

New Challenge Theme

Constraining the carbon cycle to
characterise and mitigate
climate change

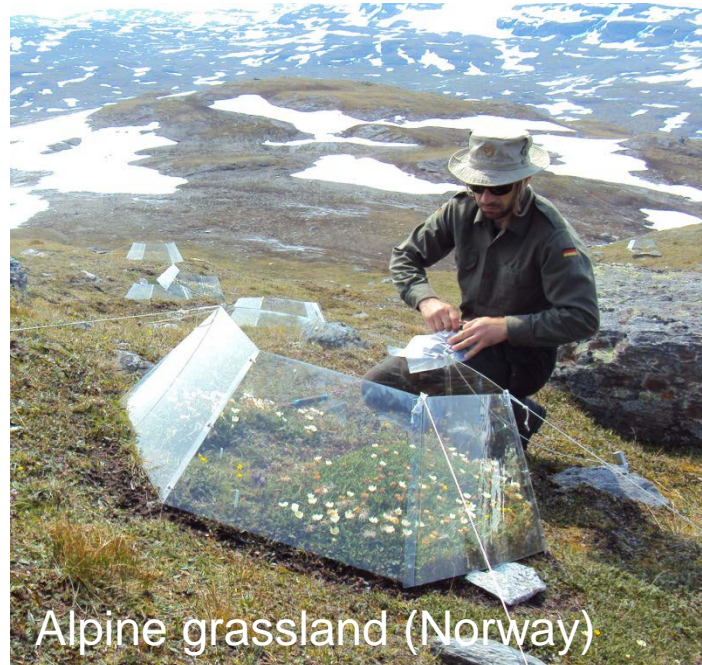


Tobias Rütting

I am a **Biogeochemist** working on:

- Soil nitrogen dynamics
- Greenhouse gas emissions

Specially on how **global (climate) change** affects biogeochemical cycles



Alpine grassland (Norway)

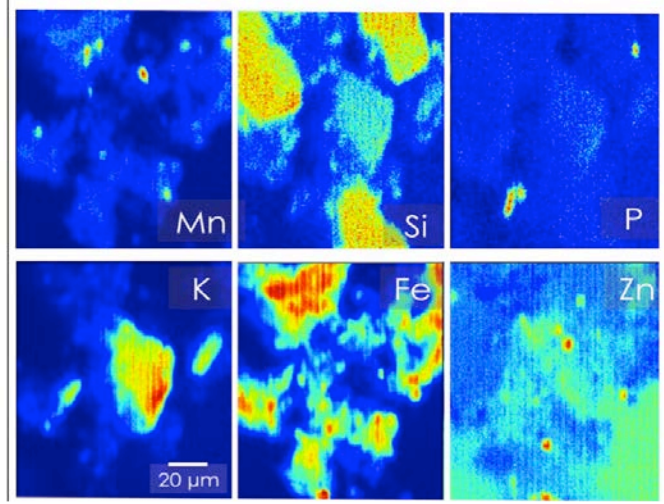
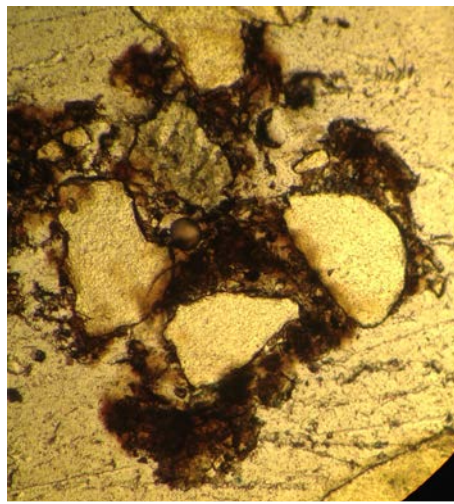


Tropical lowland Forest (Brazil)



