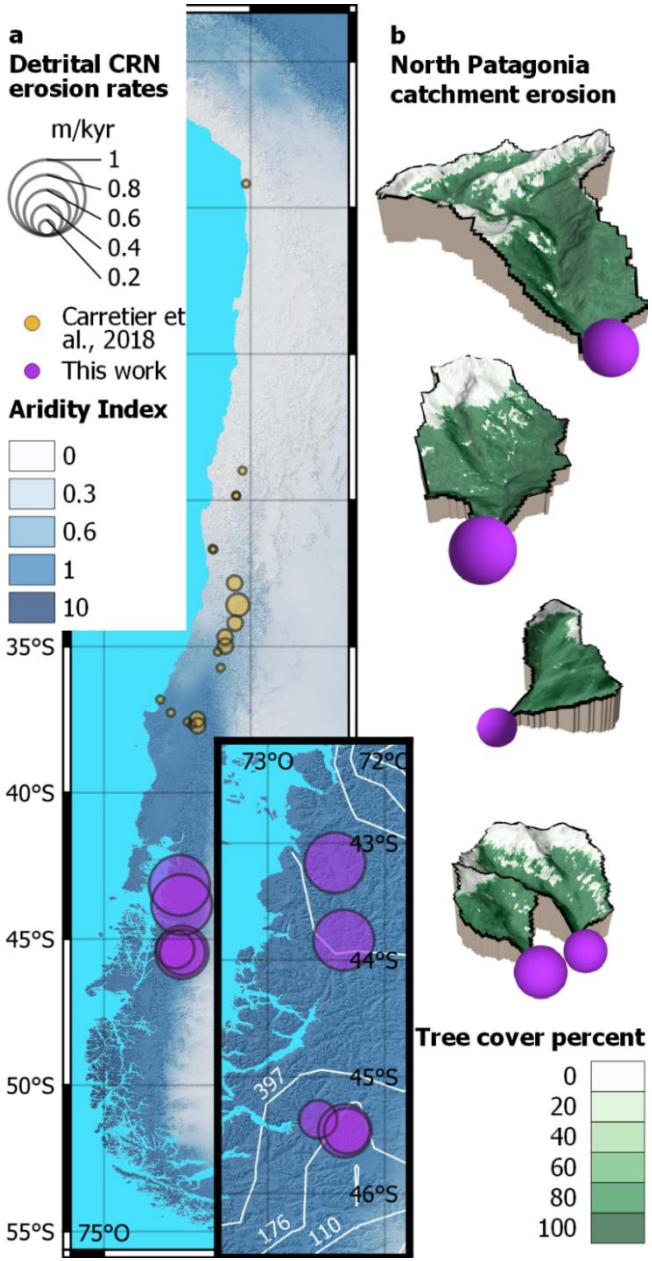
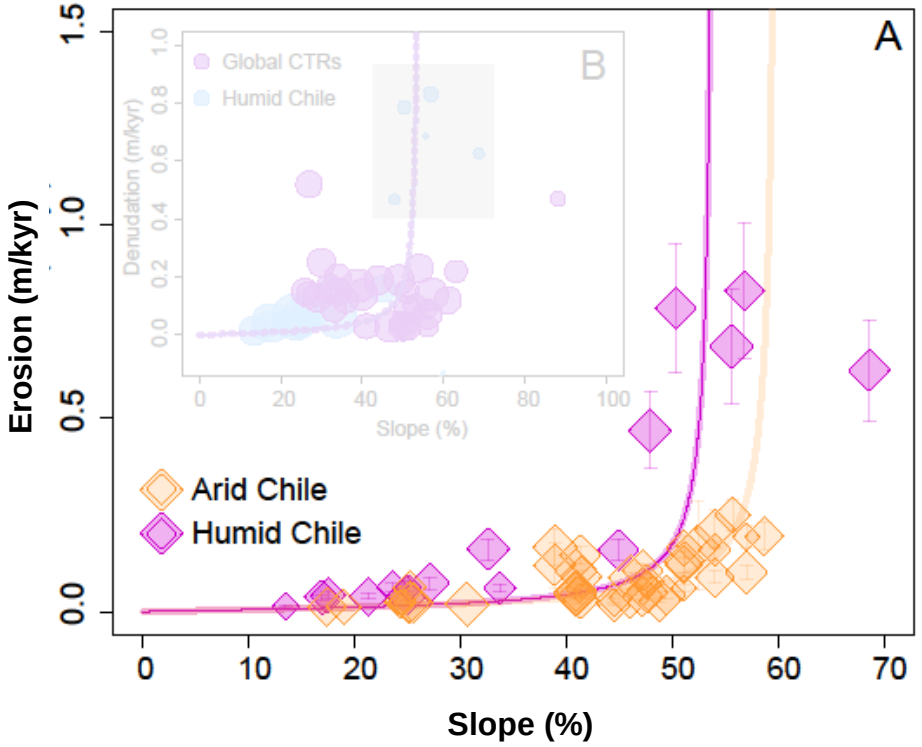
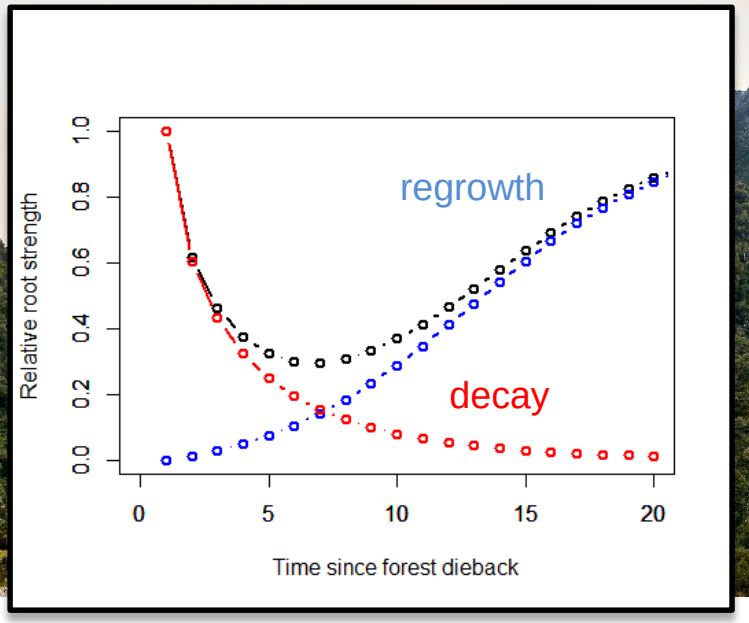
Suicidal forests? – Modelling biomass surcharge as a potential landslide driver in temperate rainforests of Chilean Patagonia

