

Functional group interactions **mediate** climate change impacts on the Carbon dynamics and biodiversity of alpine ecosystems

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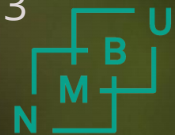
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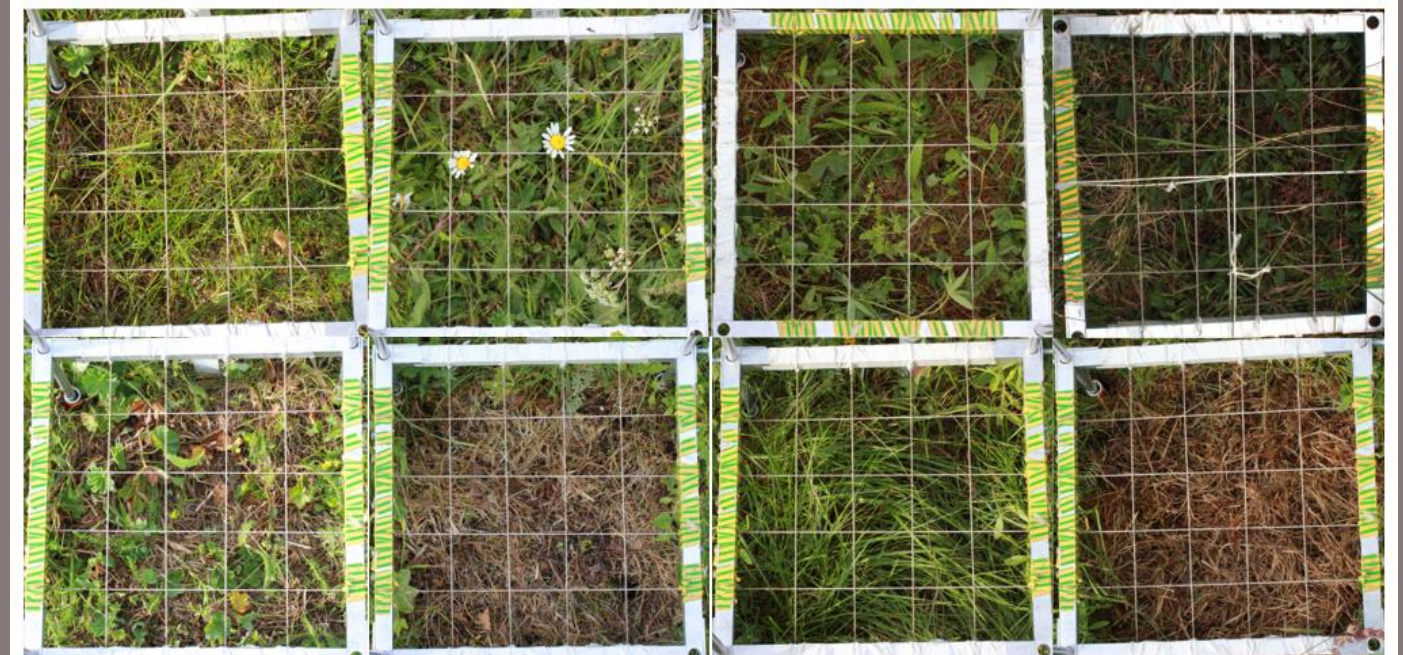
