6th Forest Innovation Workshop

Application of SlideforMap for the hydrological risk assessment in sustainable managed forests

Ilenia Murgia, Carlo Urbinati, and Alessandro Vitali

ilenia.murgia@unifi.it

Dates: 11-12 February 2025 | Location: Representation of the Free State of Bavaria to the European Union, Rue Wiertz 77, 1000 Brussels

http://www.forestinnovation.eu/

#forestinnovation2025

BIOSEIFORTE

Biodiversity and Ecosystem Services In Forest and Territory

Main project activities

- the analysis of land use changes over the years;
- the assessment of biodiversity and productivity of the forest;
- the analysis of slope stability and quantification of forest mitigation effects.

Main project activities

- the analysis of land use changes over the years;
- the assessment of biodiversity and productivity of the forest;
- the analysis of slope stability and quantification of forest mitigation effects.

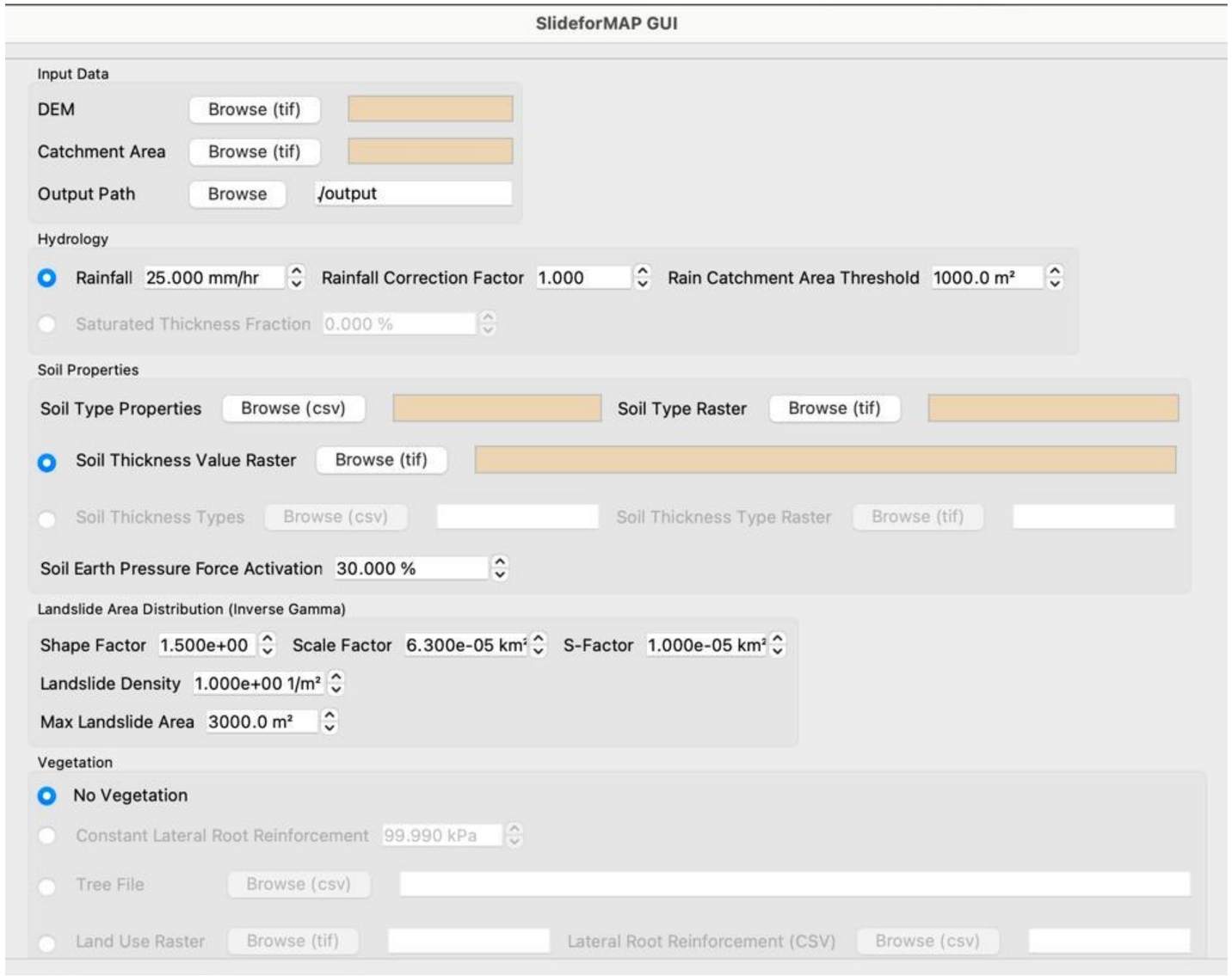
SlideforMAP *(ecorisq.org)*

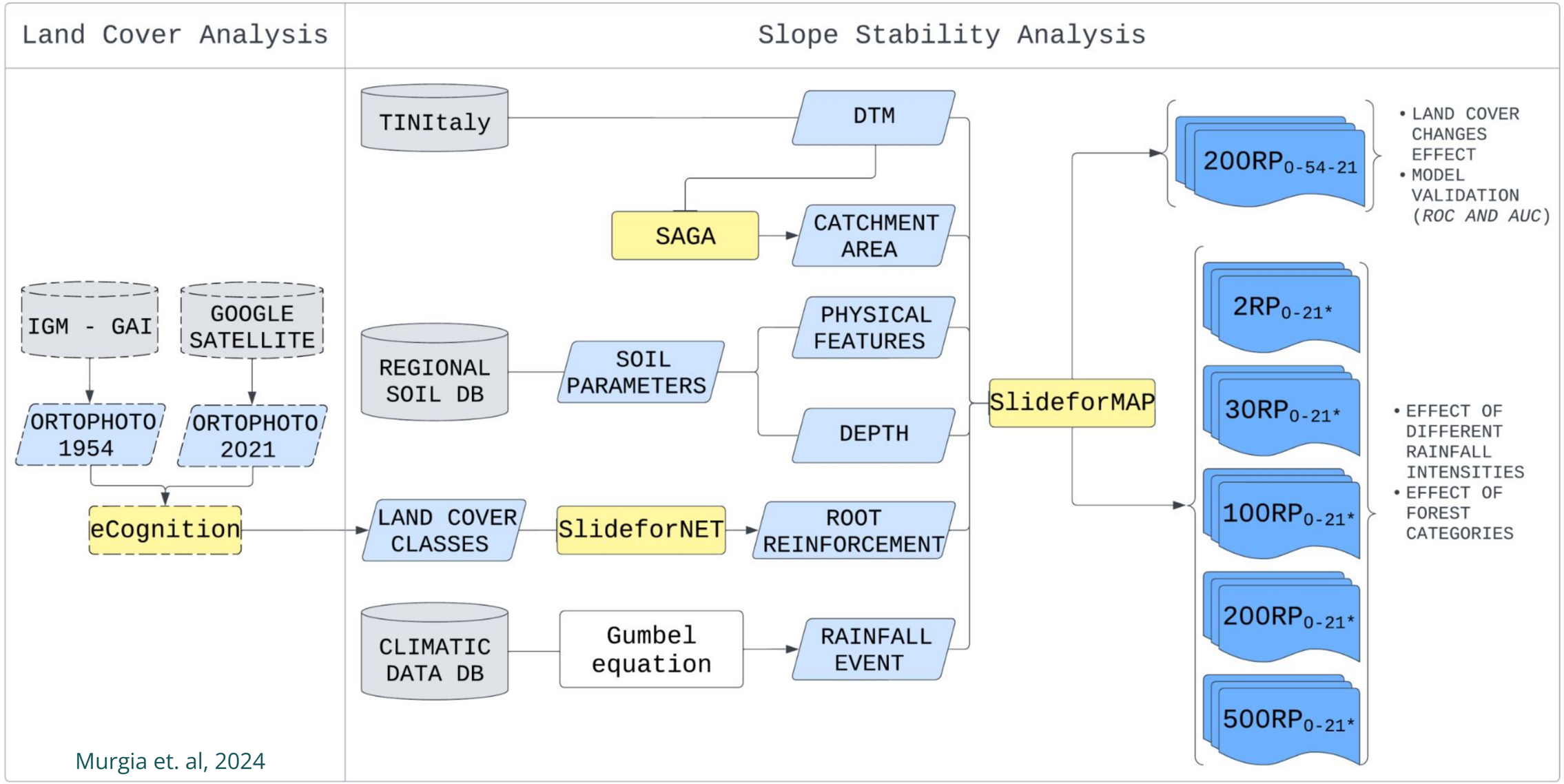
SlideforMAP software[1] is based on a physical probabilistic model[2] that allows assessing the slope stability considering the effect of trees' root reinforcement.

