

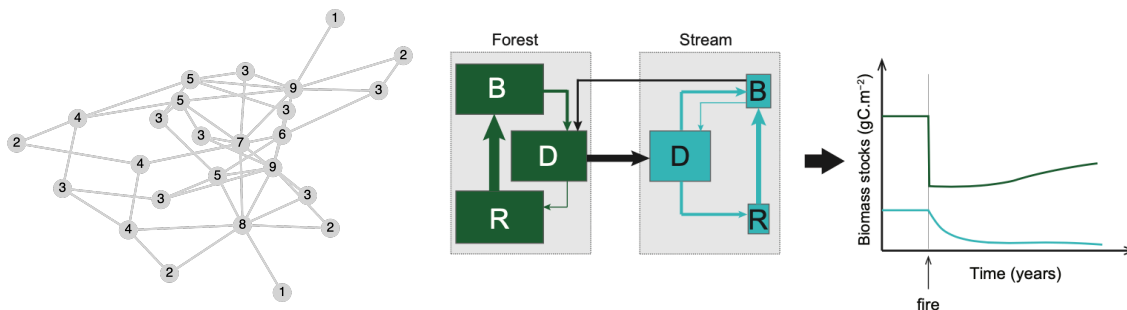
## MSc Project

### Integrating realistic landscape features into meta-ecosystem theory

We are looking for an enthusiastic MSc student who will be studying meta-ecosystem dynamics using meta-ecosystem models. The project involves extensive computational tasks and is part of a larger research program (the MetaPerspect project based in the Altermatt Lab at Eawag, Dübendorf).

A fundamental goal of ecology is to understand the drivers of diversity, productivity and stability of natural ecosystems. Accumulating evidence highlights the role of spatial flows of organisms and non-living resources (nutrients and detritus) in shaping these properties of ecological communities and ecosystems. The meta-ecosystem concept offers a general and unified framework for studying the significance of spatial flows of organisms and/or resources among ecosystems. Meta-ecosystem ecology has progressed rapidly over the past decade, yet many realistic features of natural landscapes have yet to be integrated into this framework. The overall objective of the MetaPerspect project, based in the Altermatt Lab, is to understand how abiotic drivers, such as resource availability, destructive environmental perturbations or the spatial layout of the landscape, affect diversity, productivity, and stability of meta-ecosystems.

In this MSc project you will develop and analyze a meta-ecosystem model to study how realistic features of natural landscapes influence the dynamics and functioning of ecosystems. Your project will build on previous meta-ecosystem models and contribute to the overall objective of the MetaPerspect project. Carrying out the modelling project will require extensive coding and analysing model outputs using appropriate technics.



**Requirements:** Interest in ecological modelling, programming skills, English language skills, and a strong mathematical background. The MSc project can start at any time.

#### Contact/Supervision:

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We look forward to meeting you! More info: [www.altermattlab.ch](http://www.altermattlab.ch)