Sina Spors, Erkan Istanbullouglu, Violeta Tolorza, Christian H. Mohr





Mohr et al. (submitted)



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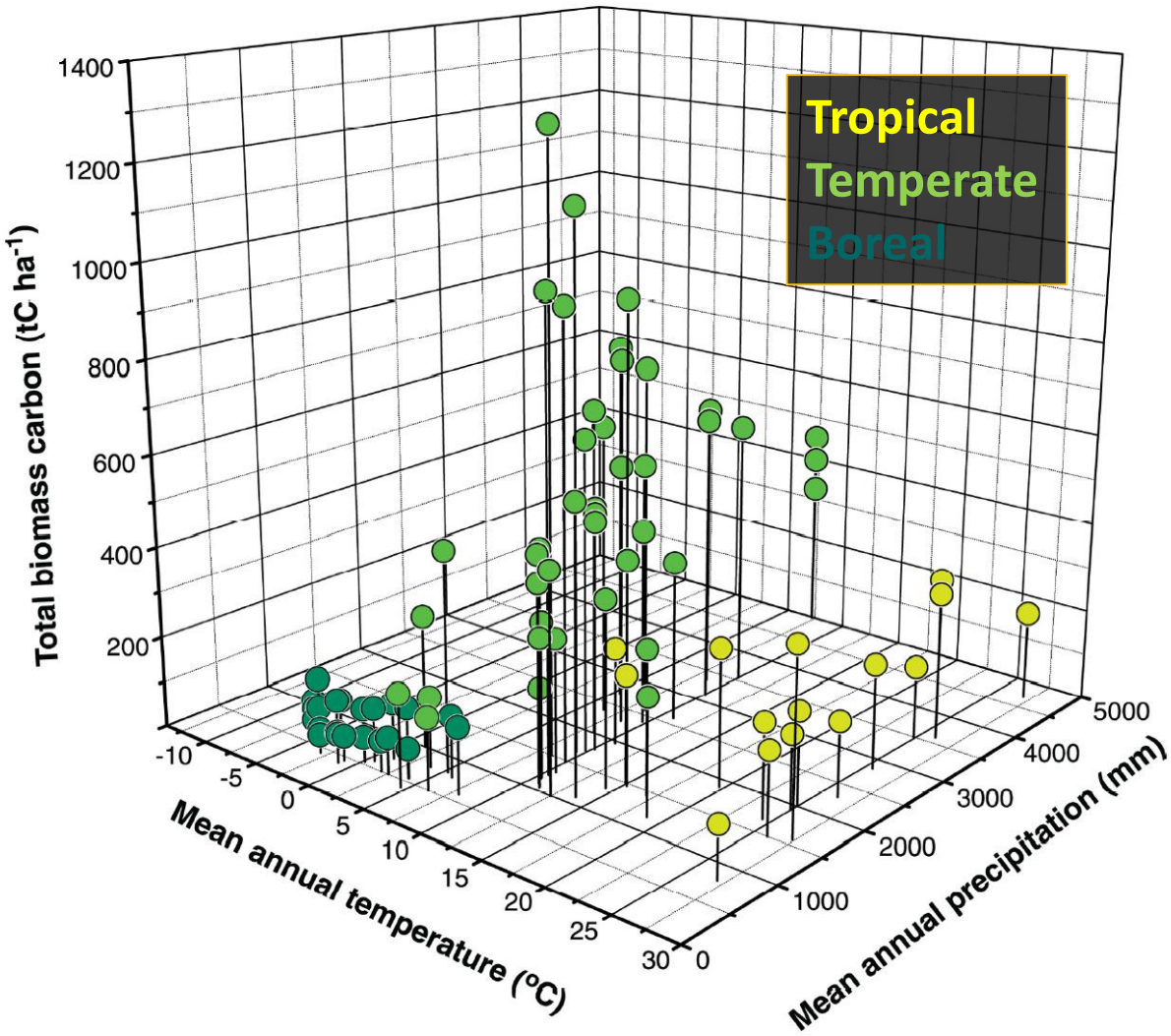