1. van Zadelhoff et al., 2022.
2. Murgia et al., 2022.

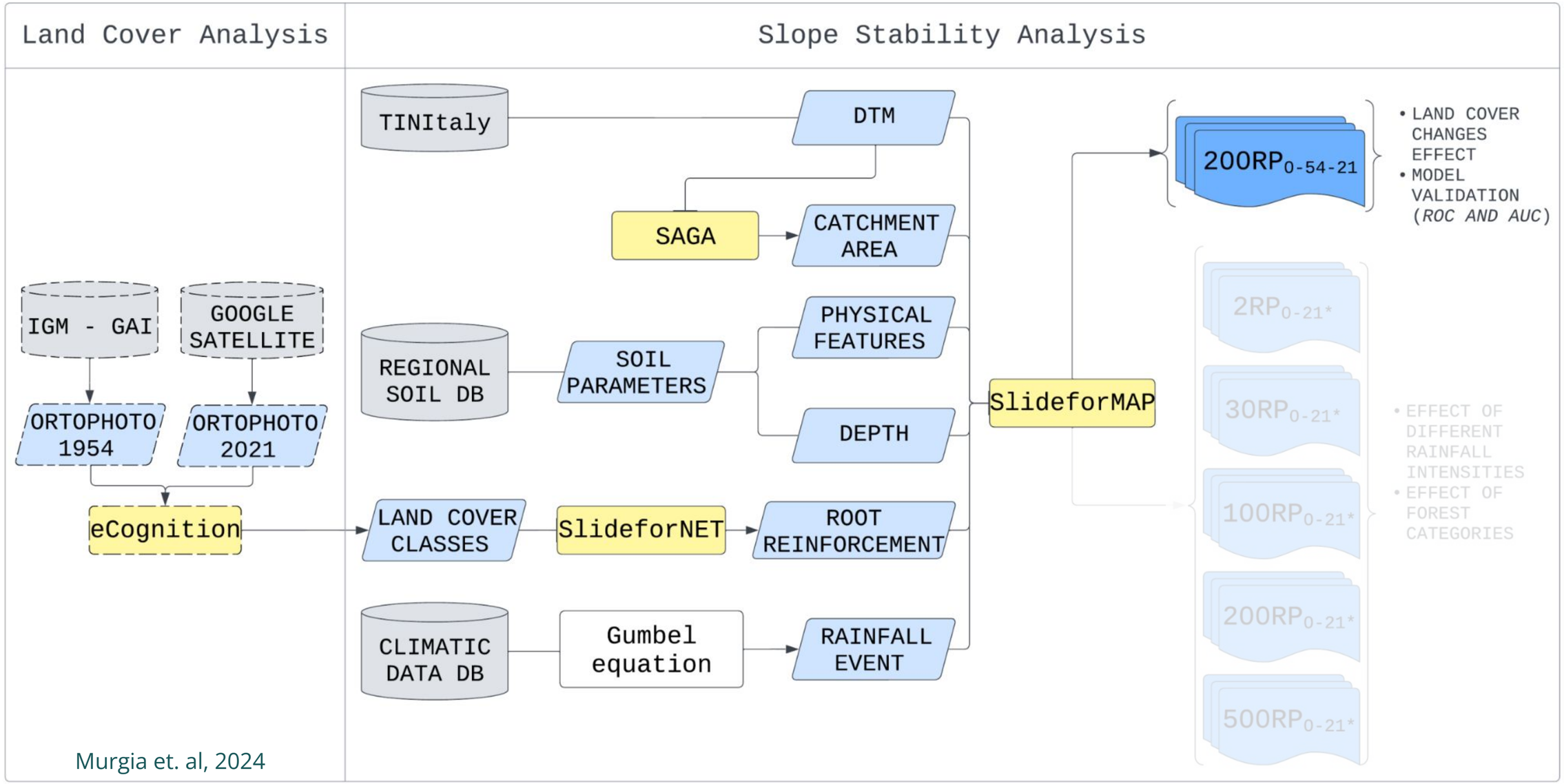
SlideforMAP - Input data

- morphology,
- catchment area,
- intensity value of a critical rainfall event,
- soil properties and depth,
- landslide area distribution,
- vegetation cover:
  - land cover classes,
  - trees position and dimension.

