Master Thesis: Predicting forest reburn probability in fire-prone areas in Europe

Earth Observation for Ecosystem Management

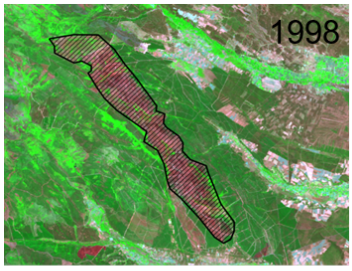
Start Date: Anytime

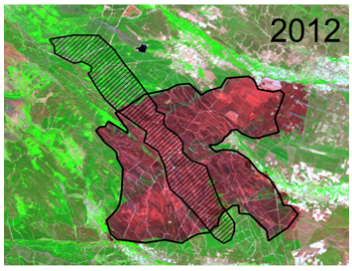
Description of Project:
In this thesis, you will investigate the probability of forest reburns following initial fire disturbances, with a focus on southern European forests. The goal is to understand how factors such as fire severity, vegetation recovery, and climate conditions influence the likelihood of a second or third fire occurring within 30 years after the initial event. To achieve this, you will build on existing methods to quantify reburn occurrence using satellite-based data on fire history and model reburn probability, incorporating predictors such as burn severity, post-fire recovery, precipitation, temperature, and land cover characteristics. This research will contribute to improving fire risk assessments and forest management strategies in fire-prone regions.

Research Question: Can we predict the probability of reburns based on environmental and climatic data?

Objectives:

- *Identify forest areas that have experienced multiple fires using fire datasets based on Landsat imagery (https://zenodo.org/records/13333034).*
- *Develop a statistical model to estimate the likelihood of reburns.*
- *Analyse spatiotemporal patterns of reburns.*





Additional information about the ForestPaths project can be found here:

ForestPaths

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