

New assessment highlights climate change as a serious threat to northern ecosystems in Finland – IUCN Red List of Ecosystems (RLE)

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Arctic
Biodiversity
Congress

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Photo: Arto Saikkonen



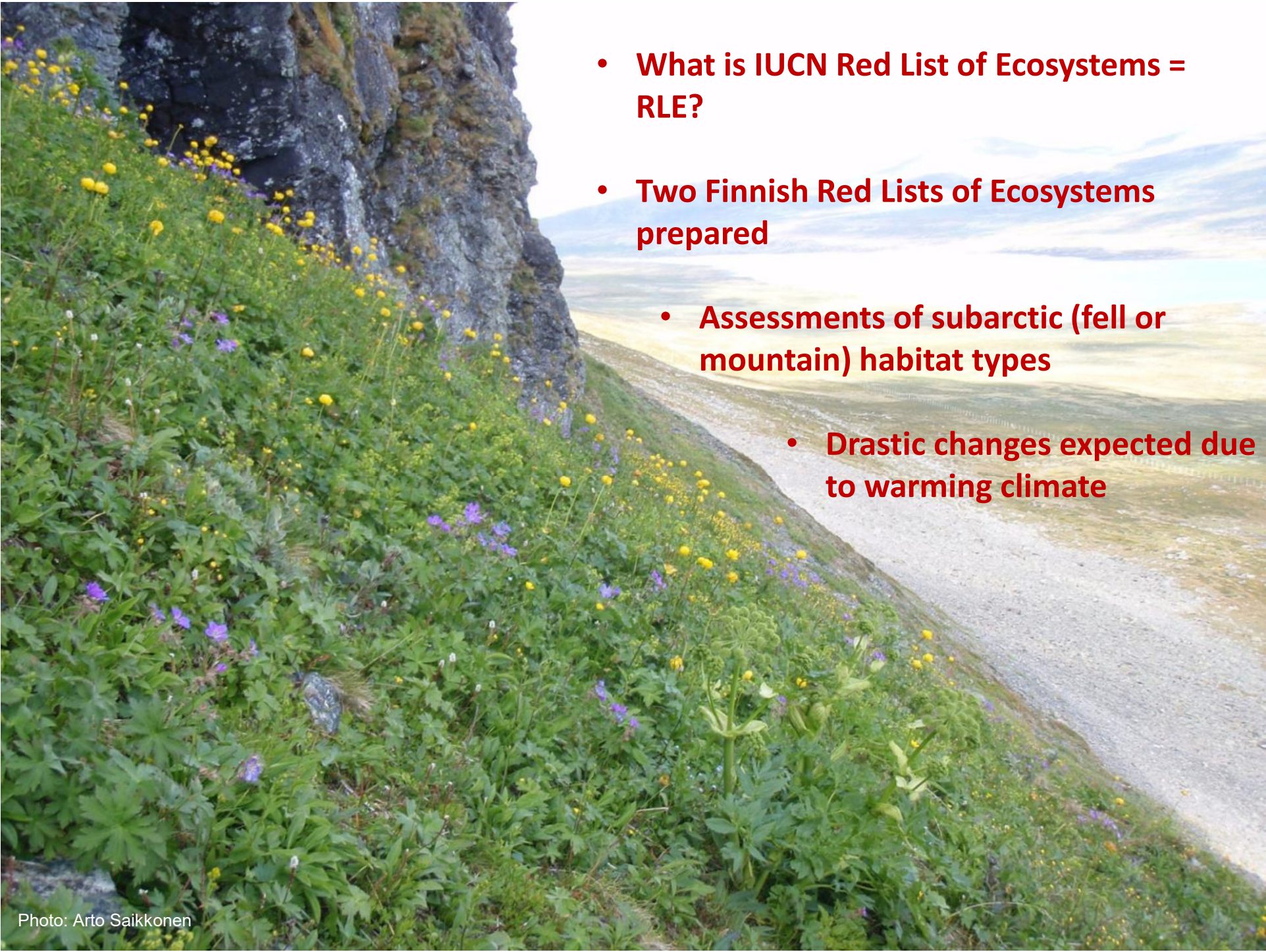
