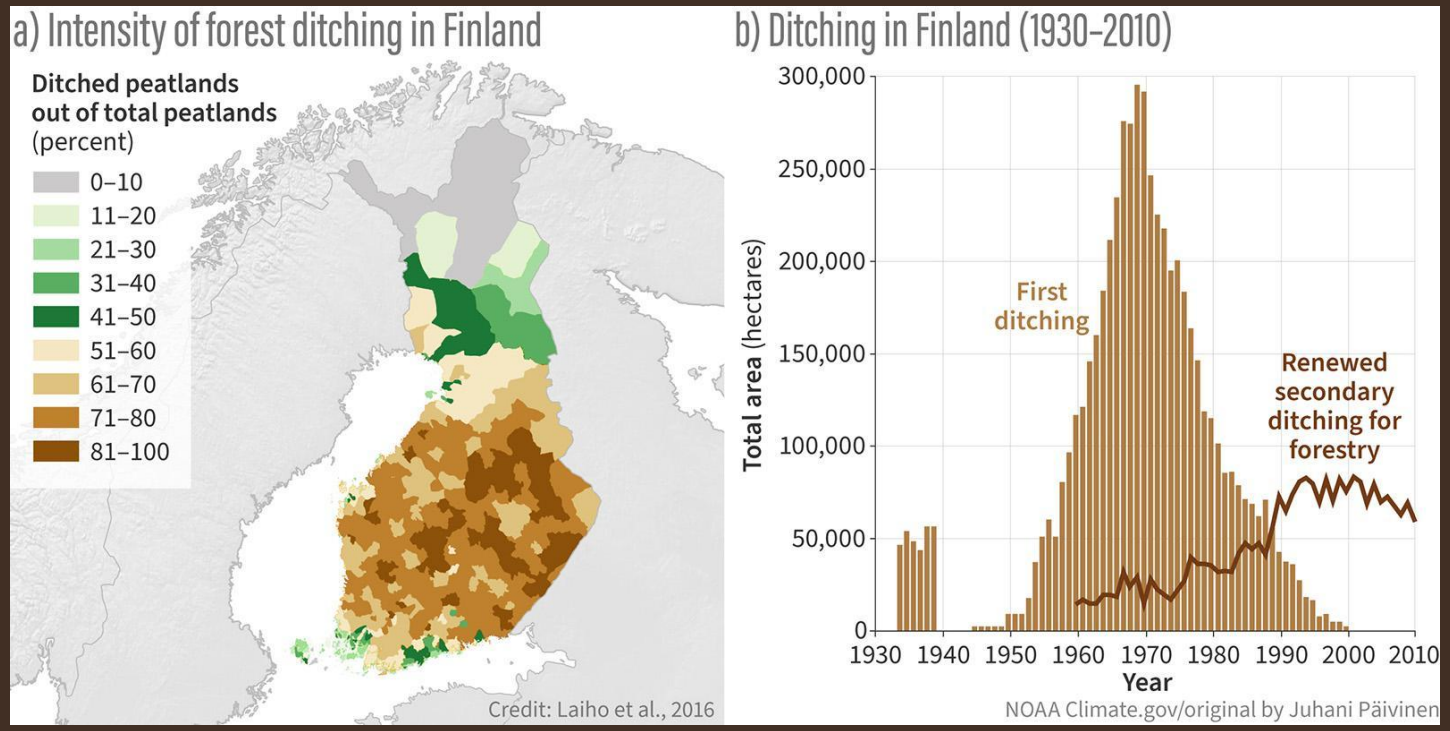
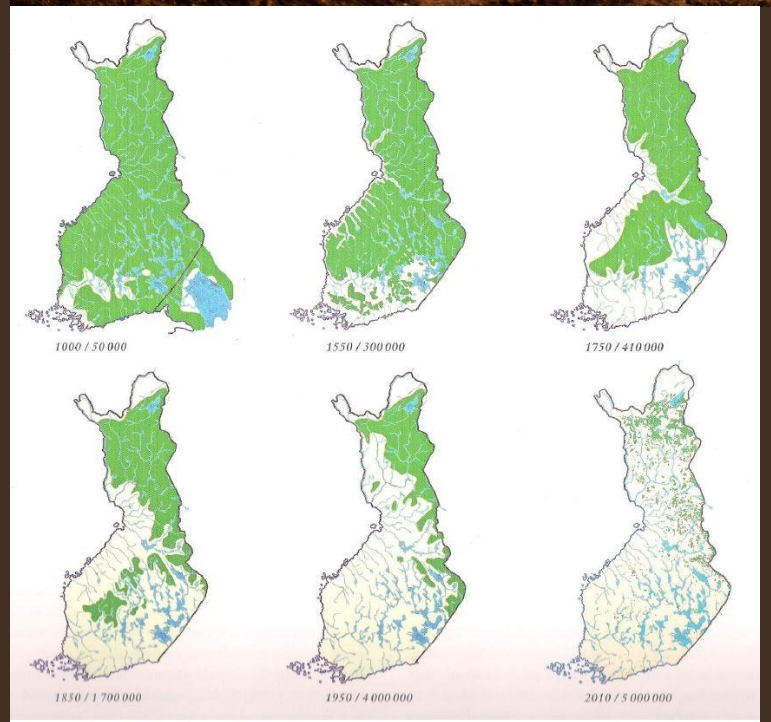
Landscape Rewilding Programme and Snowchange Cooperative