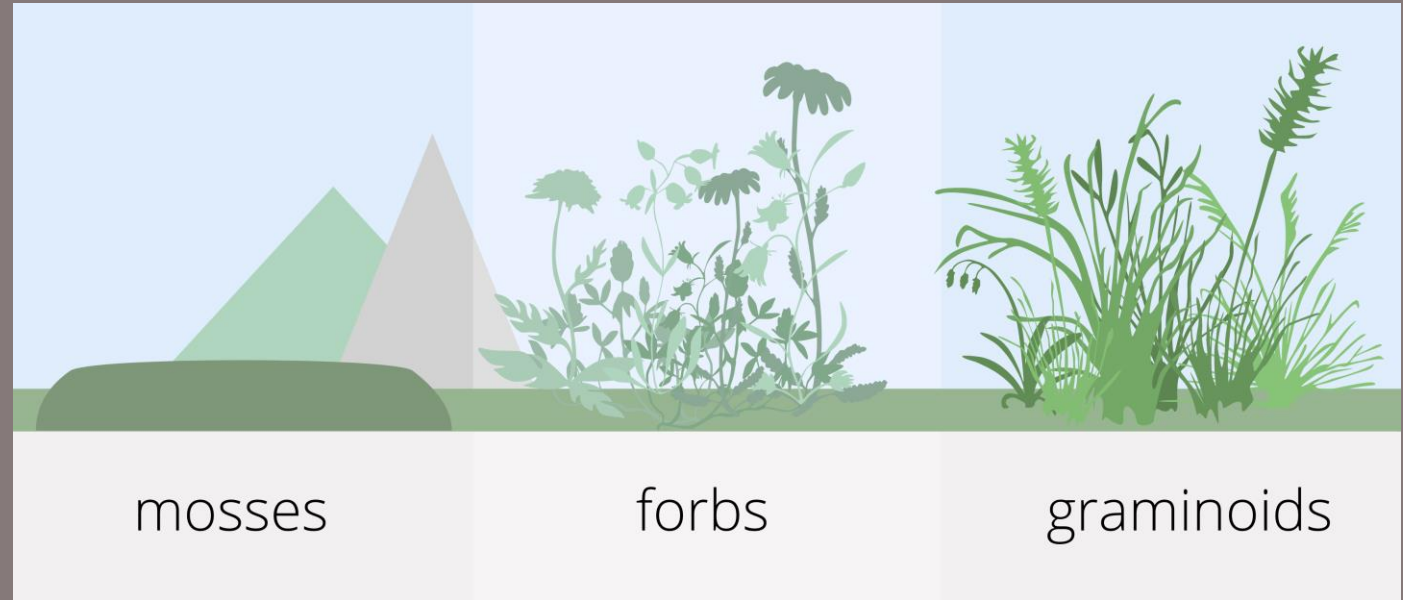
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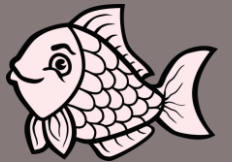
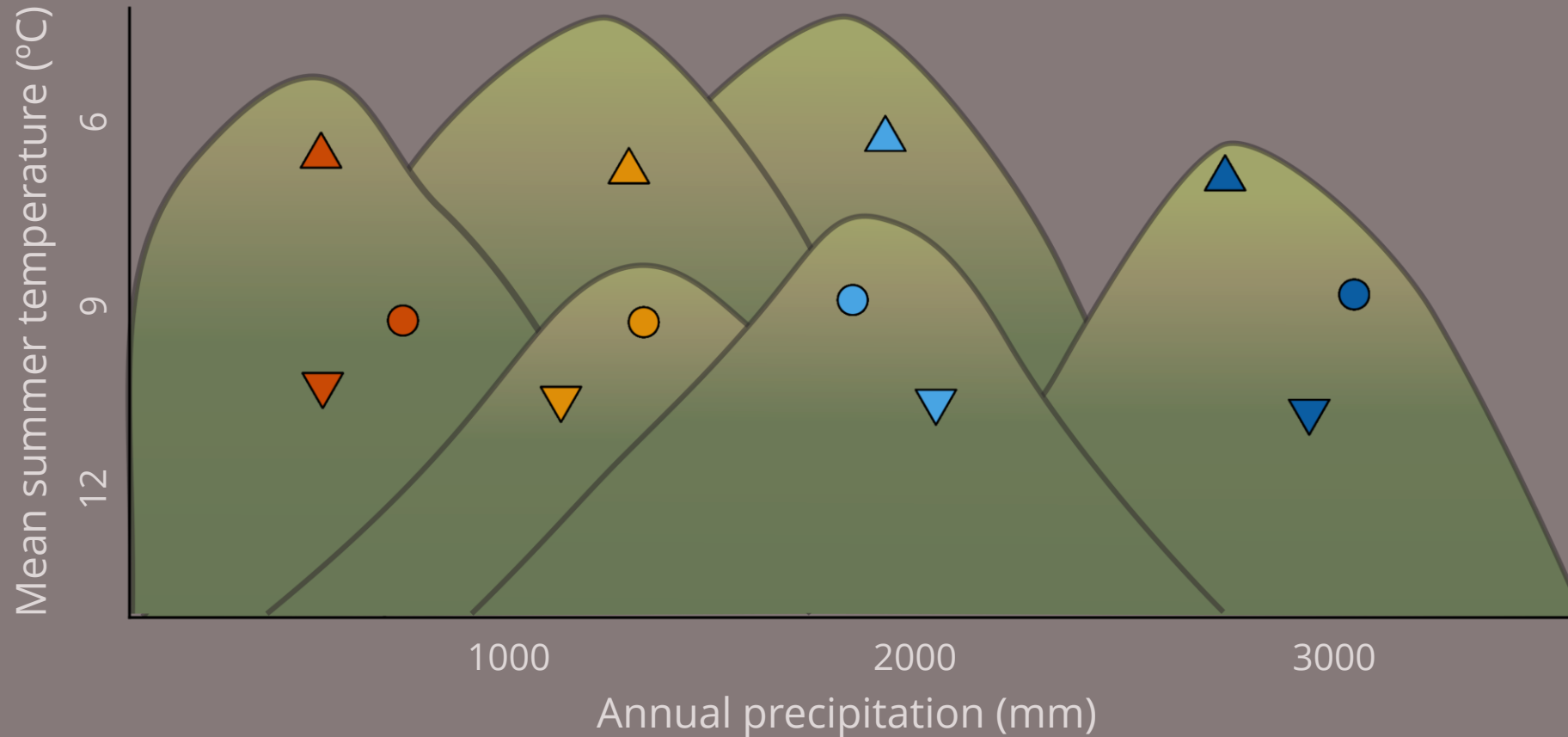
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Functional group removal experiment...