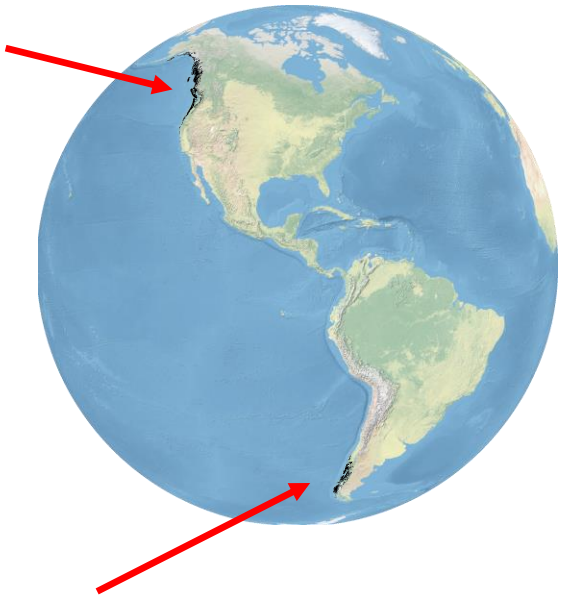
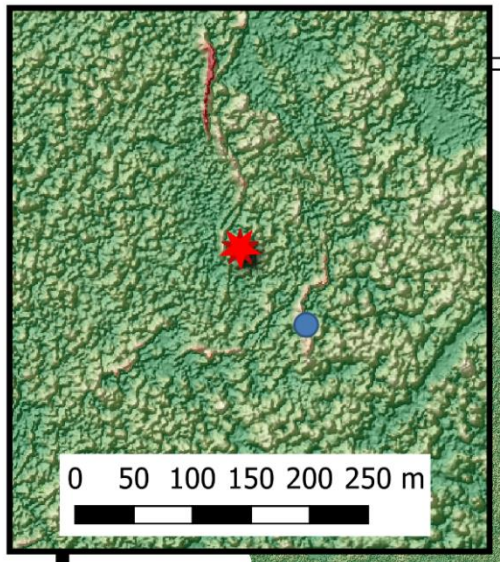
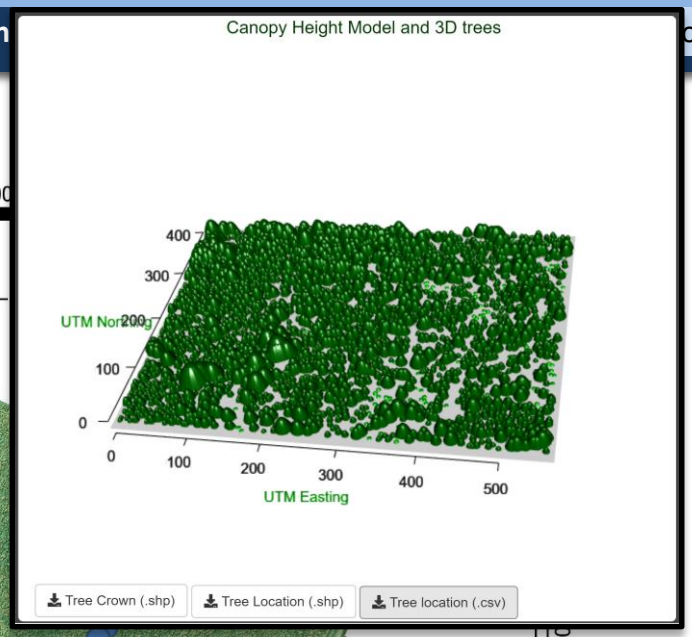
Mohr et al. (in prep.)