- Snowchange is a non profit Arctic and boreal NGO, founded in 2000
- Landscape Rewilding Programme was initiated in 2017 with Rewilding Europe, EIB and Snowchange and subsequently has grown to be the largest restoration programme in Finland
- Traditional and scientific knowledge-driven peatland & Boreal habitat restoration

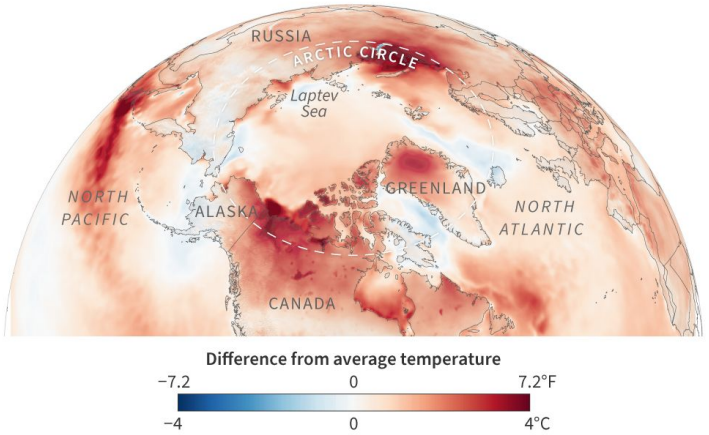
Why we restore Boreal peatlands?





Lähde: P. Keto-Tokoi & T. Kuuluvainen 2011: Suomalainen aarniometsä

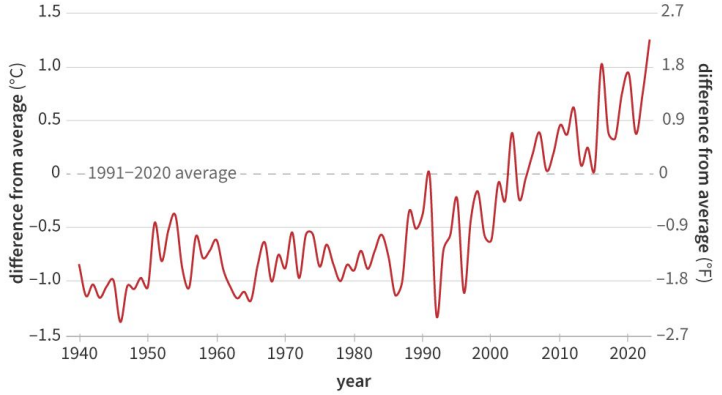
Widespread warmth across the Arctic in summer 2023



Jul–Sep 2023 vs.
Jul–Sep average (1991–2020)