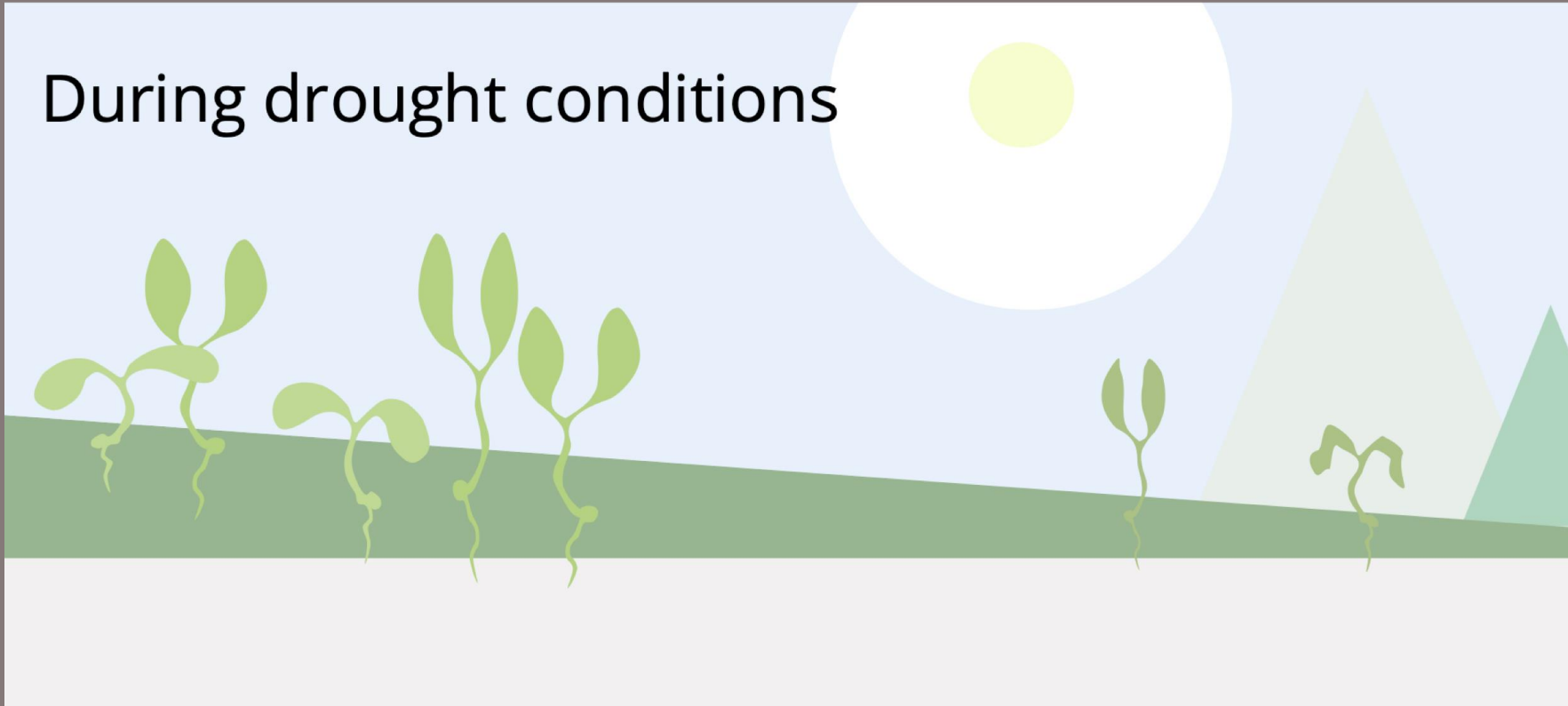


... along two climate gradients in western Norway

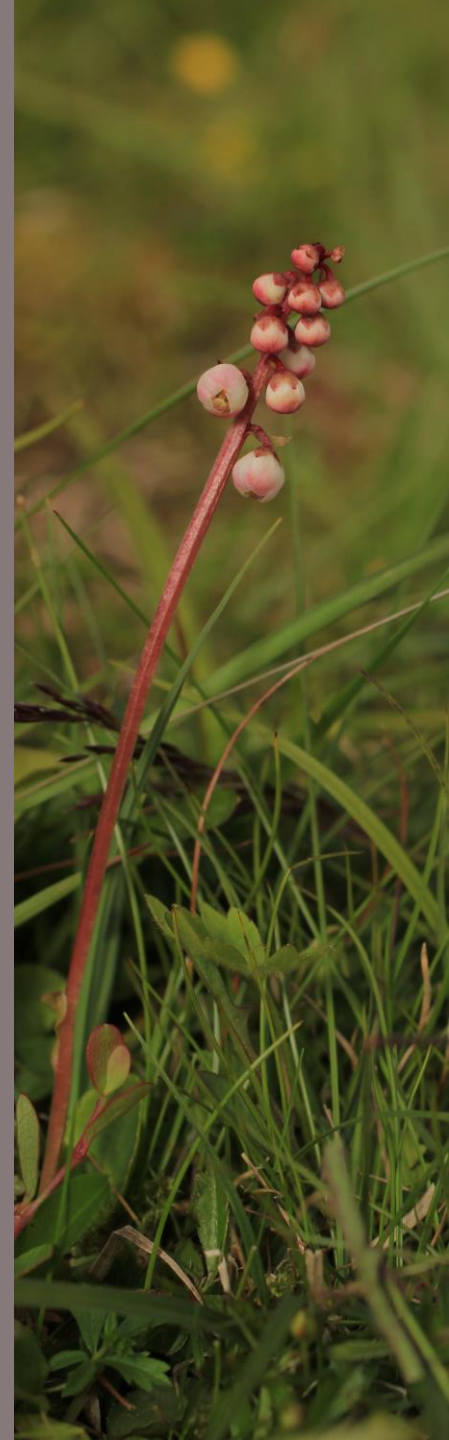


Drought: effect is climate-context dependent