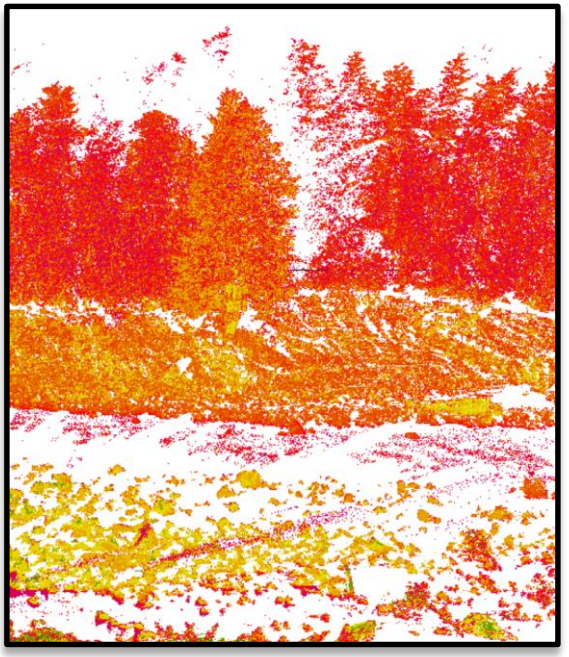


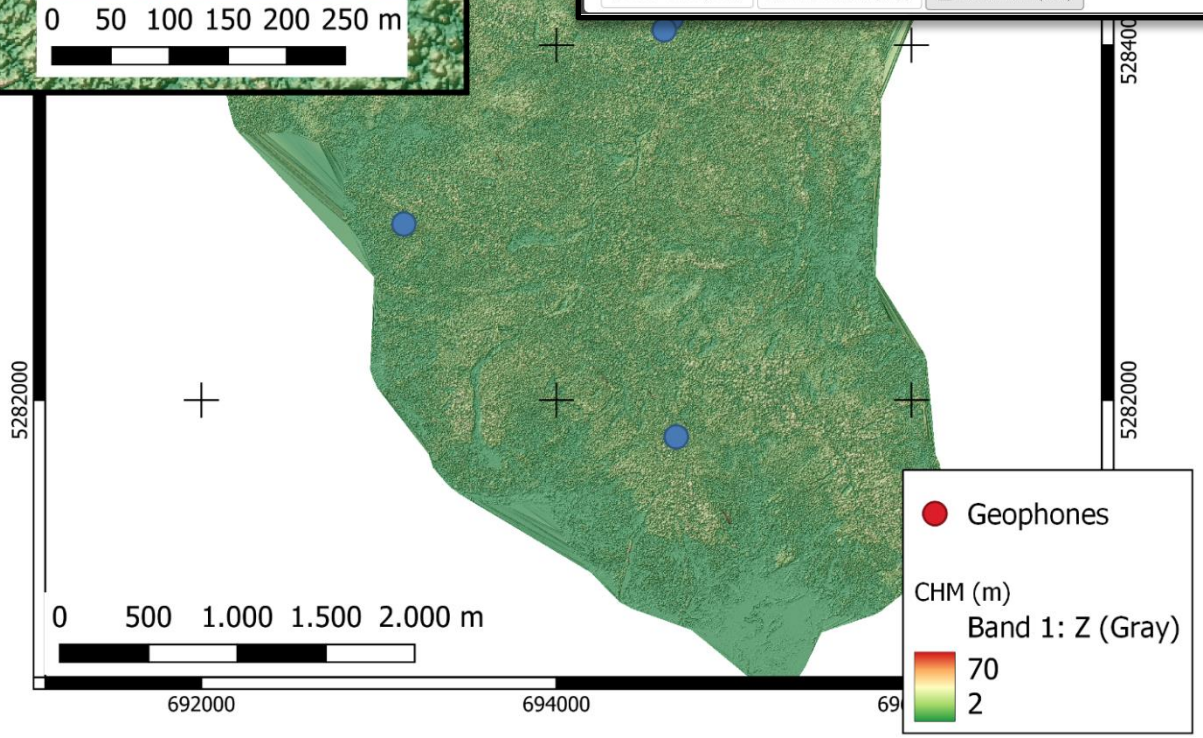


Own data & Keith et al. (2009, PNAS)

