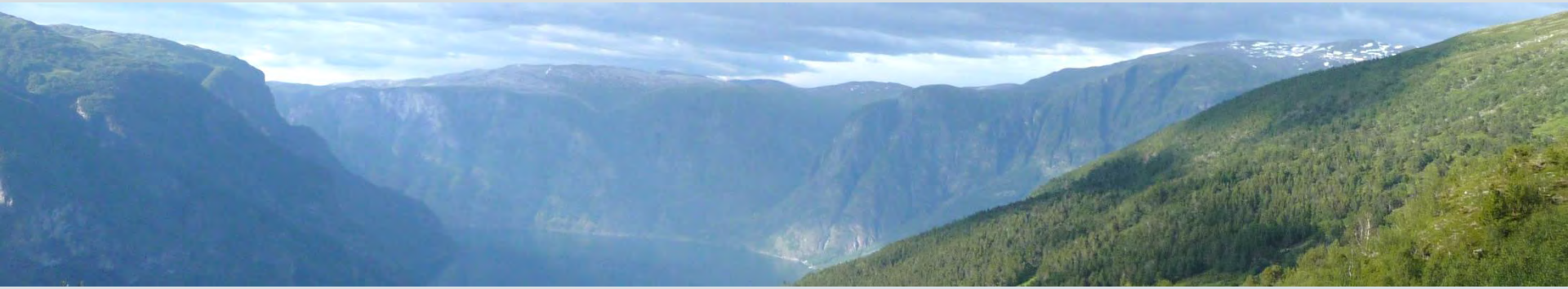

INCLINE: Indirect climate change impacts on alpine plant communities

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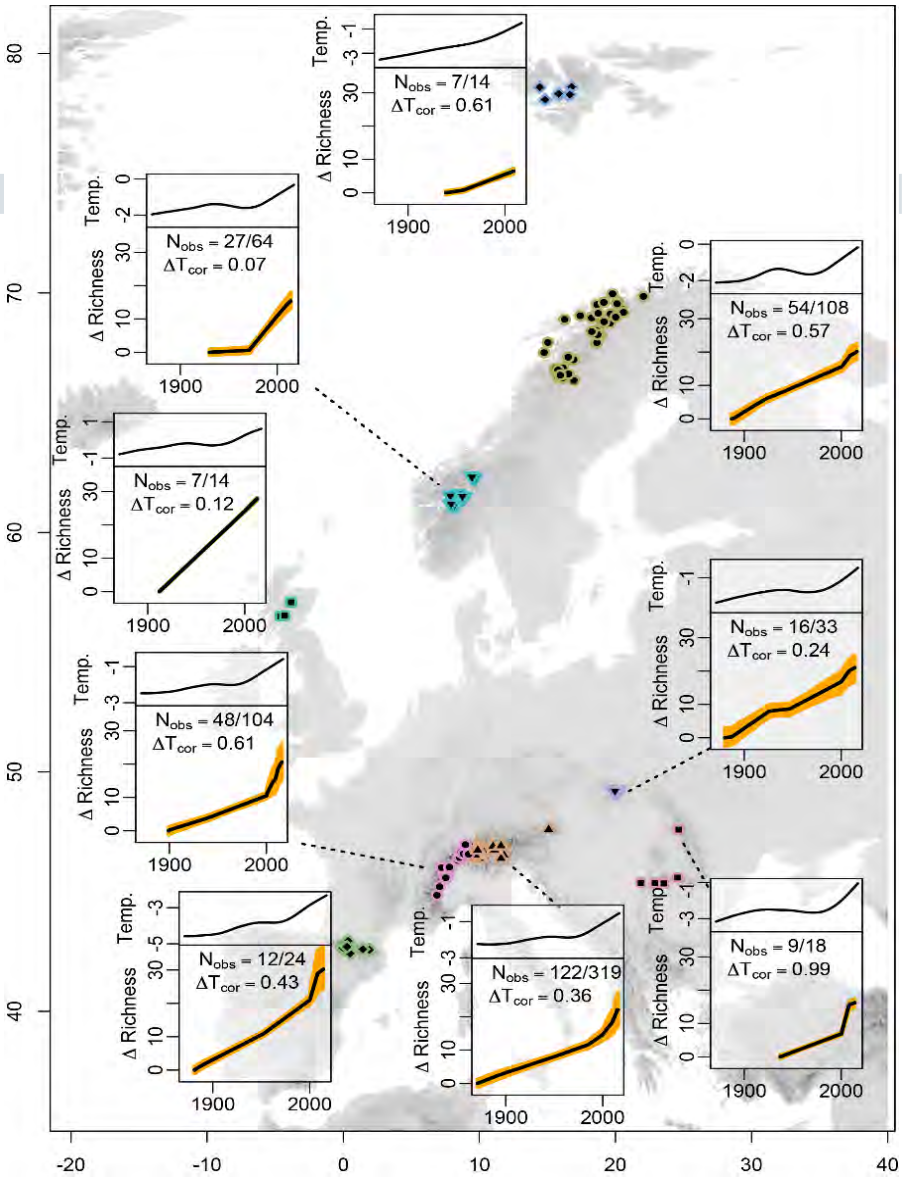
Background