NOAA Climate.gov
Data: C3S ERA5

2023 brought Arctic's hottest summer on record



Jul–Sep average
1940–2023

NOAA Climate.gov
Data: S. Bigalke

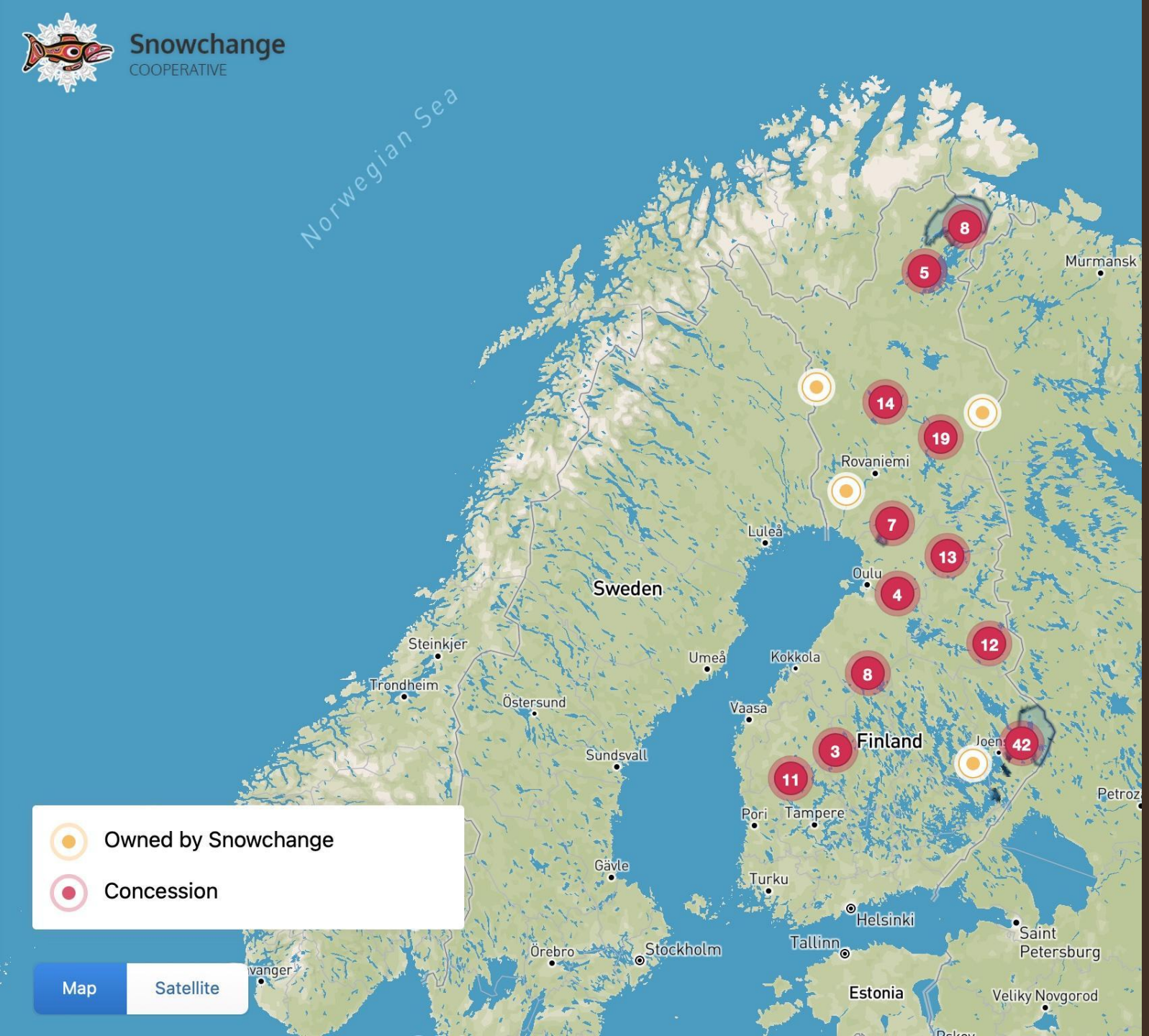
First site: Linnunsuo, a degraded peatland and marshmire, 180 hectares

2012

2020

Long-billed Do-witcher, Terek Sandpiper and other rare waders

- Monitoring: Birds: from 2 bird species into 205 species. Special interest: Wood Sandpiper and Northern Pintail as key species.