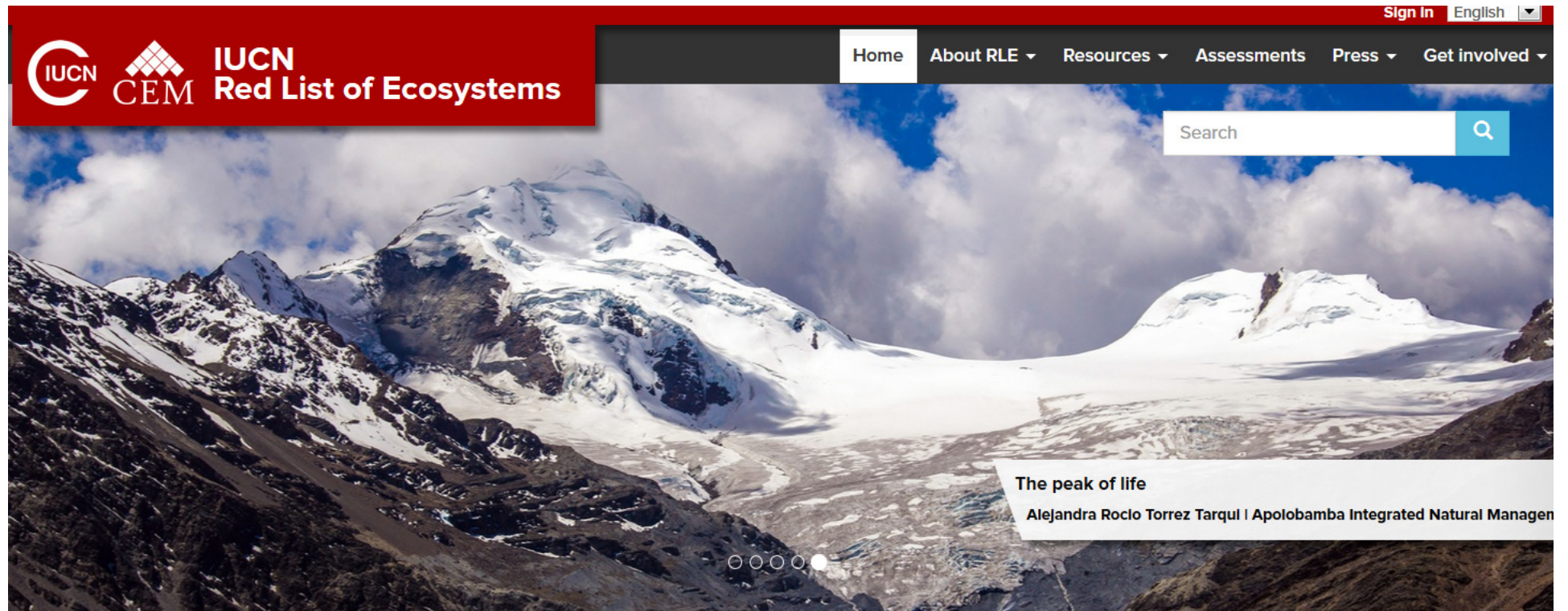
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- What is IUCN Red List of Ecosystems = RLE?
 - Two Finnish Red Lists of Ecosystems prepared
 - Assessments of subarctic (fell or mountain) habitat types
 - Drastic changes expected due to warming climate