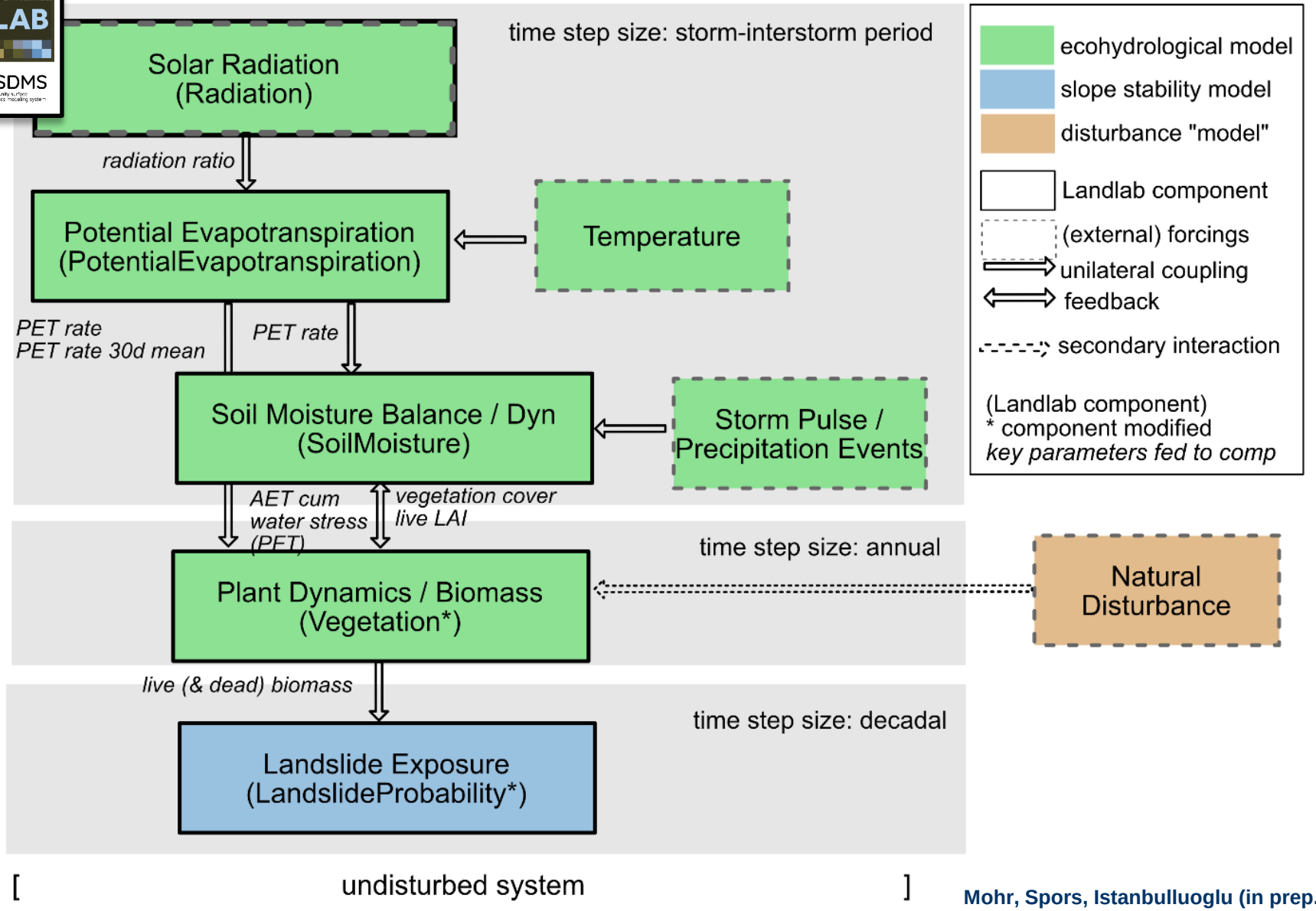








Hypothesis: Biomass surcharge promotes landsliding (‘suicidal forests’).