By June 2025:

- 7500 hectares owned over 150 sites
- Through land concessions and agreements over 56,000 hectares under rewilding and restoration influence
- Agreements with the state companies, forest operators, municipalities, private people

Kivisuo, 750 hectares, largest protected area in Finland in 2020 in the sub-Arctic

For example the nesting area of Peregrine Falcon

Practical actions, scales and methods

Small landscape rewilding actions – 1-5 hectare wetlands

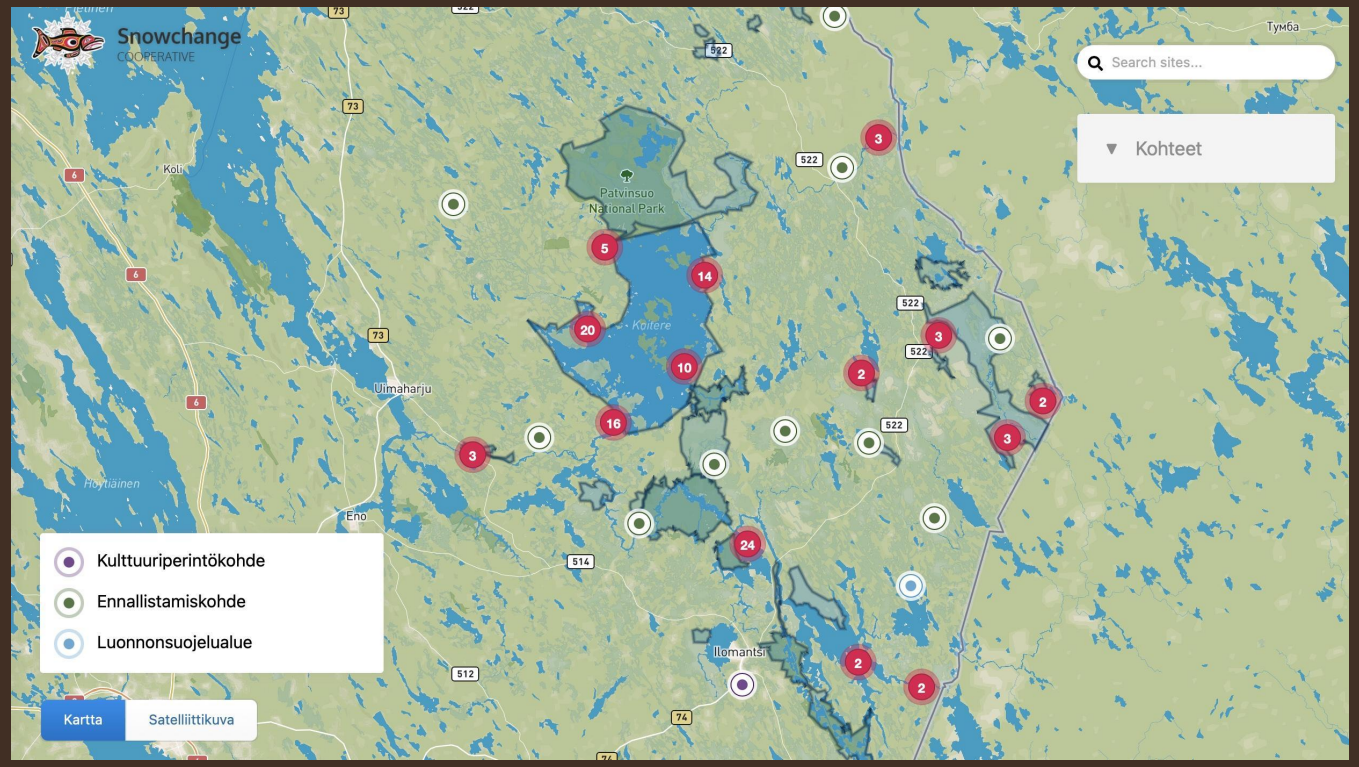
Single site actions – example of Hautaneva, 30 hectares middle boreal

