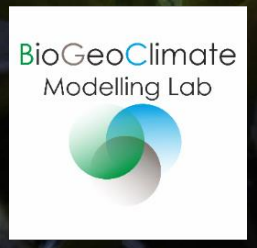
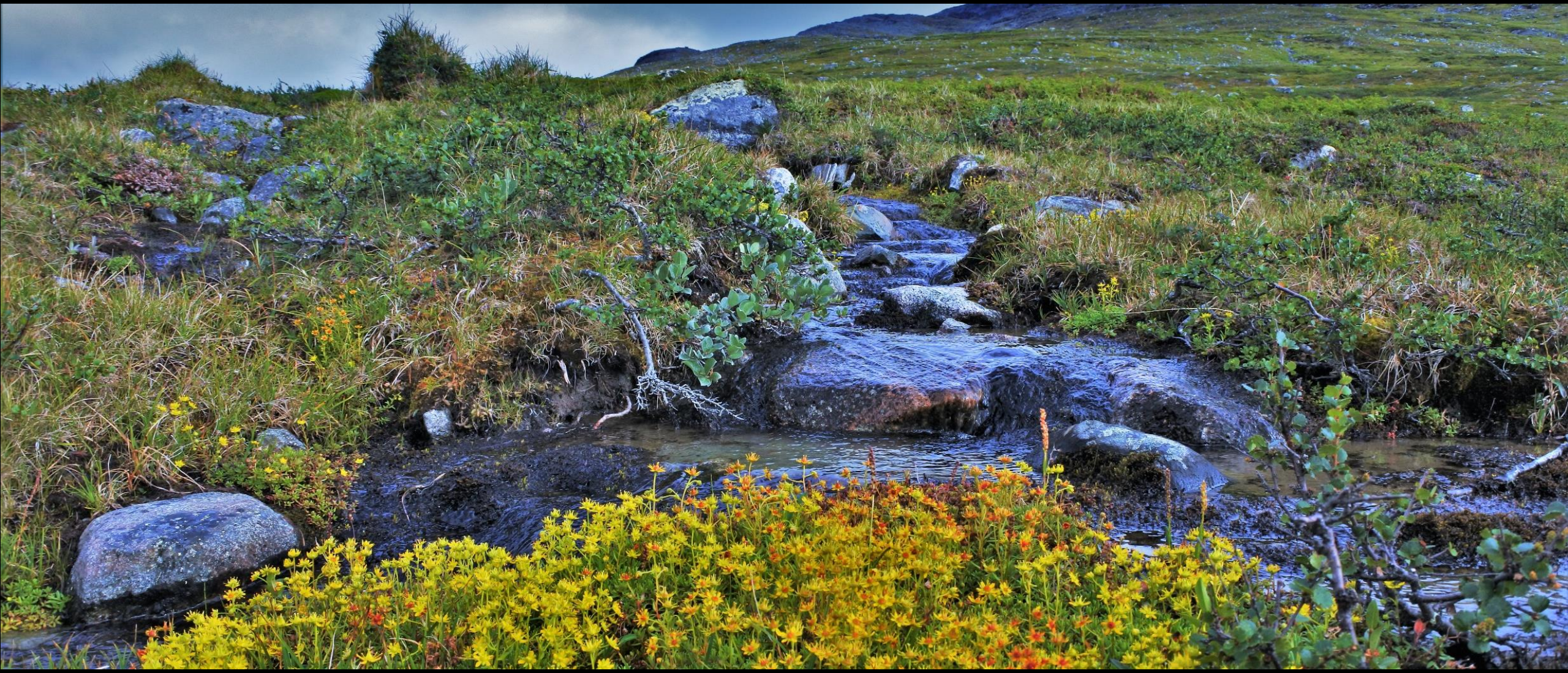
Water as a resource, stress and disturbance shaping tundra vegetation