Dan Metcalfe

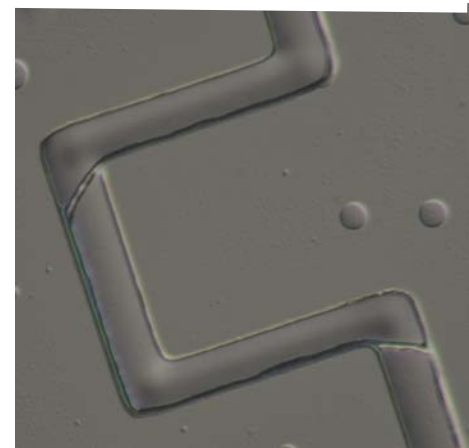
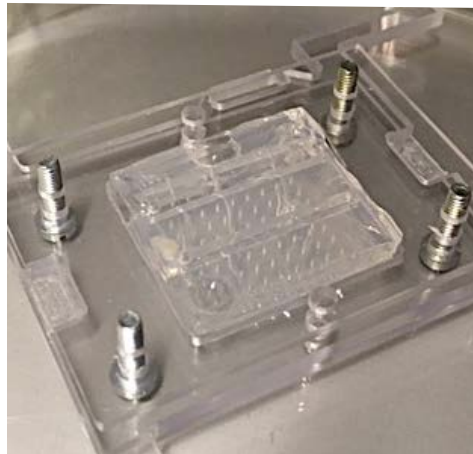
- Global Patterns of Tropical Forest Carbon Cycling
- Carbon-Nitrogen Interactions in Boreal Forest
- Herbivore Impacts on Ecosystem Biogeochemistry