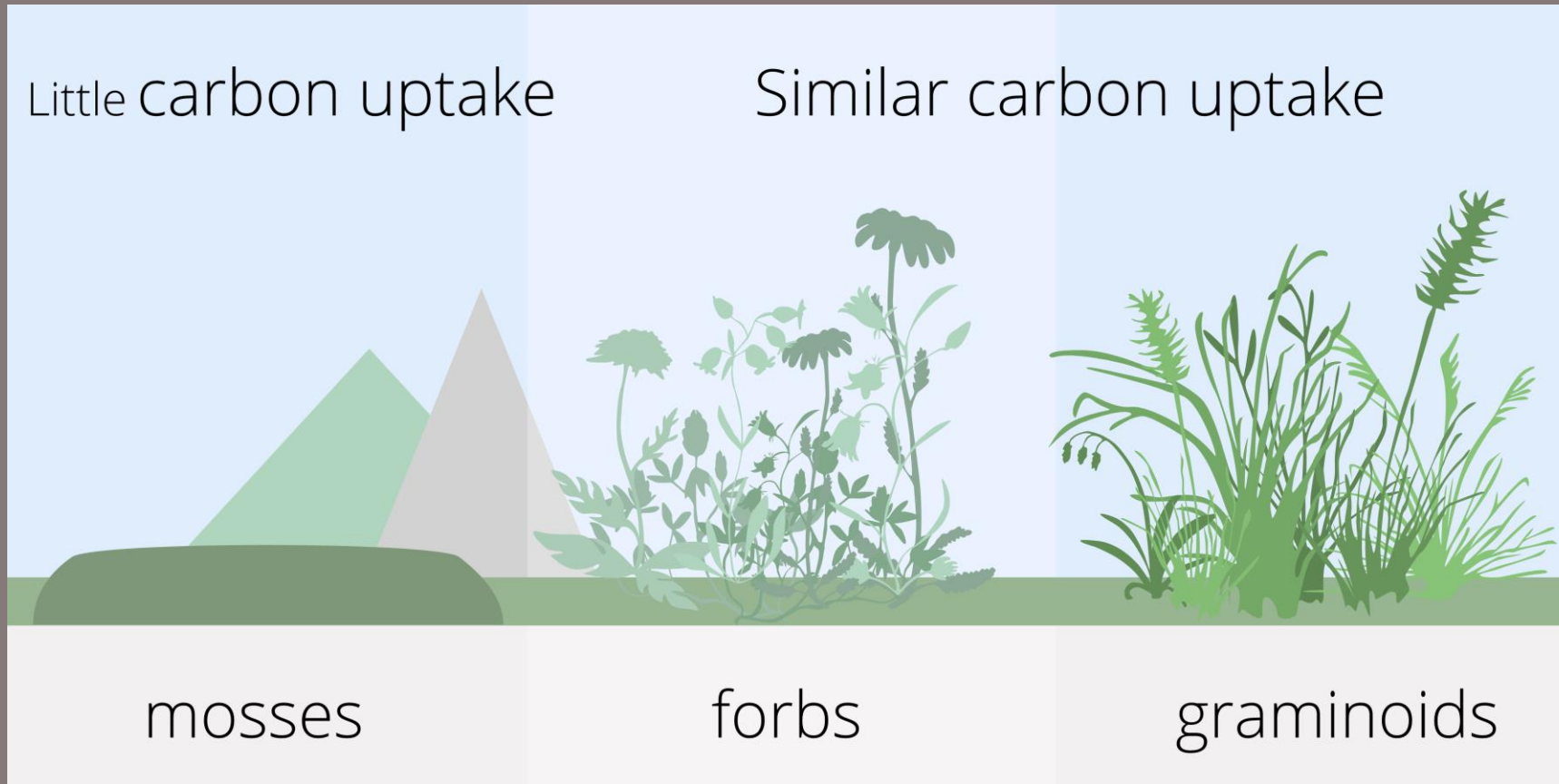
During drought conditions



Microclimate: regulation greatest by mosses

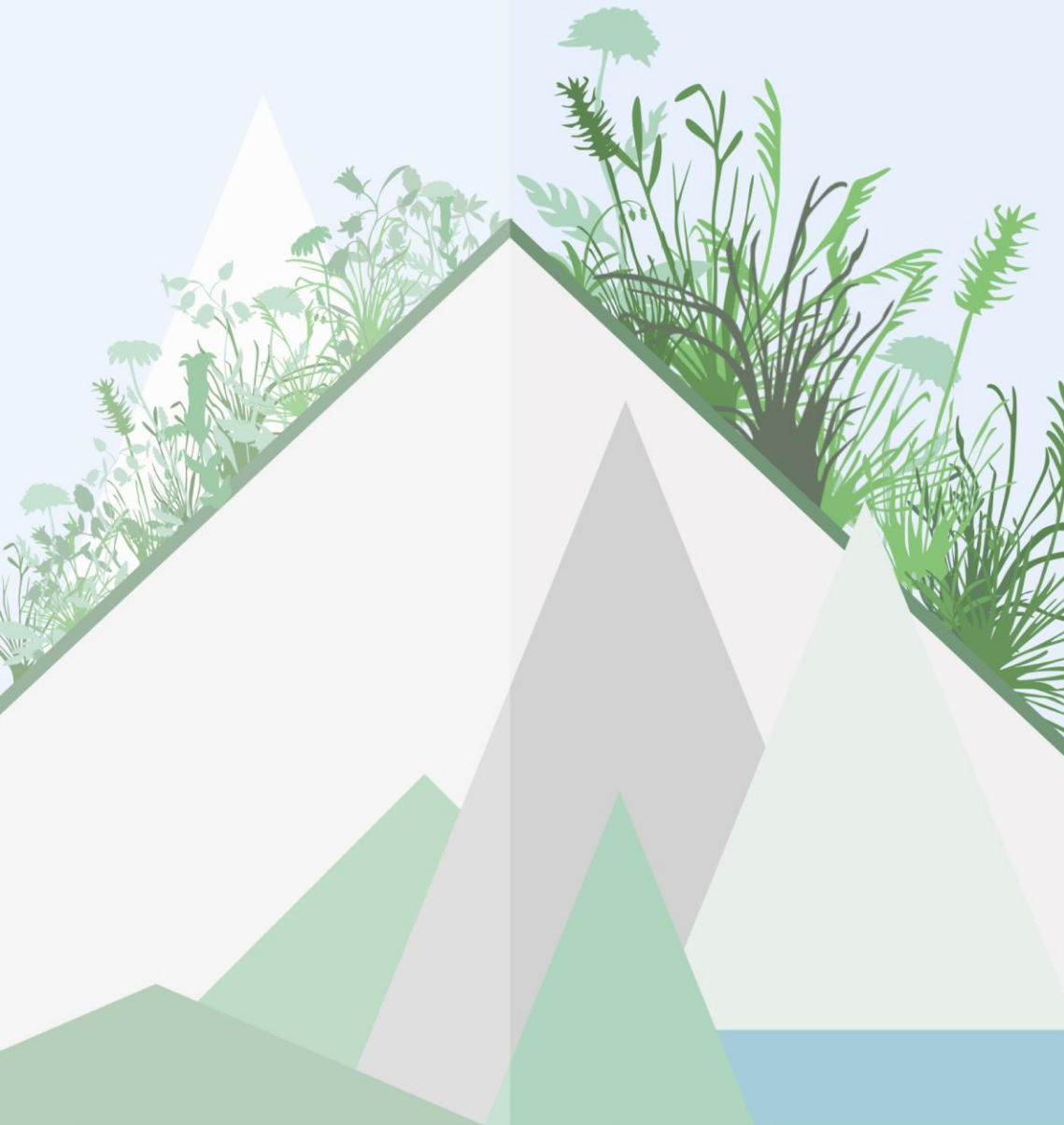