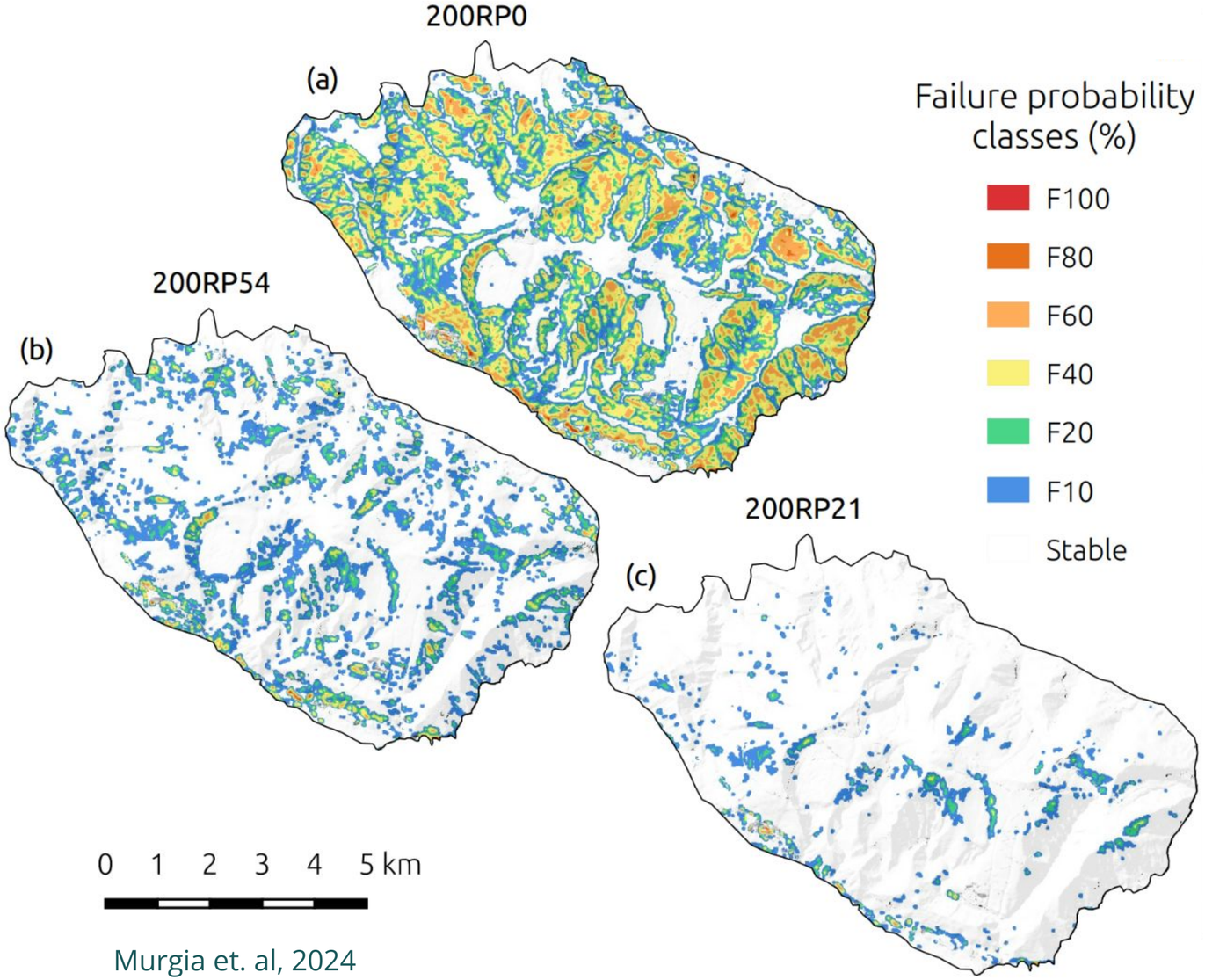




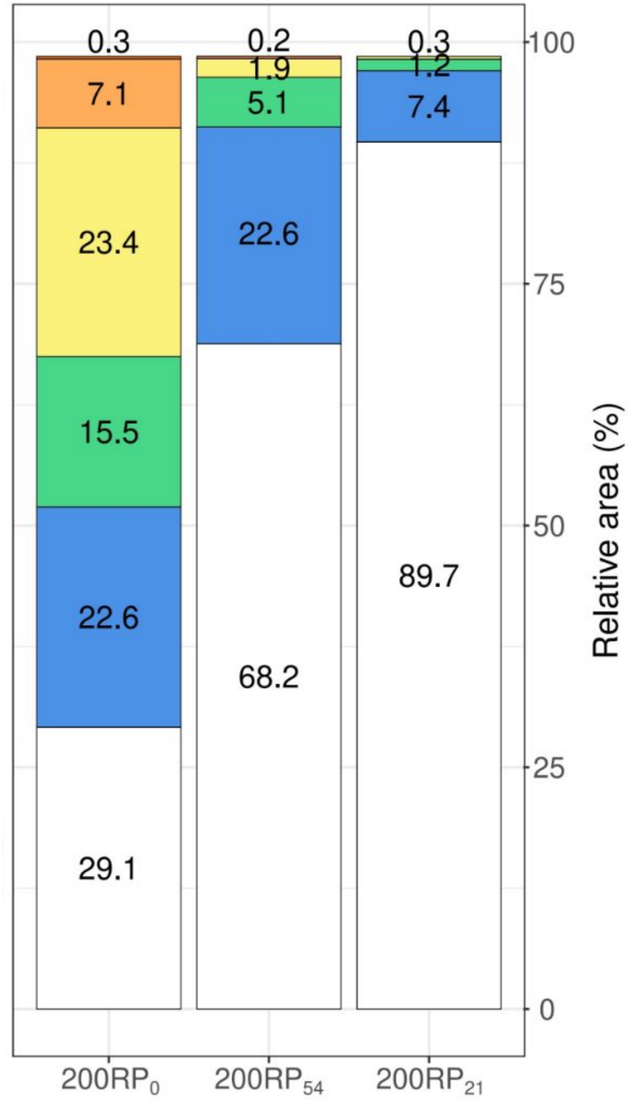
Murgia et. al, 2024



Murgia et. al, 2024