Photo: Arto Saikkonen

IUCN: global Red List of Ecosystems by 2025

- Plans to assess arctic ecosystems as part of the global task

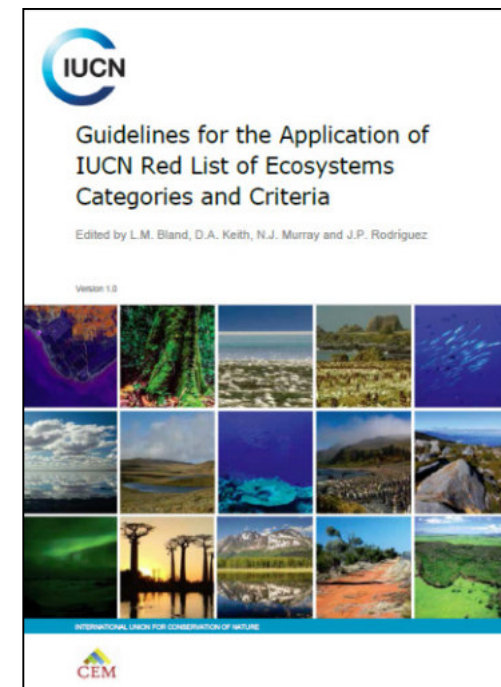
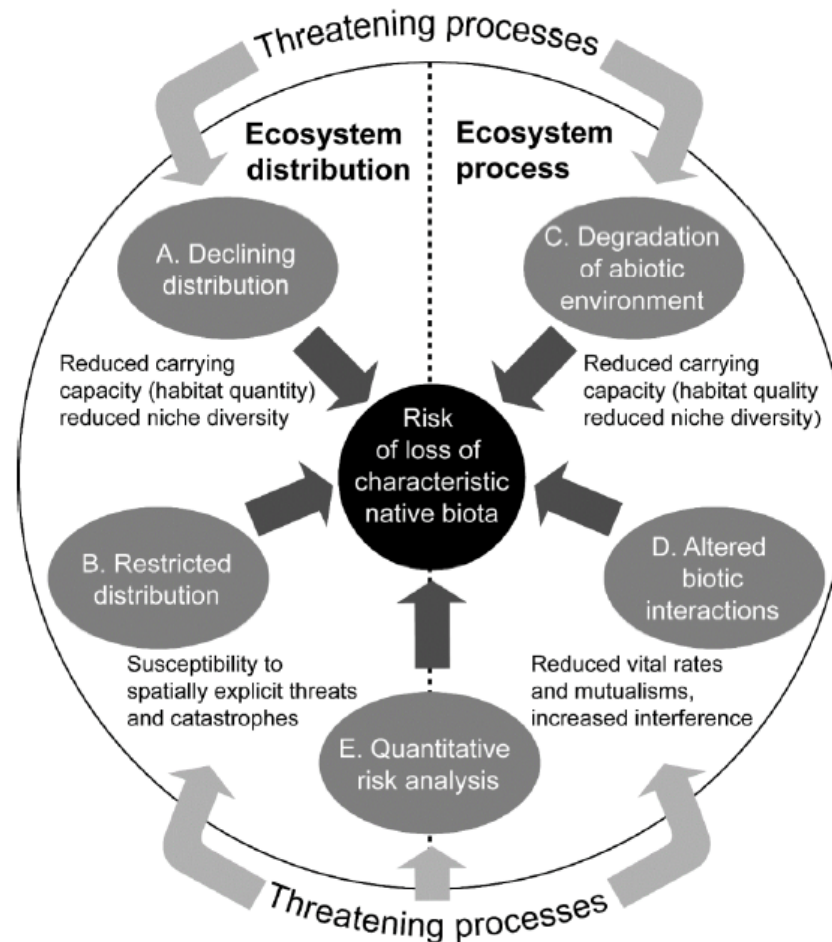


Finland has assessed its ecosystems twice, in 2008 and in 2018.

Results of the second assessment will be published **December 18th 2018.**

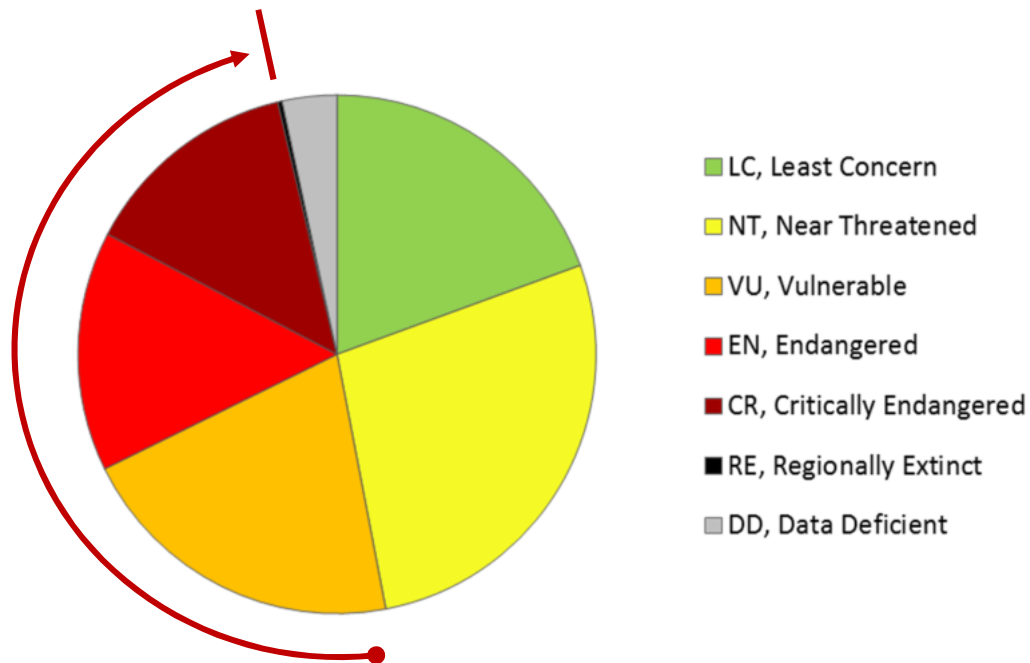
New IUCN Red List of Ecosystems Criteria