- Climate warming is causing species range shifts
- ...but how this will influence plant communities, for instance through altered biotic interactions, remains unclear



Steinbauer et al. 2018

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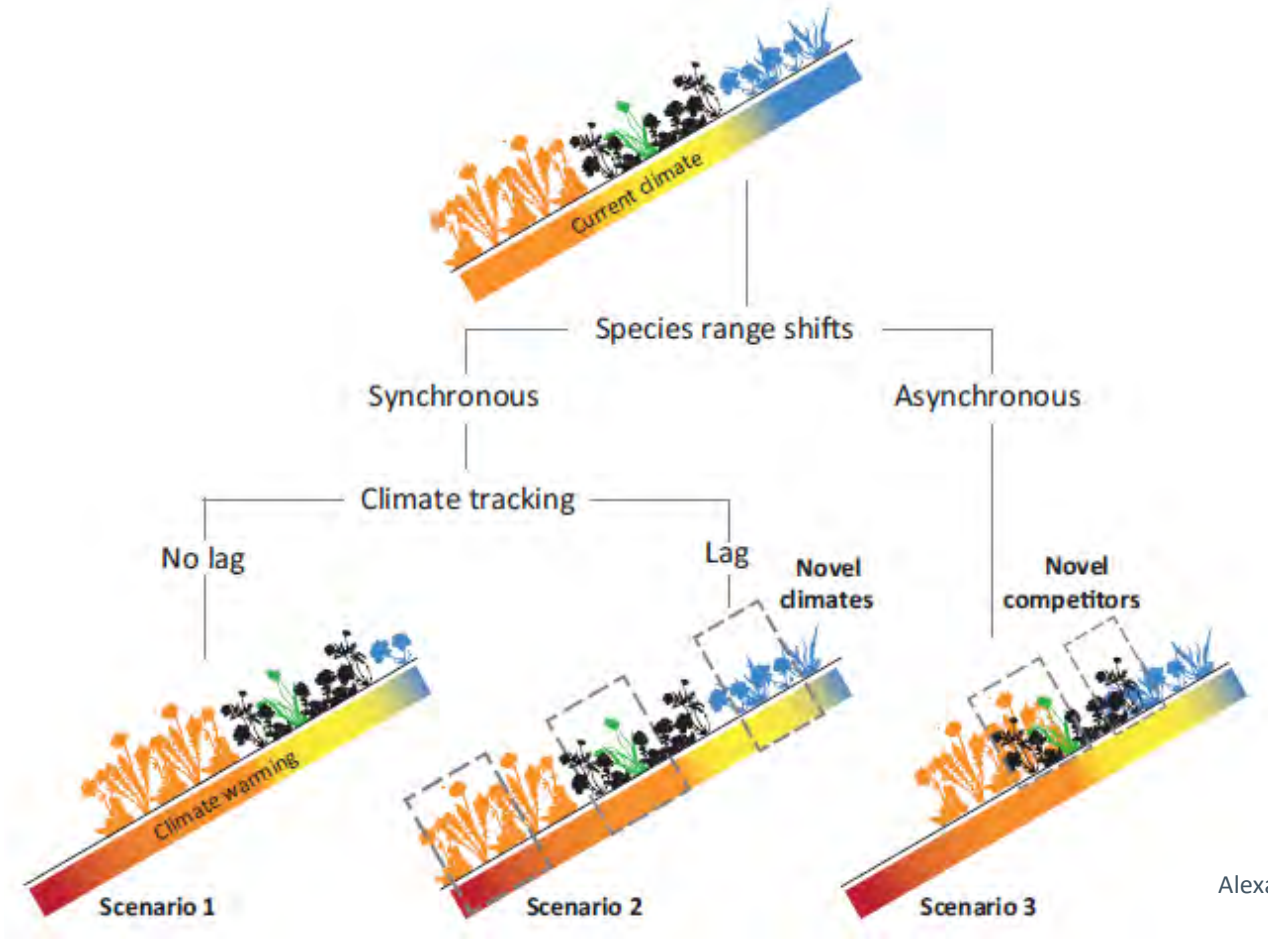
Background