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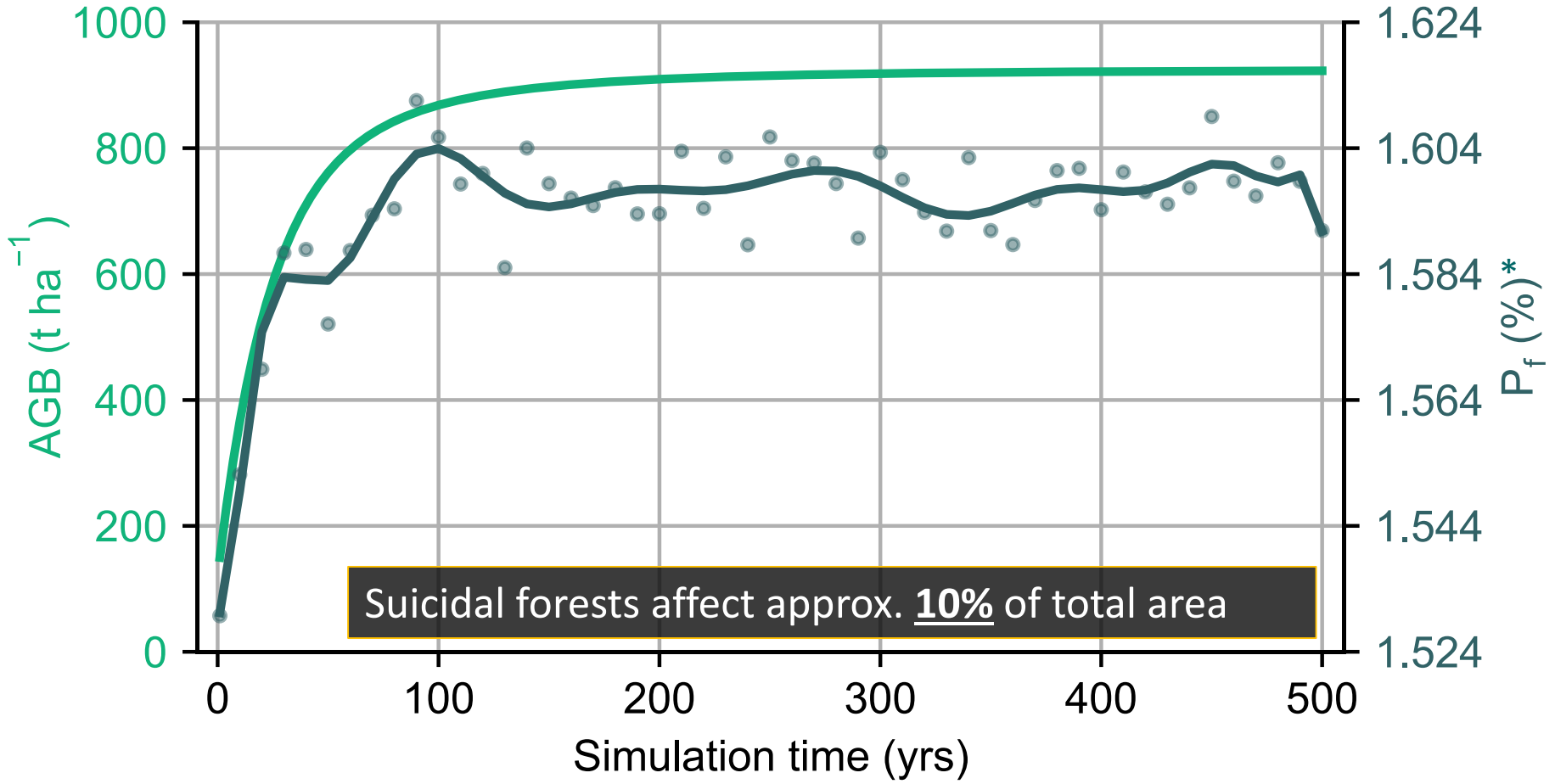
Undisturbed forest scenario