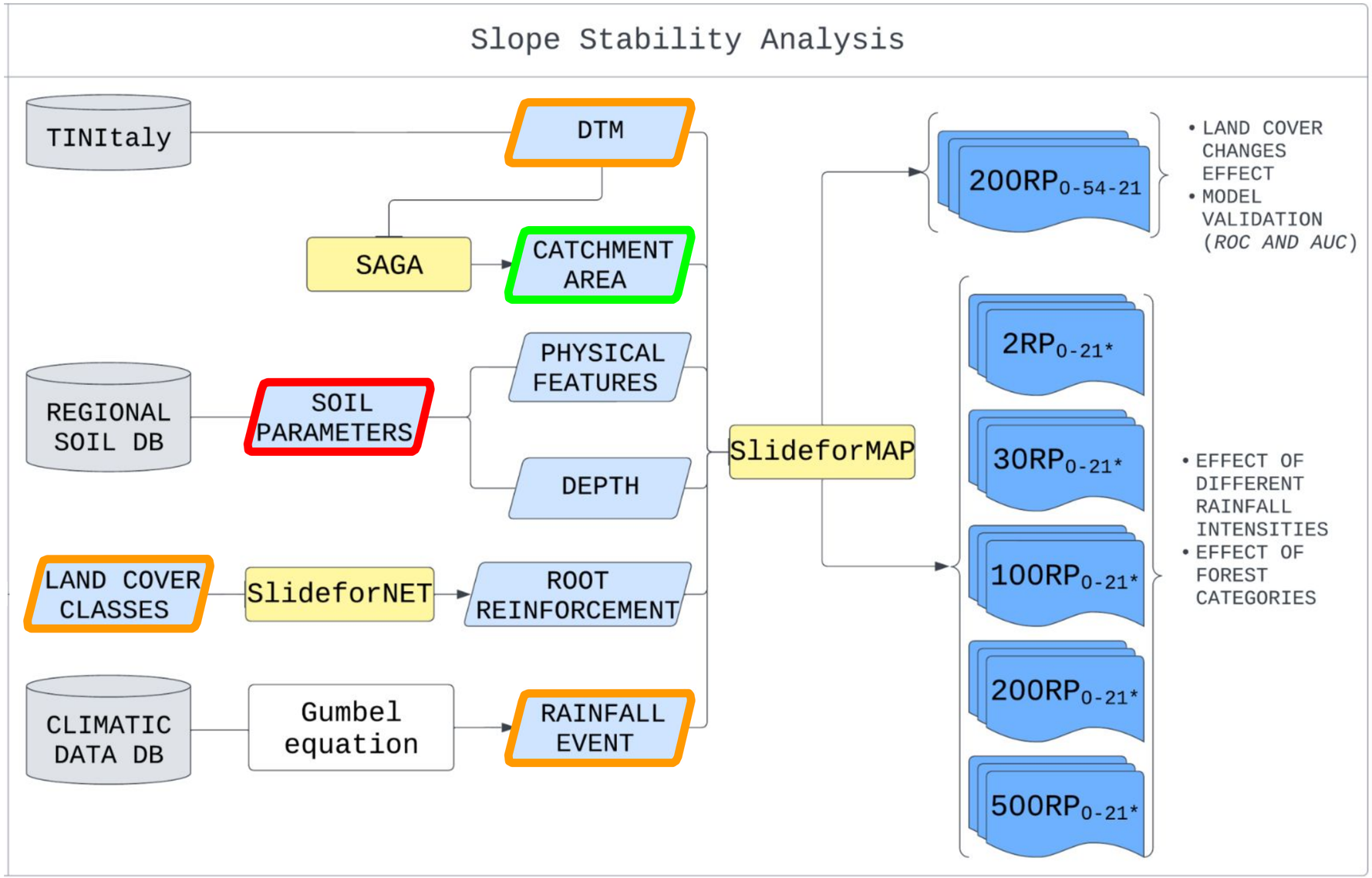


Murgia et. al, 2024



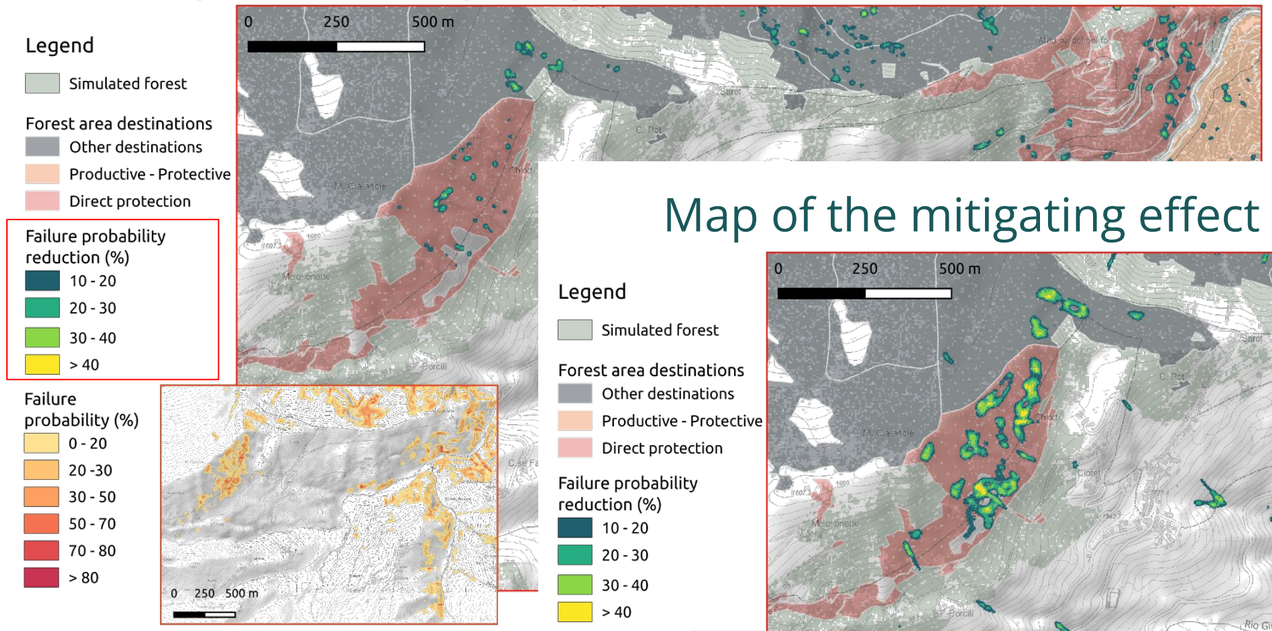
Data accessibility and findability

- **Easy**