Alexander et al. 2016

Objectives

- INCLINE will investigate impacts of novel species interactions on alpine plant population, community and ecosystem dynamics under climate change
  - WP1: Warming experiments with assisted colonization (Vandvik, Töpper)
  - WP2: Meta-analysis of transplant experiments (Alexander, Vandvik)
  - WP3: Novel interaction impacts on species' distributions (Skarpaas, Töpper)

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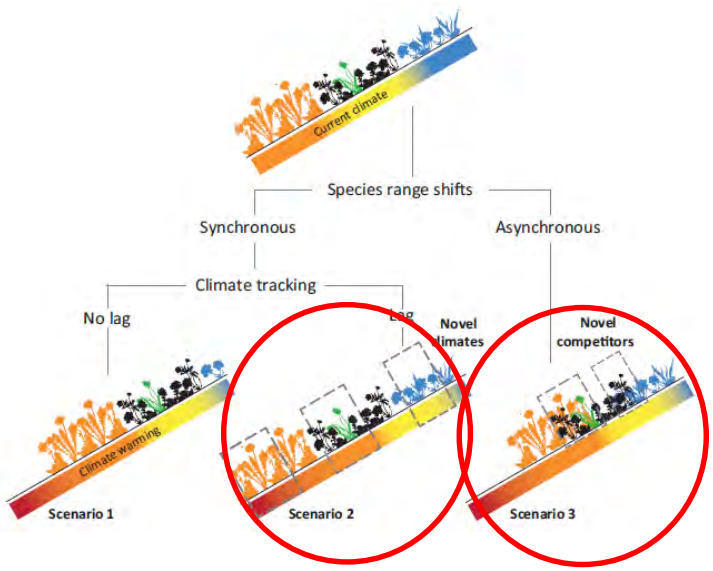
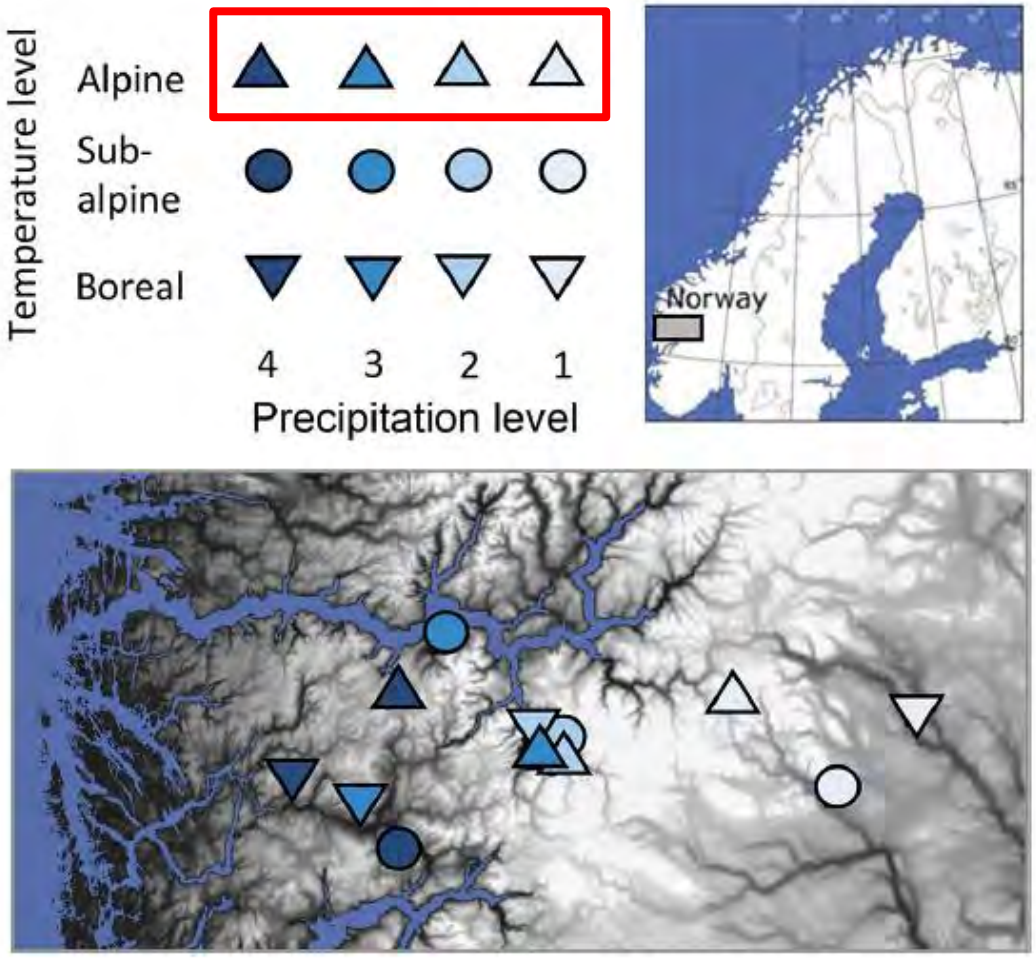
The experiment