* refers to **annual** probability of failure

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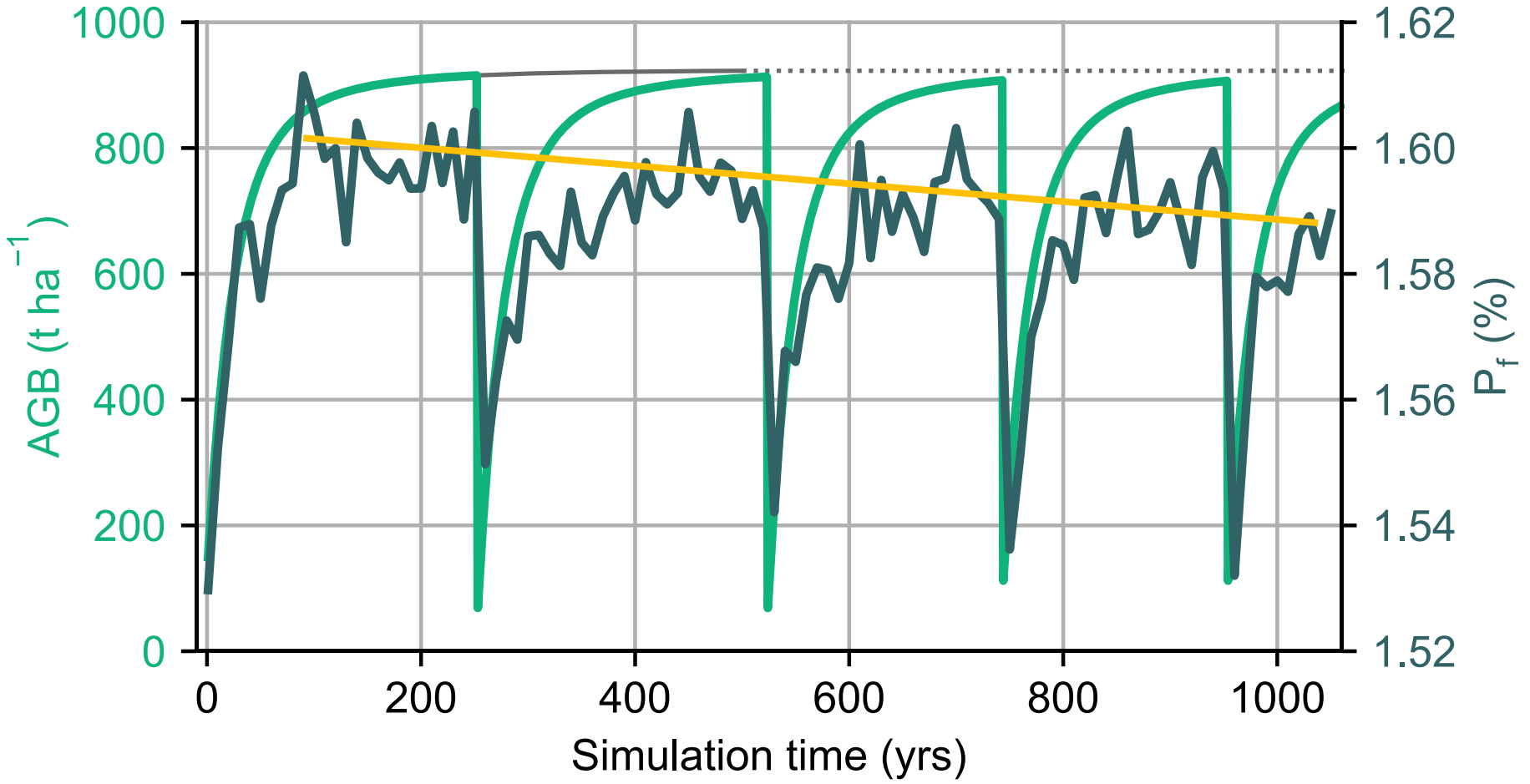
Disturbed forest scenario



Landscape stability enhanced by disturbances?