Kemppinen, Niittynen, Aalto, le Roux, & Luoto
julia.kemppinen@helsinki.fi
@juliakemppinen

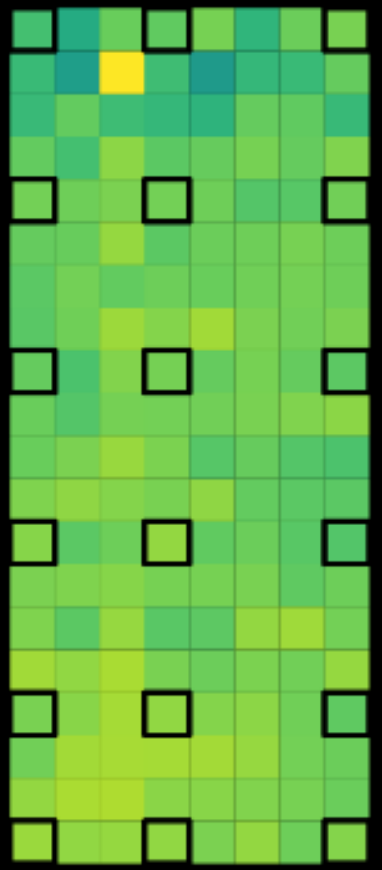




Soil moisture controls tundra vegetation.

We need more research on moisture conditions, and their impacts on Arctic biodiversity.

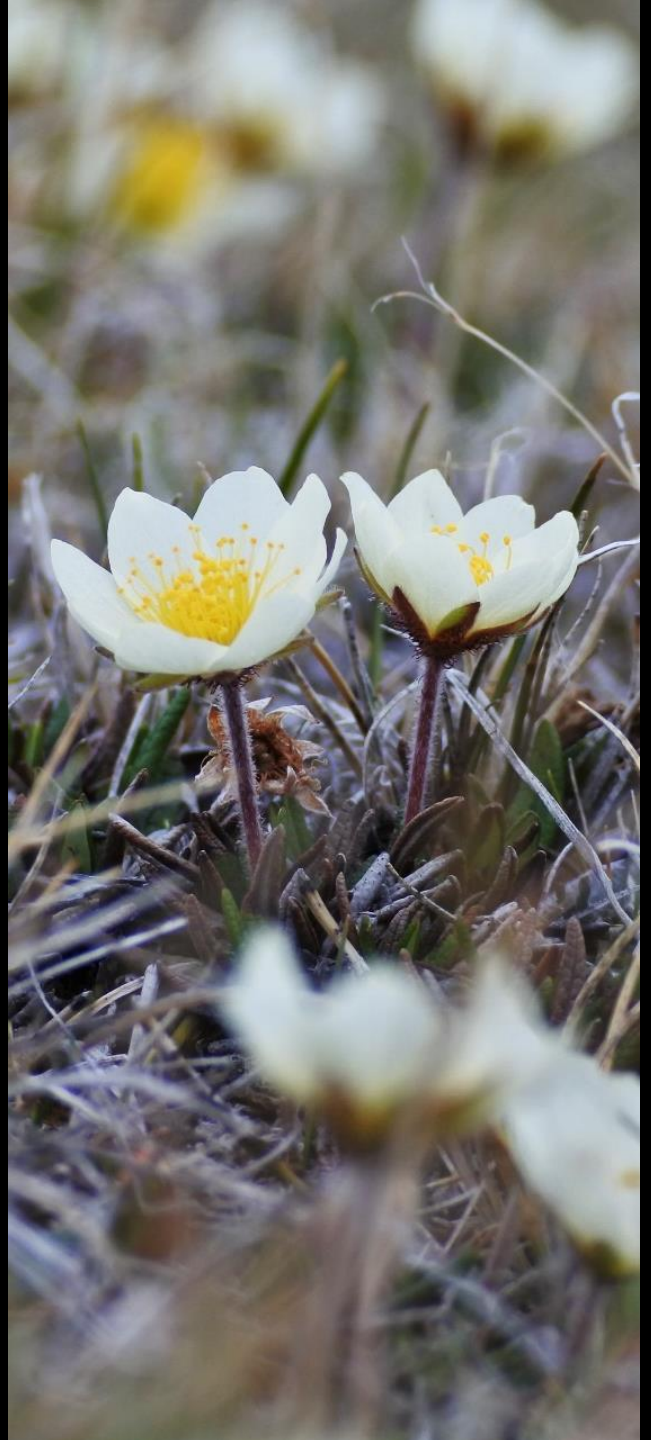
Fine-scale data for understanding fine-scale patterns