- We will simulate migration of lowland species into alpine plant communities
  - Combination of experimental warming and transplantation of lowland species into alpine communities
  - Disentangle the effects of competition with novel and «old» species
  - Does species traits matter?



Study area



Klanderud et al. 2015

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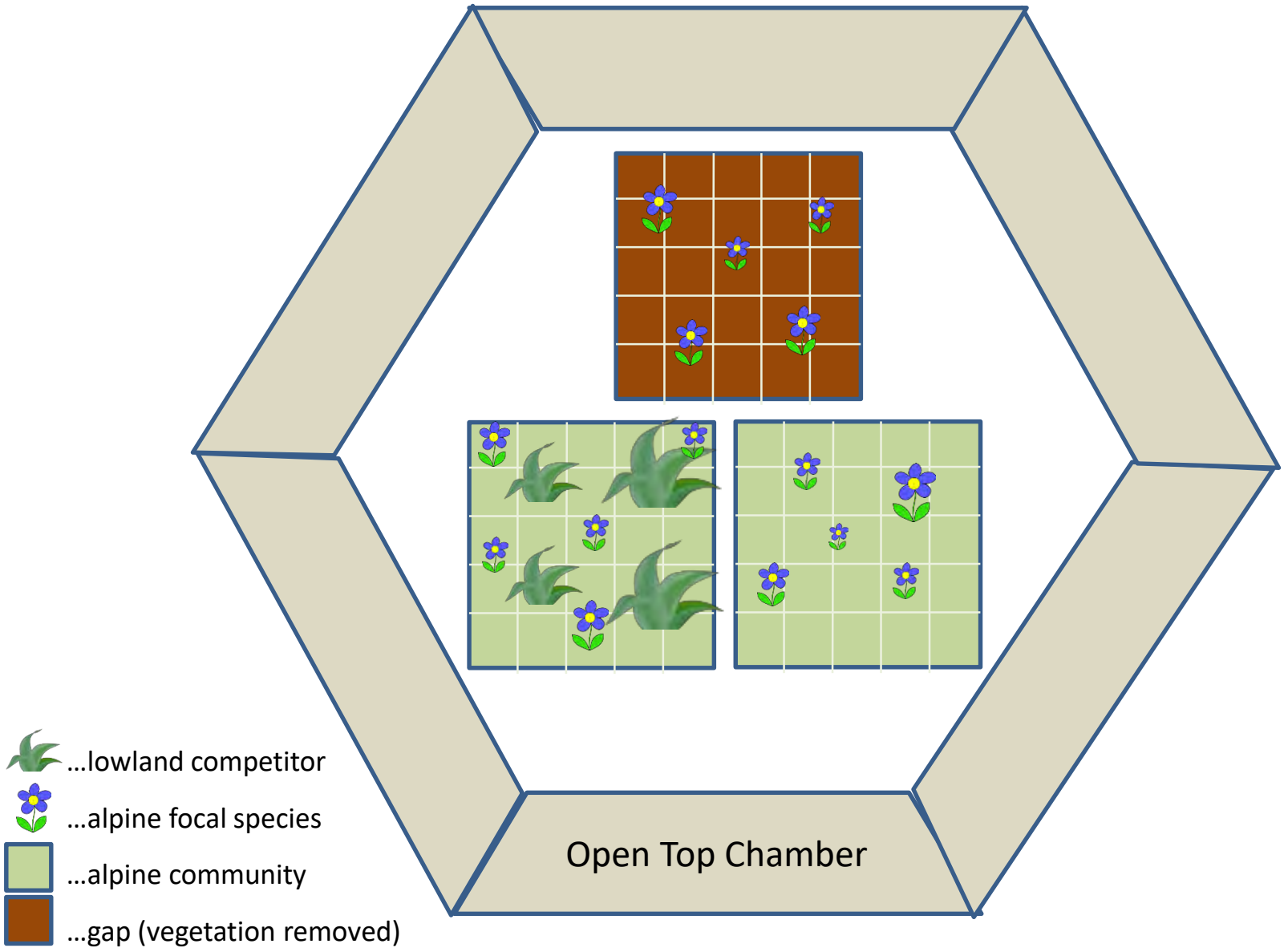
Open Top Chamber
…lowland competitor
…alpine focal species
…alpine community
…gap (vegetation removed)

Responses