- **Challenging**
- **Really challenging!**

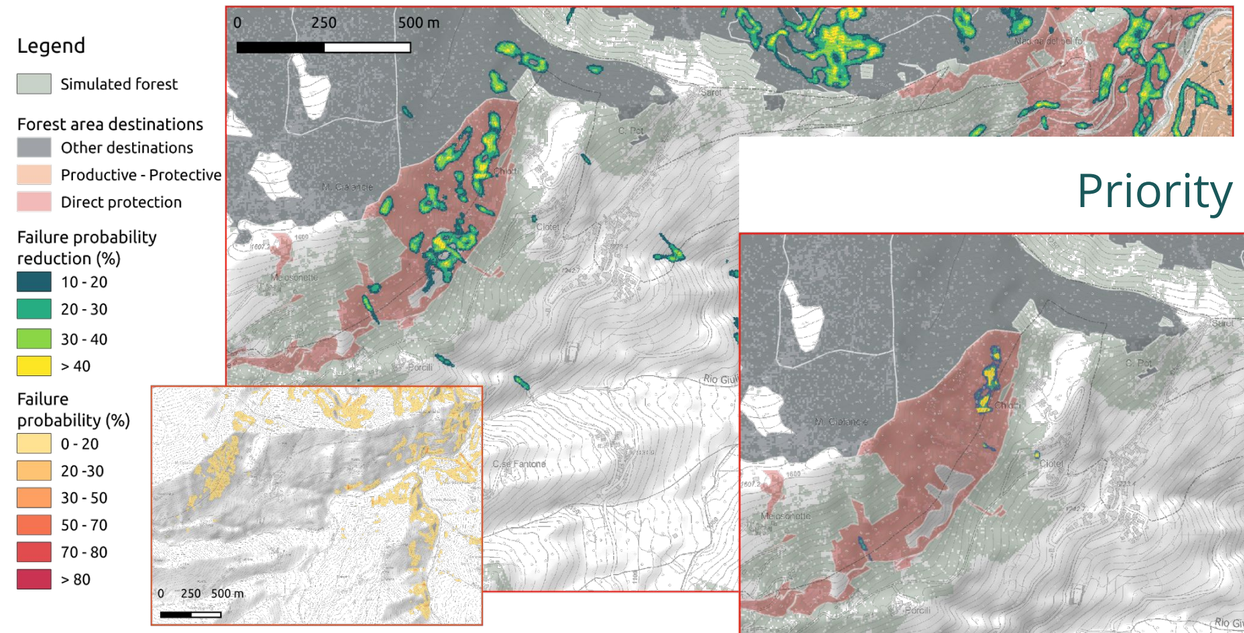


Supporting decision process in forest and land management

