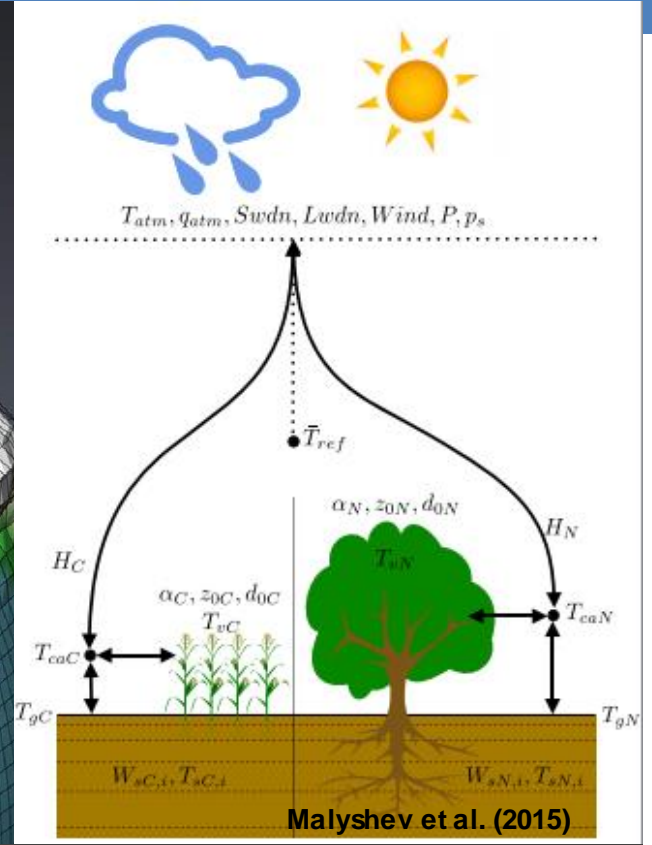


Graphic: A. Will



CLIMPULSE: Climate Impacts of Utilizing Land in Switzerland and Europe

COSMO User Workshop 2018, 15.01.2018, Ronny Meier

Who am I?

- Master in Atmosphere and Climate at IAC
 - Master Thesis on biogeophysical impacts of forest on local climate
- Started a PhD in December at Land-Climate Dynamics group

CLIMPULSE Project

CLimate IMPacts of Utilizing Land in Switzerland and Europe

- Investigating biogeophysical impacts of LULCC on regional climate
- Deliver policy relevant information
- Provide monitoring tools

Employees of the project:

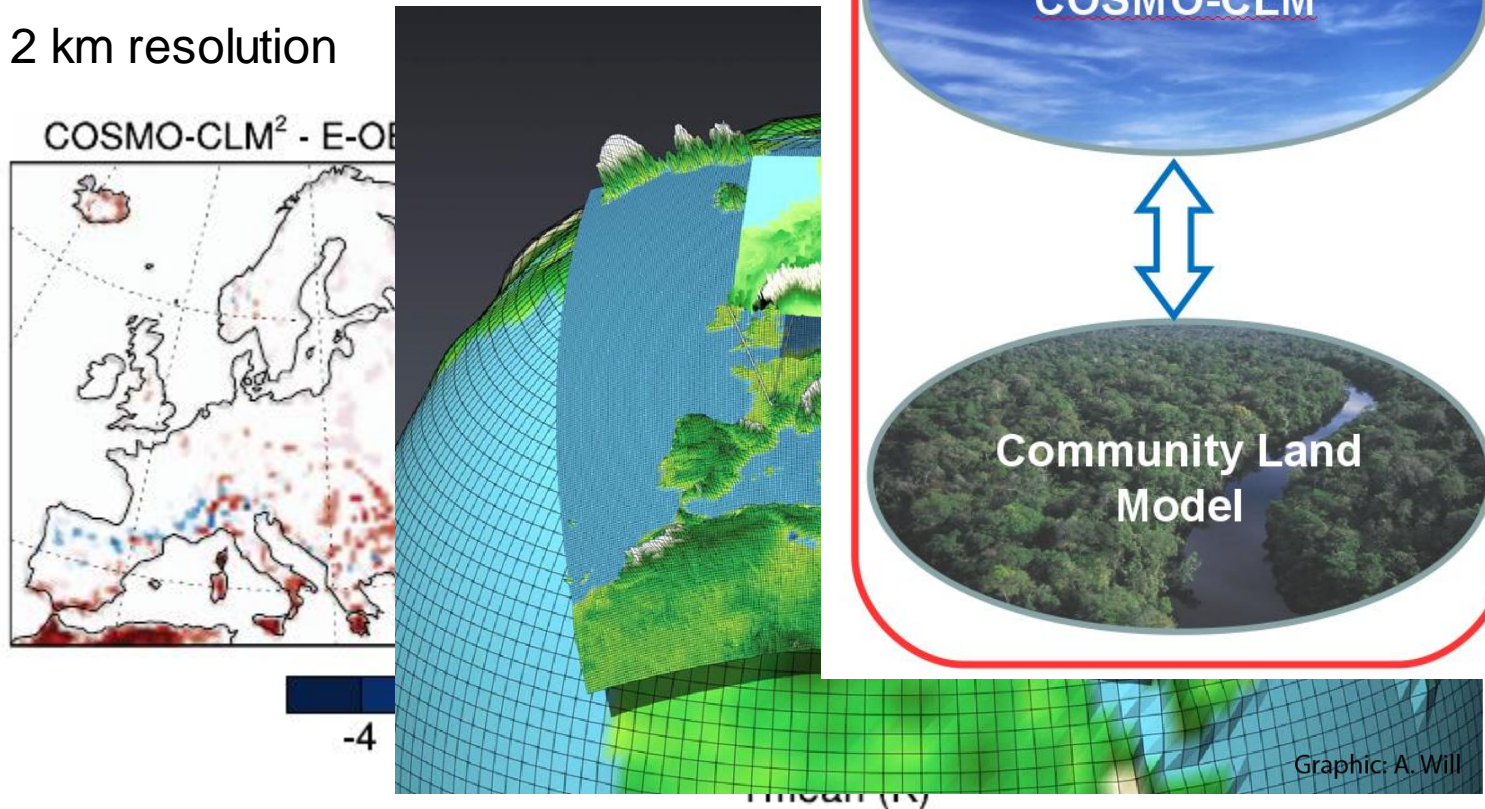
- Jonas Schwaab (PostDoc): Observation-based assessment of LULCC effects + development of policy tools
- Me (PhD): Regional modelling of LULCC impacts

LULCC we plan to consider:

- Forest: Reforestation, species conversion
- Agriculture: Conservation agriculture, Agroforestry
- Urban Development

Simulation Set Up

- COSMO-CLM + CLM = COSMO-CLM²
- Nested simulations Europe > Switzerland
- Up to 2 km resolution



Davin et al. (2016)

References:

Davin, E.L. , Maisonnave E, Seneviratne SI: Is land surface processes representation a possible weak link in current regional climate models? Environ. Res. Lett. 11: 074027. <https://doi.org/10.1088/1748-9326/11/7/074027>, 2016.

Malyshev, S., Shevliakova, E., Stouffer, R. J., and Pacala, S. W.: Contrasting Local versus Regional Effects of Land-Use-Change-Induced Heterogeneity on Historical Climate: Analysis with the GFDL Earth System Model, J. Climate, 28, 5448–5469, <https://doi.org/10.1175/JCLID-14-00586.1>, 2015.