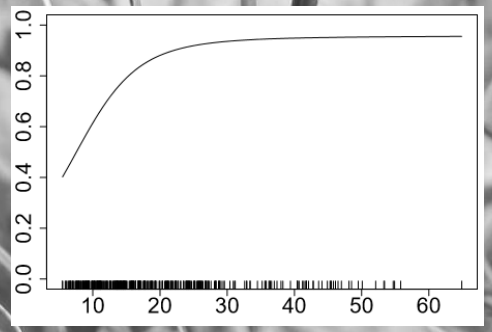
UNDER REVIEW


Species richness
Vasculars
Mosses
Lichens
800 1200
GDD
(°C)
0.2
R
(MJ /
a)
.0 5.
S
(pH)
.0
0 20
CRY
(%)
60 0 20
BIO
(%)
10 30 50
WRE
(VWC%)
0 40 80
WST
(CV%)
0 20 60
WDI
(%)
UNDER
REVIEW
TEMPERATURE
LIGHT
NUTRIENTS
DISTURBANCE
BIOTA
WATER RESOURCE
WATER STRESS
WATER DISTRUBANCE

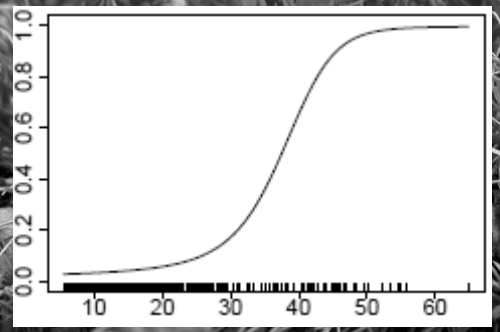




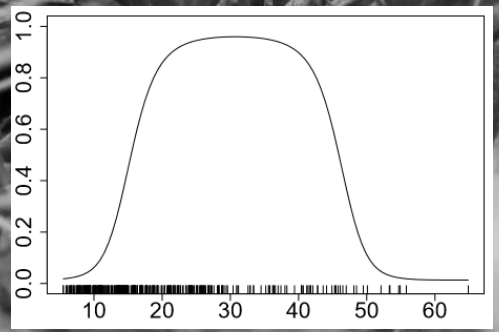

Next step:
Plant-moisture relationships across the Arctic?



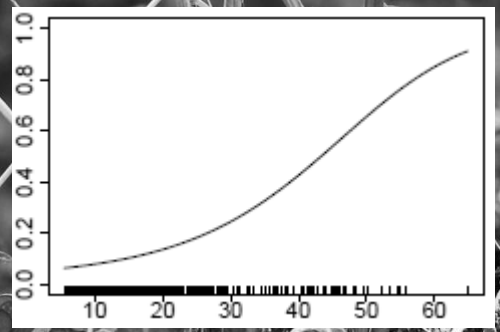
Bistorta vivipara



Huperzia selago



Dryas octopetala



Luzula confusa


Next step:
Plant-moisture relationships across the Arctic?
Kilpisjärvi
Finland
Rastigaisa
Norway
Kangerlussuaq
Greenland
Longyearbyen
Svalbard

THANK YOU

julia.kemppinen@helsinki.fi
@juliakemppinen