In the second assessment Finland is using the new IUCN Red List of Ecosystems criteria



Finnish RLE 2008

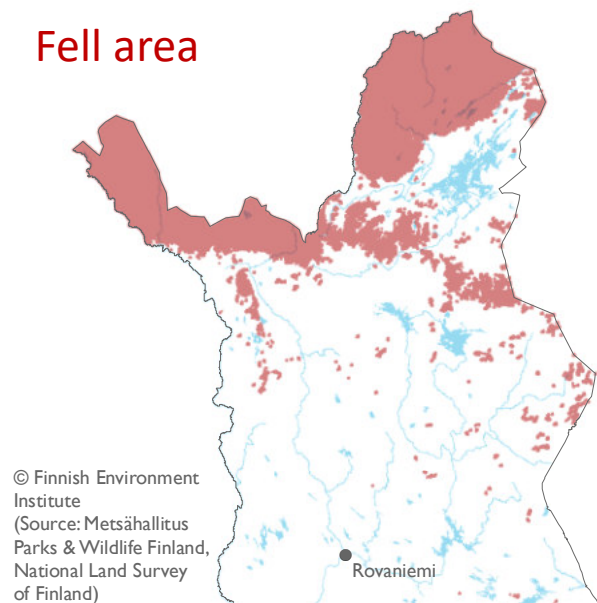
In 2008, 368 habitat types were assessed and 51 % of them were categorized threatened.



Threatened categories = Vulnerable, Endangered and Critically Endangered (IUCN 2015)



Fell area



Part of classification of subarctic habitat types:

Mountain heaths

Wind-exposed mountain heaths

Empetrum mountain heaths

Betula nana mountain heaths

Myrtillus mountain heaths

Phyllodoce caerulea mountain heaths

Calluna mountain heaths

Cassiope tetragona mountain heaths

Calcareous *Dryas octopetala*

mountain heaths

Non-calcareous *Dryas octopetala*

mountain heaths

Red List assessments of subarctic habitat types in Finland

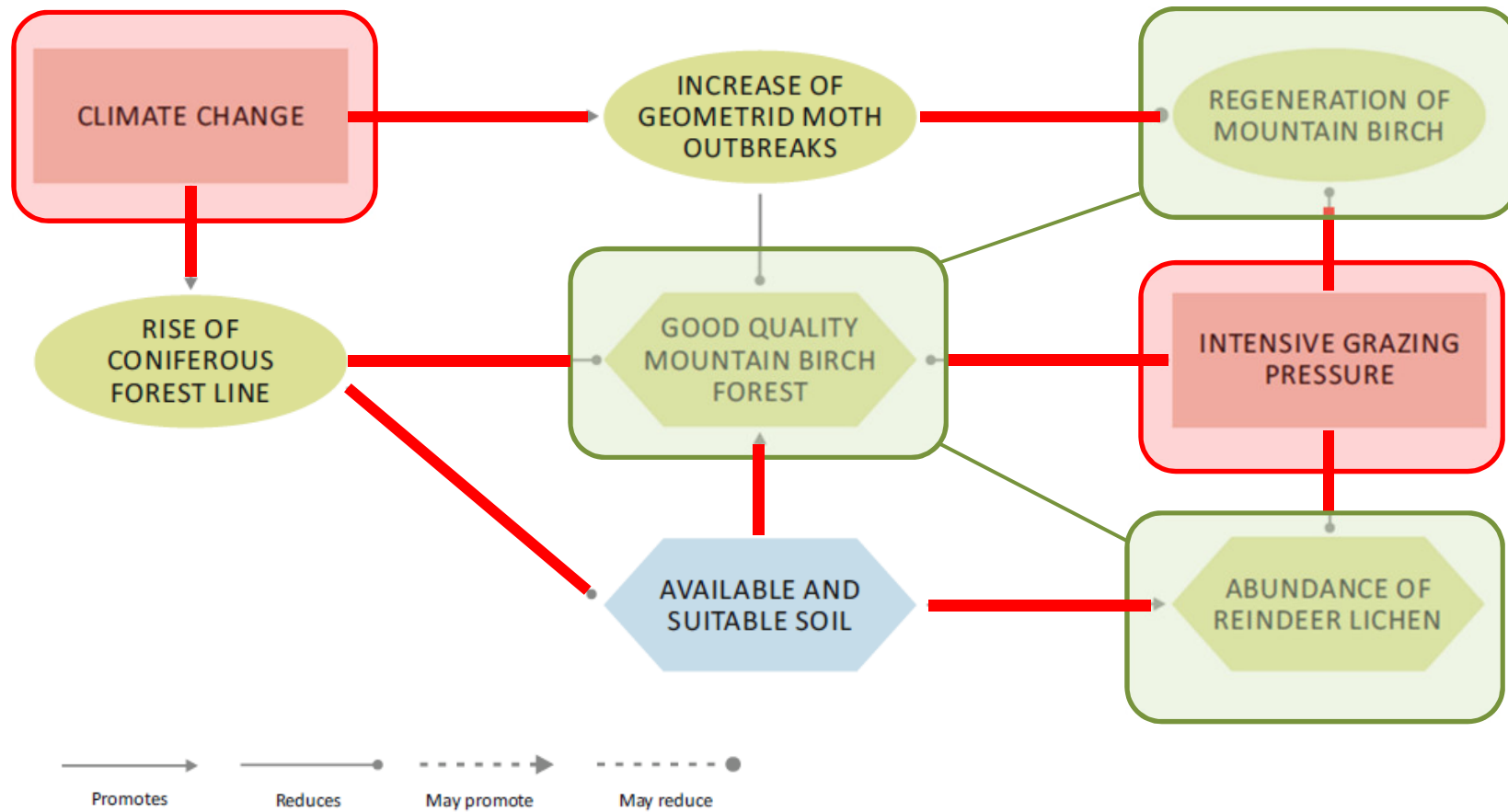
In all 53 subarctic / fell habitat types were assessed:

- How common they are?
- Have they declined & how much?
- Has their quality changed?

Most important data source the biotope data of Metsähallitus Parks & Wildlife Finland.

Photo: Arto Saikkonen

Threats, biotic and abiotic processes and elements of dry mountain birch forests



Utilization of all available data

- On habitats, pressures, climate

Questionnaire survey for the local reindeer herders to collect their knowledge on changes in local climate.

→ Support for meteorological data



KOKEMUKSIA MUUTTUVISTA VUODENAJOISTA

Teksti Minna Tununen, Sipa Rosmus, Elsa Pääkkö, Maja Arvola ja Katariina Mäkelä. Kuva Tarja Koneit.

Poronhoitajilla on lapsesta asti kertynyttä kokemusta paliskuntansa luonnonoloista eri vuodenaikoina. Heille osoitetun kyselyn tavoitteena oli kerätä paikallista tietoa sääolosuhteista ja ilmastosta sekä niiden vaikutuksista luontoon ja poronhoitoon.

Kokemusperäinen paikallistieto ja havainnot säästä ja luonnonoloista ovat arvokkaita, sillä niillä on suora vaikutus poronhoitoon harjoittamiseen. Tavoitteenamme on yhdistää poronhoitajien kokemusperäinen tieto ja tieteellinen tieto, ja siten laajentaa ja syventää ymmärrystä luonnon ja ihmisen välisestä vuorovaikutuksesta.