European Golden Plover

Salojenneva, 36 hectares

Keystone species: Southernmost population of Willow Ptarmigan

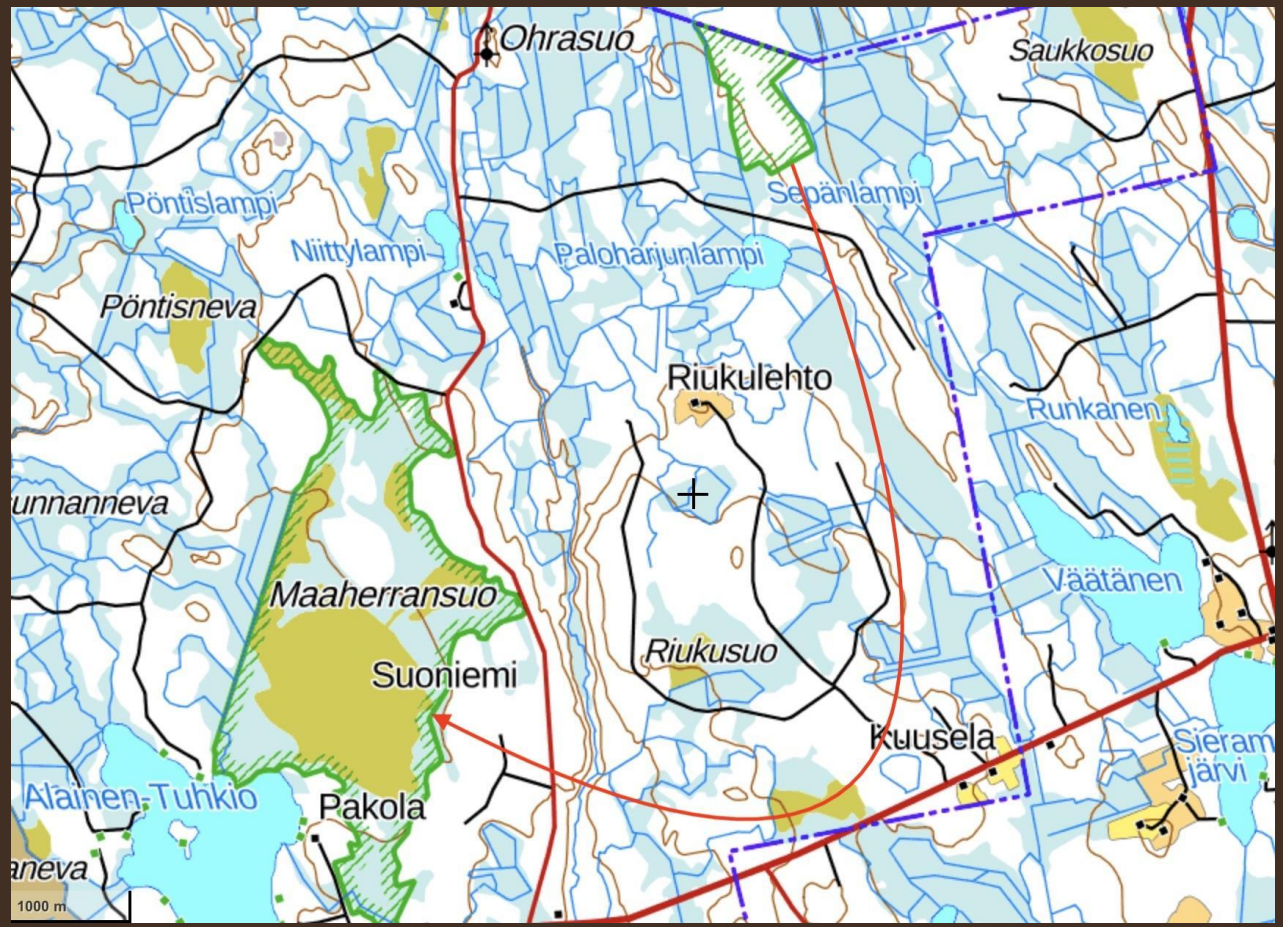
Catchment Restoration: Koitajoki 6500 square kilometers in North Karelia – the ELSP Project: Koitajoki – Land of Epic Poetry