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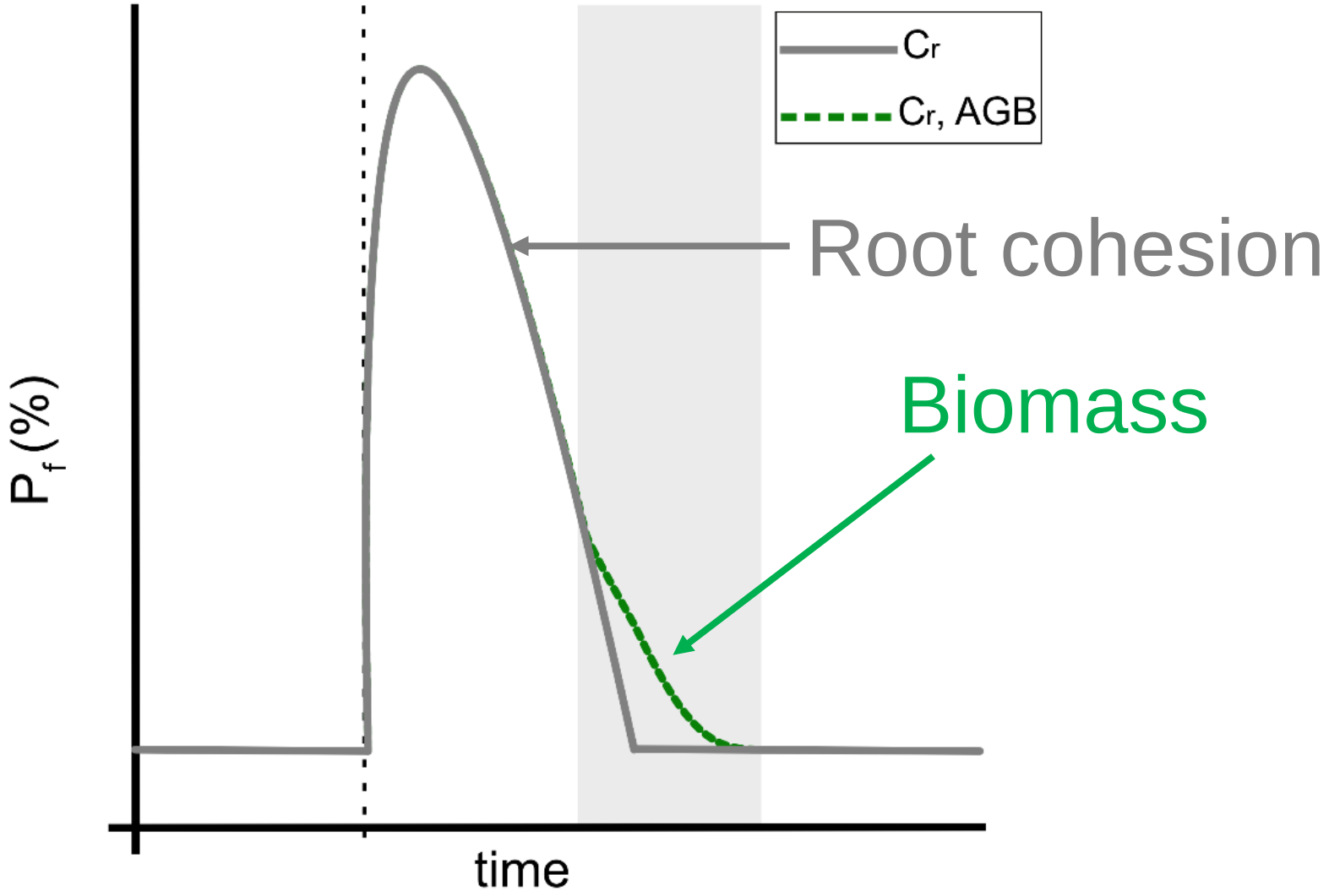

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- **Biomass surcharge plays an important, yet previously underappreciated role in hillslope stability of biomass-rich, forested landscapes**
- **Landscape disturbances may increase landscape stability**
- **Frequent landsliding in Patagonian rainforests controls ecosystems' rejuvenation and affects the regional carbon cycle**
- **Landlab is a great tool to explore cause-and-effect cycles/cascades in ecogeomorphology**

Thank you!

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SCAN ME

Check out:
Pumalin NP Critical Zone Observatory launched!

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