Kyselyyn vastaaja arvioi vuodenaikoittain esitettyjä välttämisiä säästä ja ilmastosta viisiportaisella asteikolla. Vastaaja saattoi myös kuvata mahdollisia muutoksia ja niiden vaikutuksia paliskunnan poron-



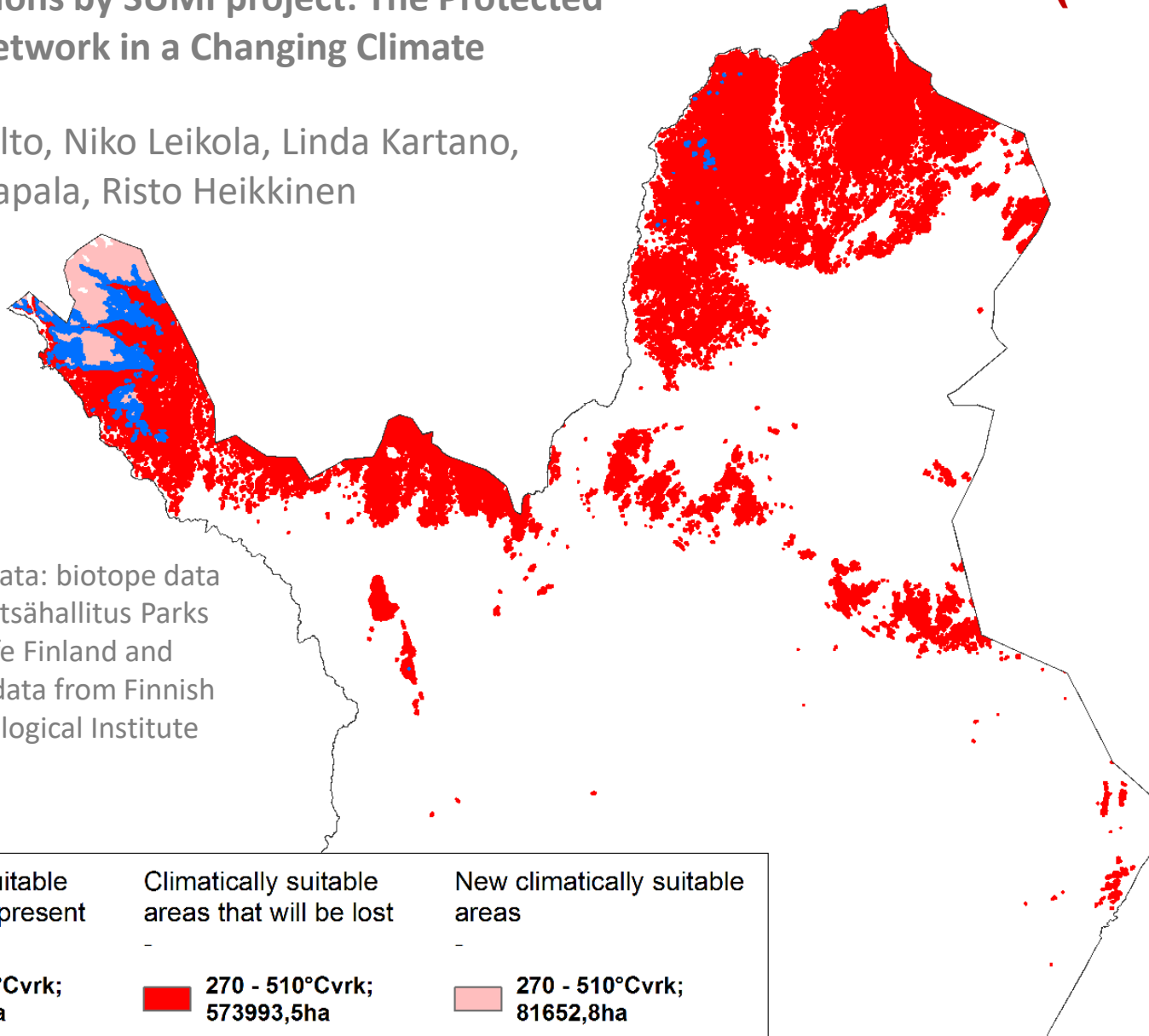
Majority of mountain (subarctic) heaths will be lost from Finland

Projections by SUMI project: The Protected Area Network in a Changing Climate

RCP4.5 (2040–2069)

Juha Aalto, Niko Leikola, Linda Kartano,
Kaisu Aapala, Risto Heikkinen

Source data: biotope data
from Metsähallitus Parks
& Wildlife Finland and
climate data from Finnish
Meteorological Institute