- Population dynamics and community properties of the alpine vegetation
  - with new competitors
    - new traits
    - extant traits
  - with «old» competitors
  - without interactions
- Population dynamics of lowland species

The experiment

- Project start-up is this summer!
- Input on experimental design?

- Interest in doing side projects within the same experimental setup is most welcome!

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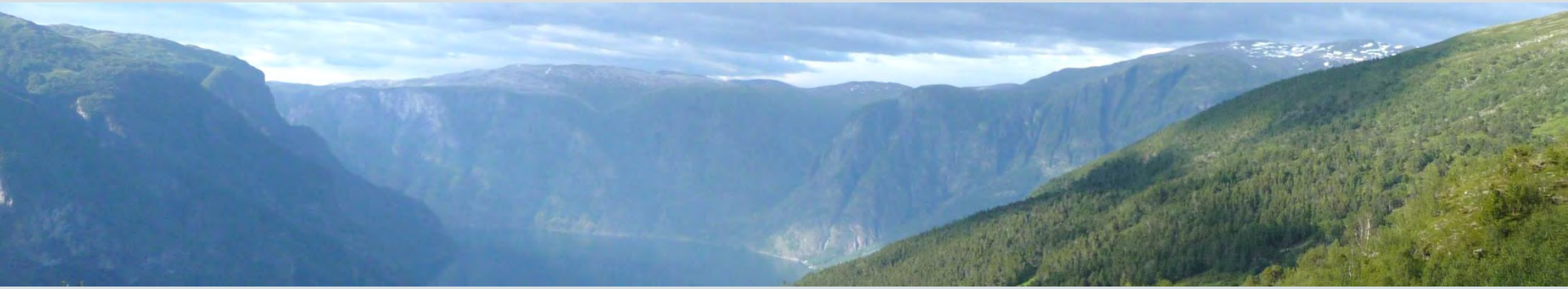

Thank you for your attention

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