Edith Hammer

Microorganisms

Soil structure and -heterogeneity
affecting soil carbon sequestration



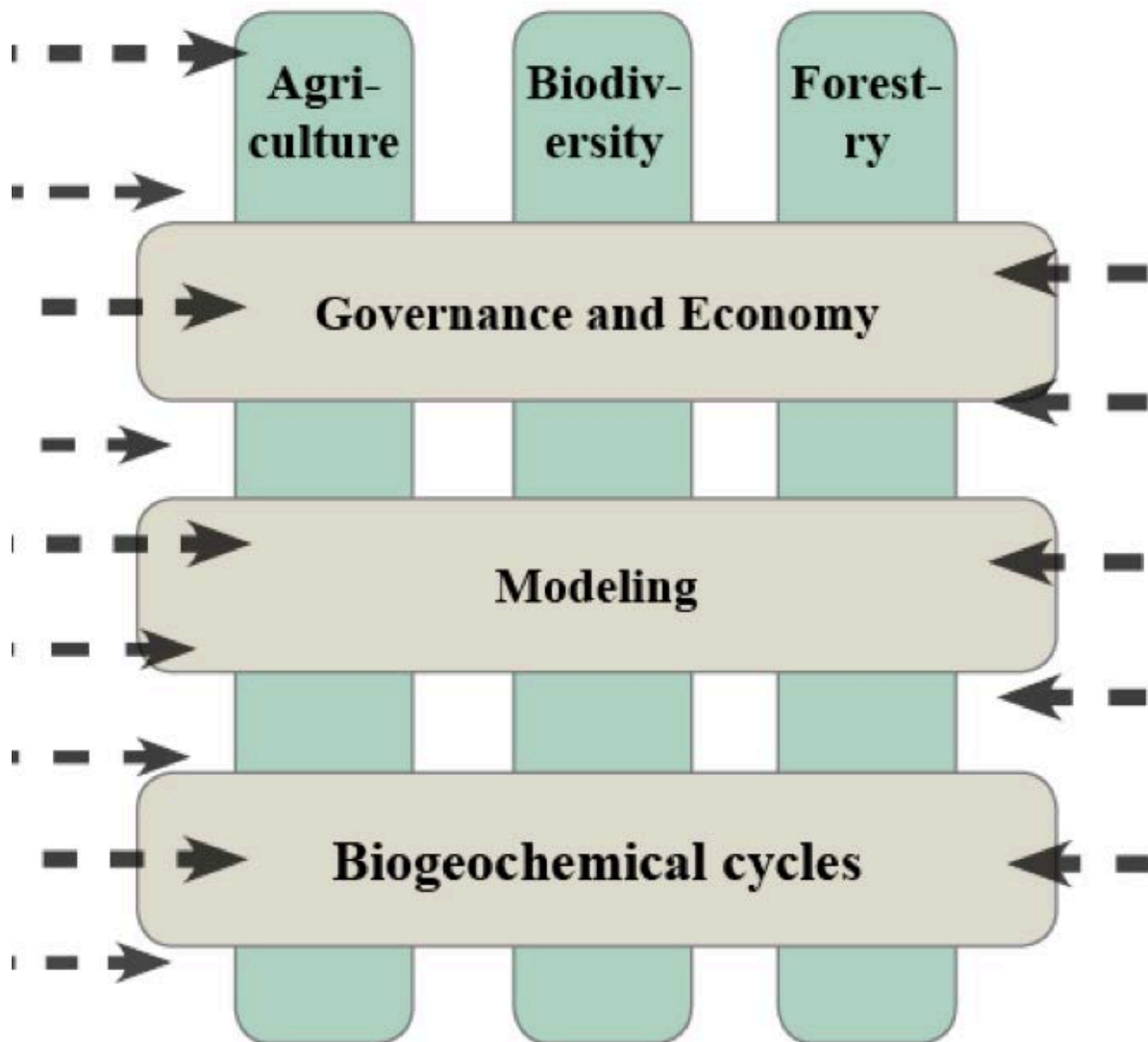
Carbon Cycle and Climate Change

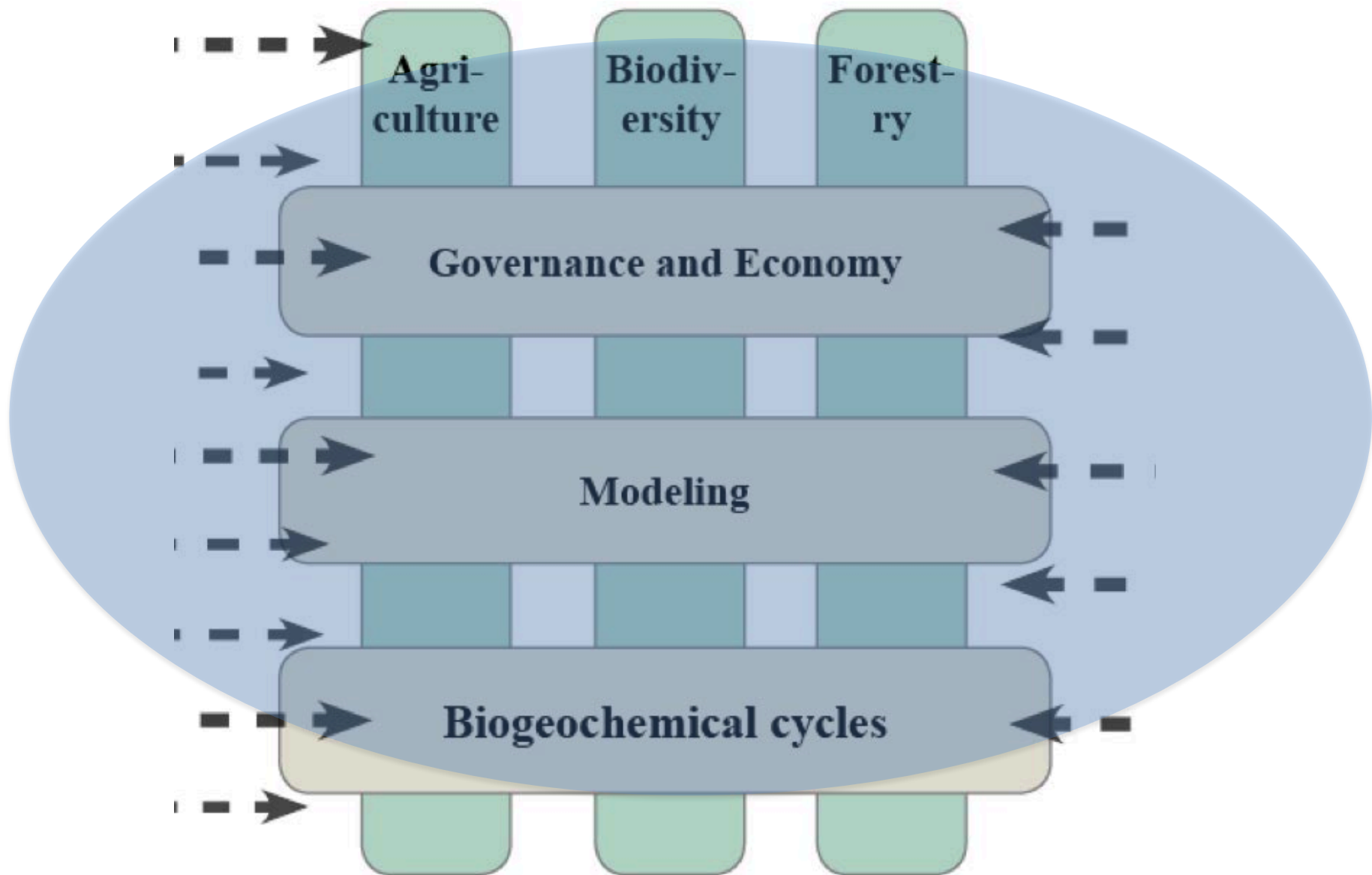
Grand challenges

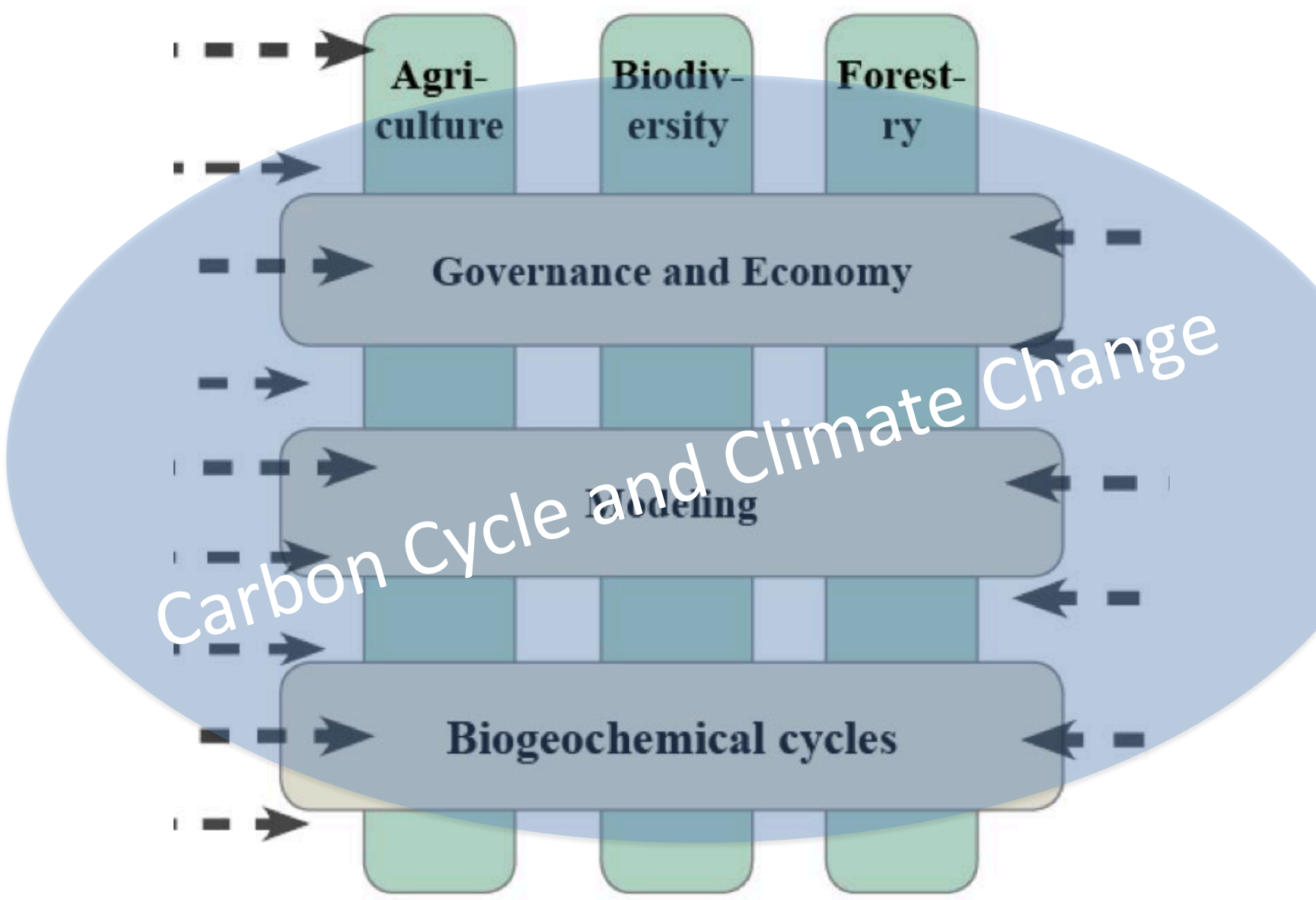
Reduce uncertainty in the carbon cycle

- quantify and project changes in carbon balance
- regionally and globally
- link to other biogeochemical cycles
- responses to anthropogenic and biophysical drivers
- slow-responding processes of vegetation and soils

Design mitigation strategies







Carbon Cycle and Climate Change

Agri-culture

Biodiv-ersity

Forest-ry

Governance and Economy

Modeling

Biogeochemical cycles