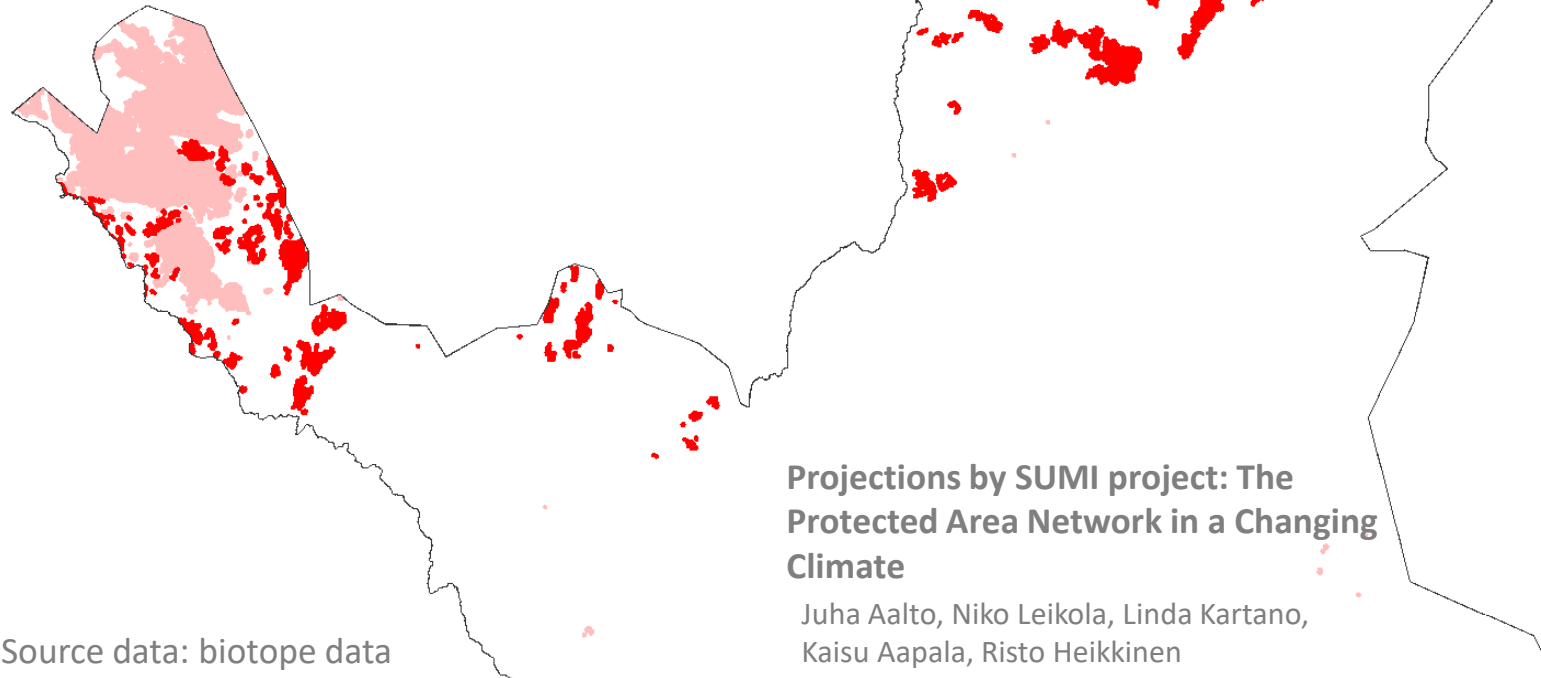


Future of palsa mires?

Photo: Markku Mikkola-Roos



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Climatically suitable
areas both at present
and in future

0ha

Climatically suitable
areas that will be lost

364 - 551°Cvrk;
39156ha

New climatically
suitable areas

366 - 549°Cvrk;
132263,3ha

Thank you

Rest of RLE results available 18th December 2018.



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment



METSÄHALLITUS
MEÄHICIRÄDDEHUS



GTK



Ålands
landskapsregering



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UNIVERSITY OF HELSINKI



UNIVERSITY OF
EASTERN FINLAND



JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ



LAPIN YLIOPISTO
UNIVERSITY OF LAPLAND



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