Consequences for grassland ecosystems



Cold and dry climate

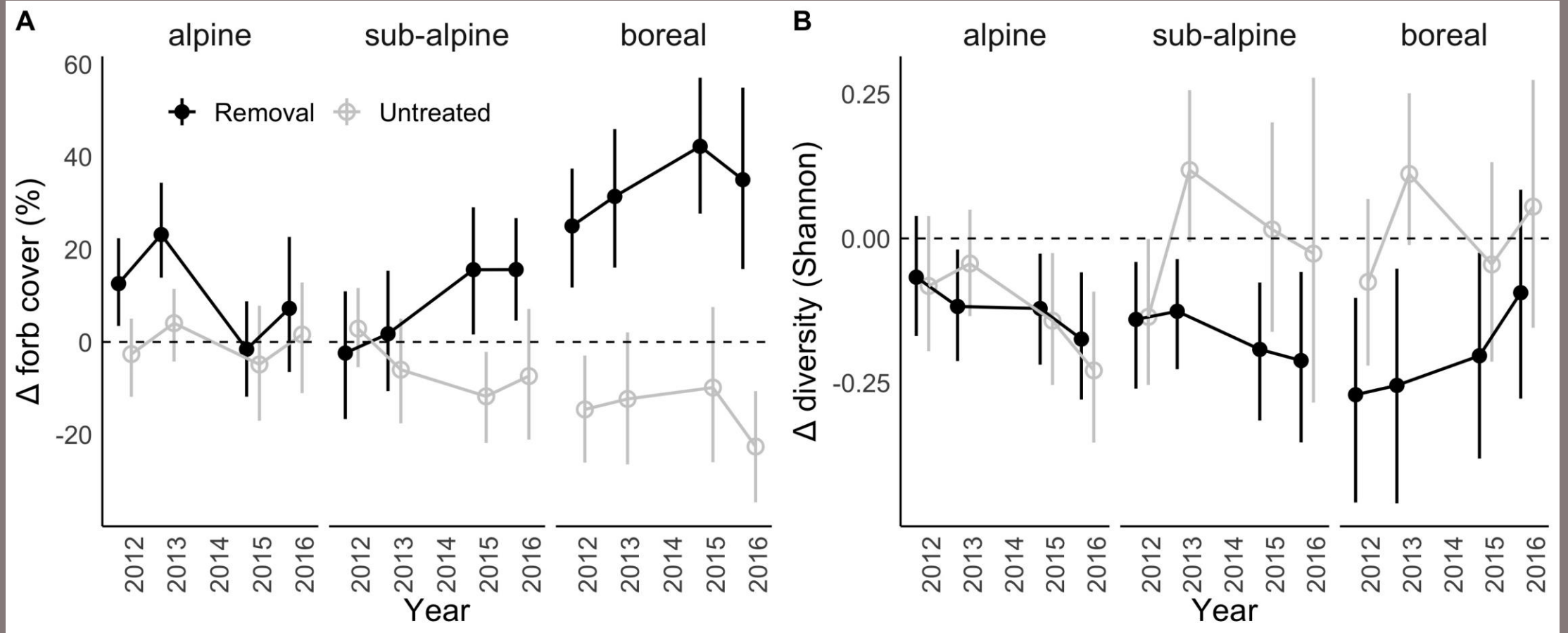
Warm and wet climate

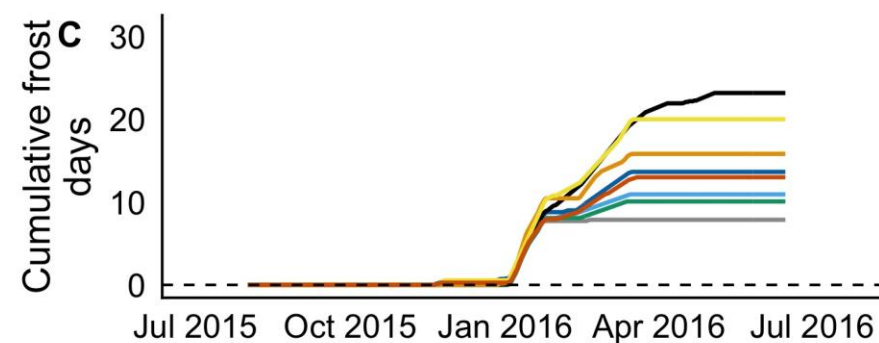
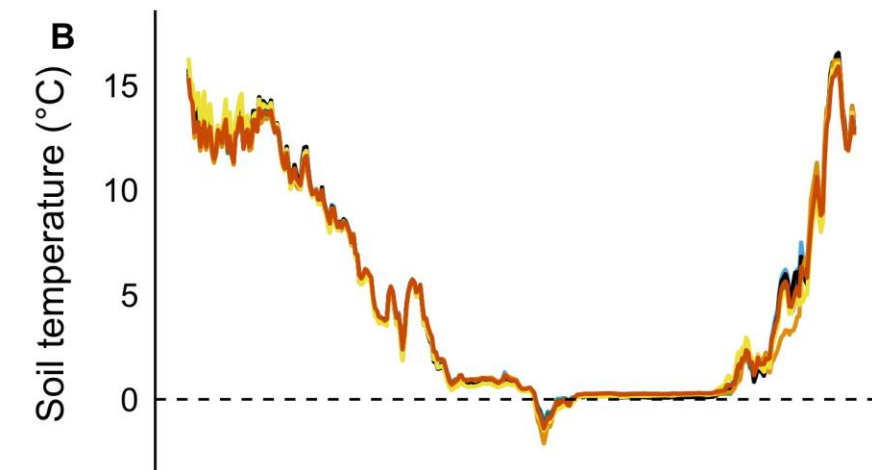
