POST-FIRE REGENERATION PATTERNS IN THE ALPS

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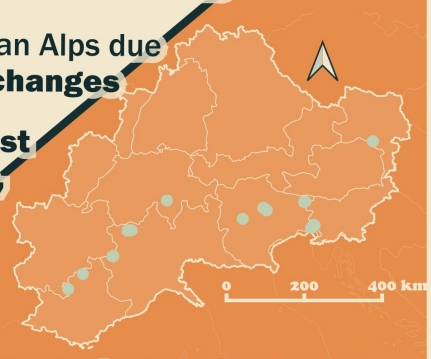
Background

Mountain forests provide an important **protective function** against **gravitational hazards**

Wildfires are increasing in the European Alps due to **climate** and **land-use changes**

Post-fire regeneration is key to **forest recovery** and **protective forests**, but **patterns** remain poorly **understood**



Data & Methods

13 sites across 5 countries (IT, FR, CH, AT, SI) with different fire characteristics and time since fire

Regeneration and post-fire environmental characteristic survey

Harmonization of existent datasets and dedicated surveys

Variables

Post-fire regeneration & environmental conditions

Fire characteristics (severity, time since fire)

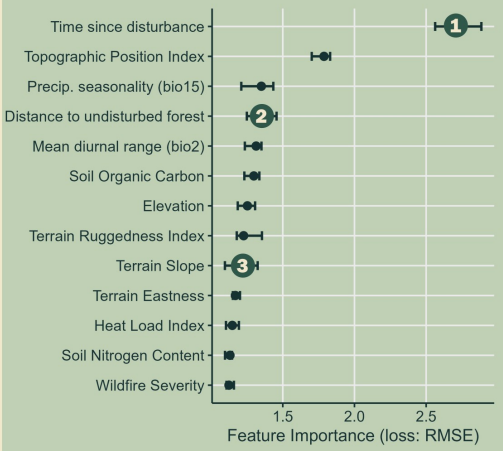
Topographic features (elevation, slope, aspect)

Climatic conditions (temperatures, precipitation, GDDs)

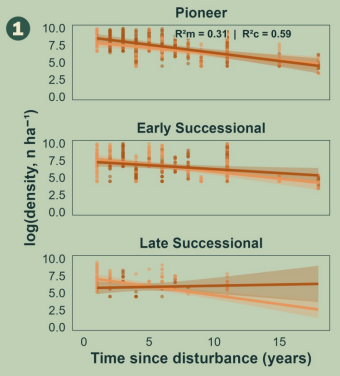
Objectives & RQs

Dynamics | How do mountain forests regenerate after fire?
Drivers | Which environmental and disturbance factors explain regeneration?
Functions | What are the implications for protection against natural hazards? (**TBD!**)

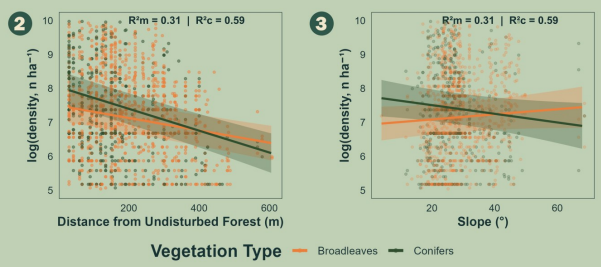
Results & Implications



Climate, topography, and wildfire characteristics drive post-fire regeneration
[Results of a BRT regressive model on the total regeneration density]



Over 15 years, pioneer and early successional species regeneration decreases in post-fire environments, while late species start to establish
[Results of a linear mixed effect model on the regeneration density]



Contrasting effects of distance from forest edges and slope on the log-transformed regeneration density of broadleaves vs conifers
[Results of a linear mixed effect model on the regeneration density]

What are the implications for protective forests?

Follow the MOSAIC Interreg AS Project for updates by scanning the QR!

SCAN ME

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