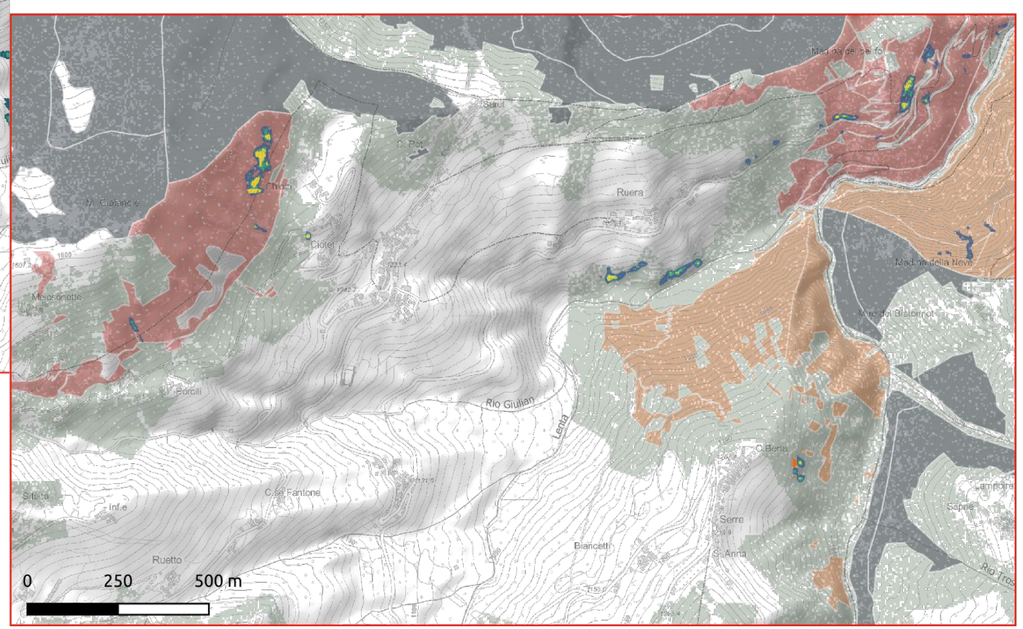
Map of the mitigating effect of the actual forest



Map of the mitigating effect of the actual forest



Priority management maps



Murgia et. al, 2022 - Congress of the Italian Society of Silviculture and Forest Ecology

Thank you

ilenia.murgia@unifi.it