



Quantifying the temporal evolution of the protection service of forests against rockfall in the face of climate change

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Protective effect of forests against natural hazards not constant over time

- Disturbances
- Effect of climate change?



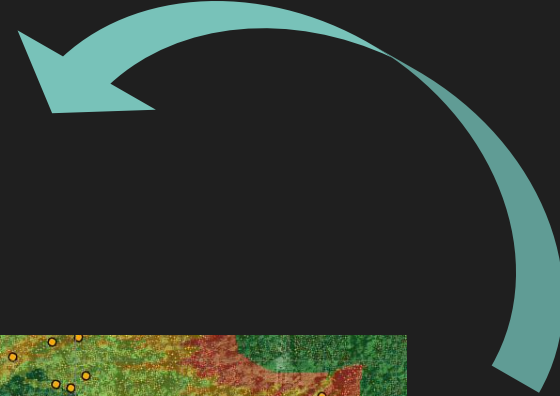
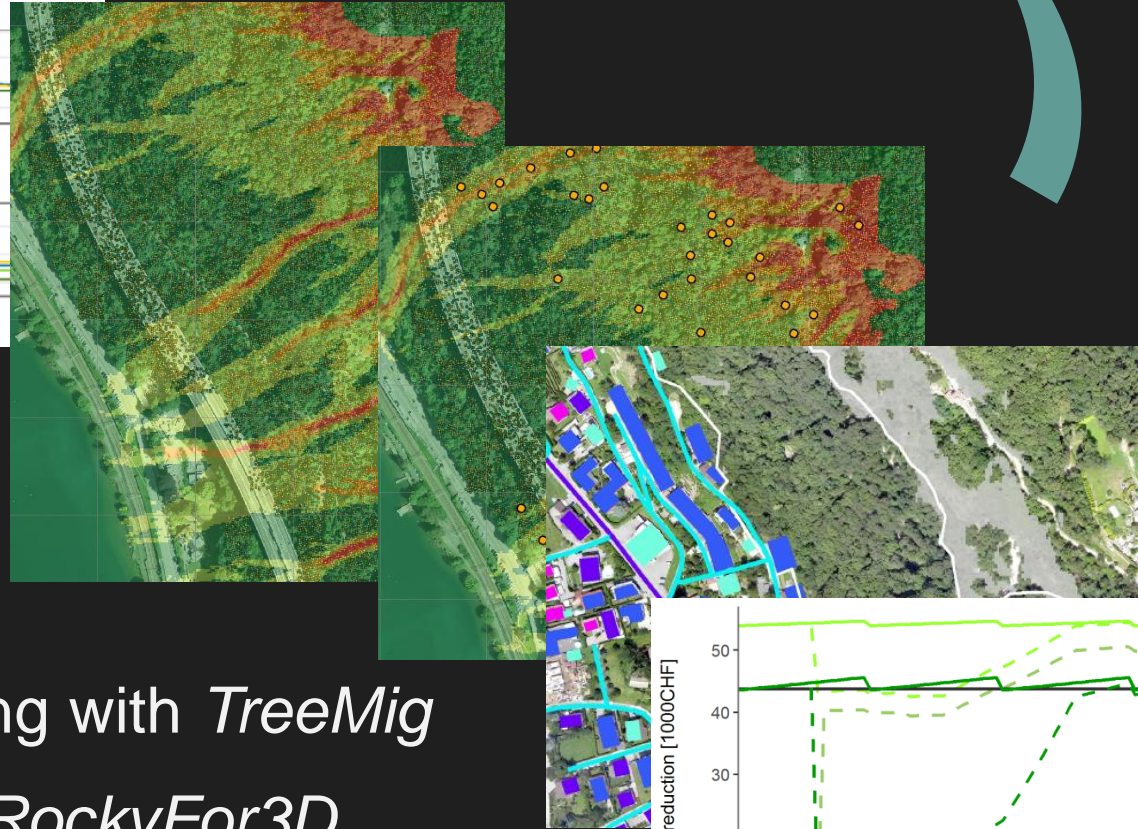
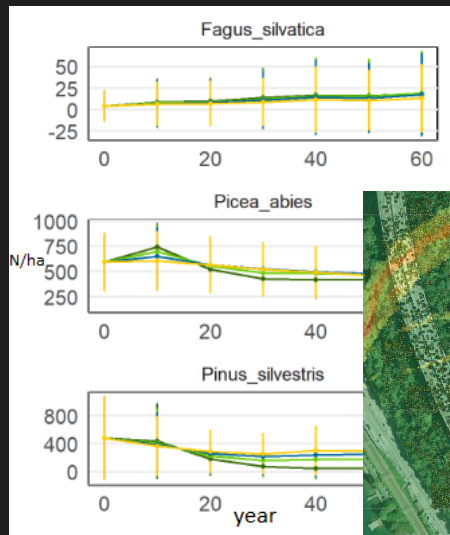
Objective

Quantifying climate induced changes in the protection service of forests against rockfall in the Swiss Western Alps

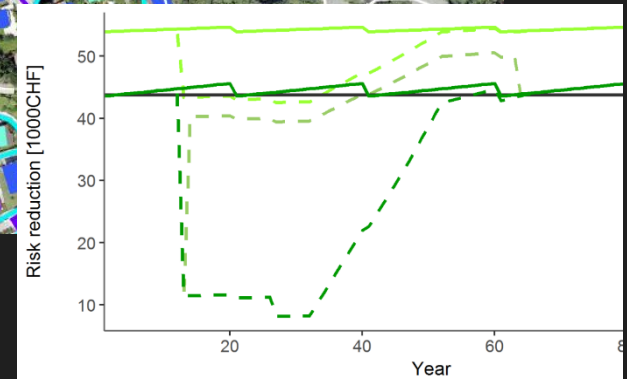
- Combination of forest dynamic modelling and process-based modelling of rockfall
- Rockfall as disturbance
- Risk-based approach



Approach



- Forest modelling with *TreeMig*
- Coupling with *RockyFor3D*
- Quantification of risk > valuation in monetary terms
- Local case study sites (Valais / Vaud)



Outlook

- Resilience of protection forests
- Implications for management
- Basis for cost-benefit analysis > Optimisation of forest management