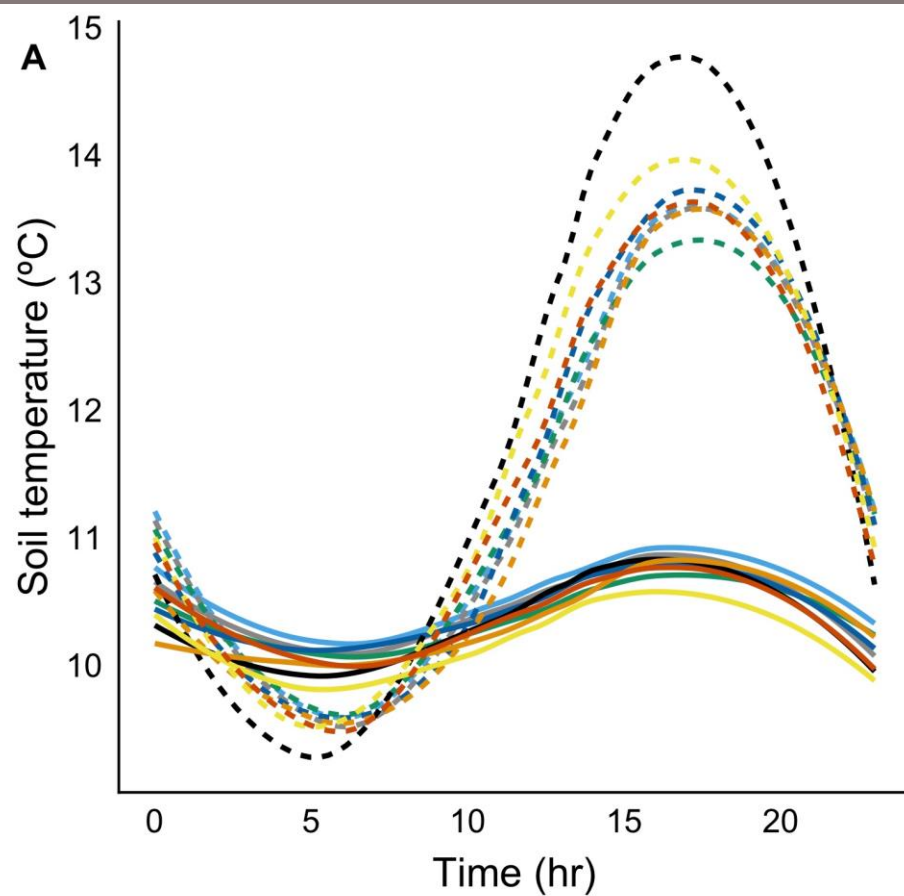


Wrap-up:

- ecosystem functioning and community dynamics determined by temperature and precipitation
- **BUT** these effects strongly mediated by functional group interactions
- inevitable reduction in biodiversity of these highly diverse ecosystems

Appendix figures:





- Functional groups
- Bare ground
 - Bryophytes
 - Forbs
 - Graminoids
 - Bryophytes and forbs
 - Graminoids and bryophytes
 - Forbs and graminoids
 - Bryophytes, forbs and graminoids
- weather
- cloudy
 - - sunny