Methods – Larger-scale peatland restoration in Koitajoki Watershed

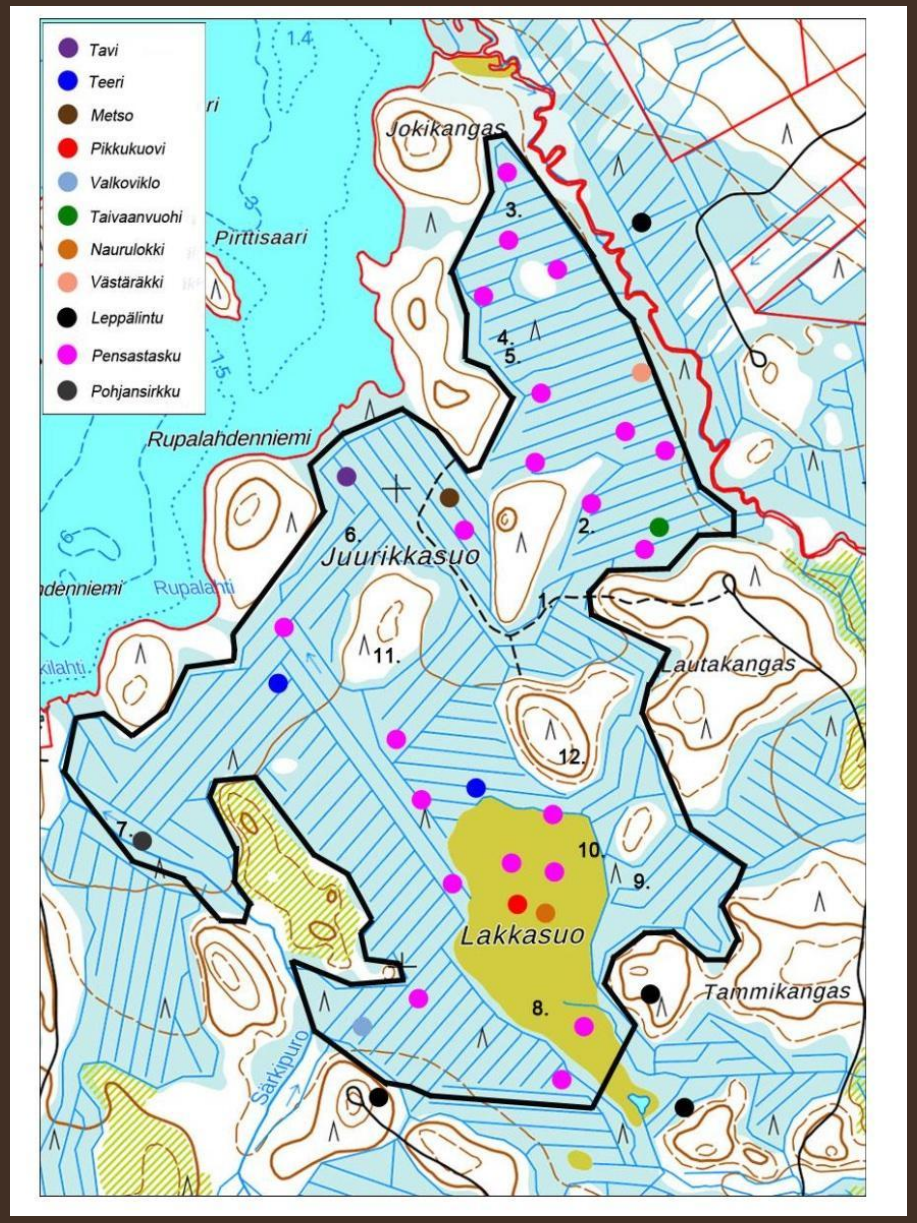
Interconnections to Natura 2000 Sites – Example of Ähtäri

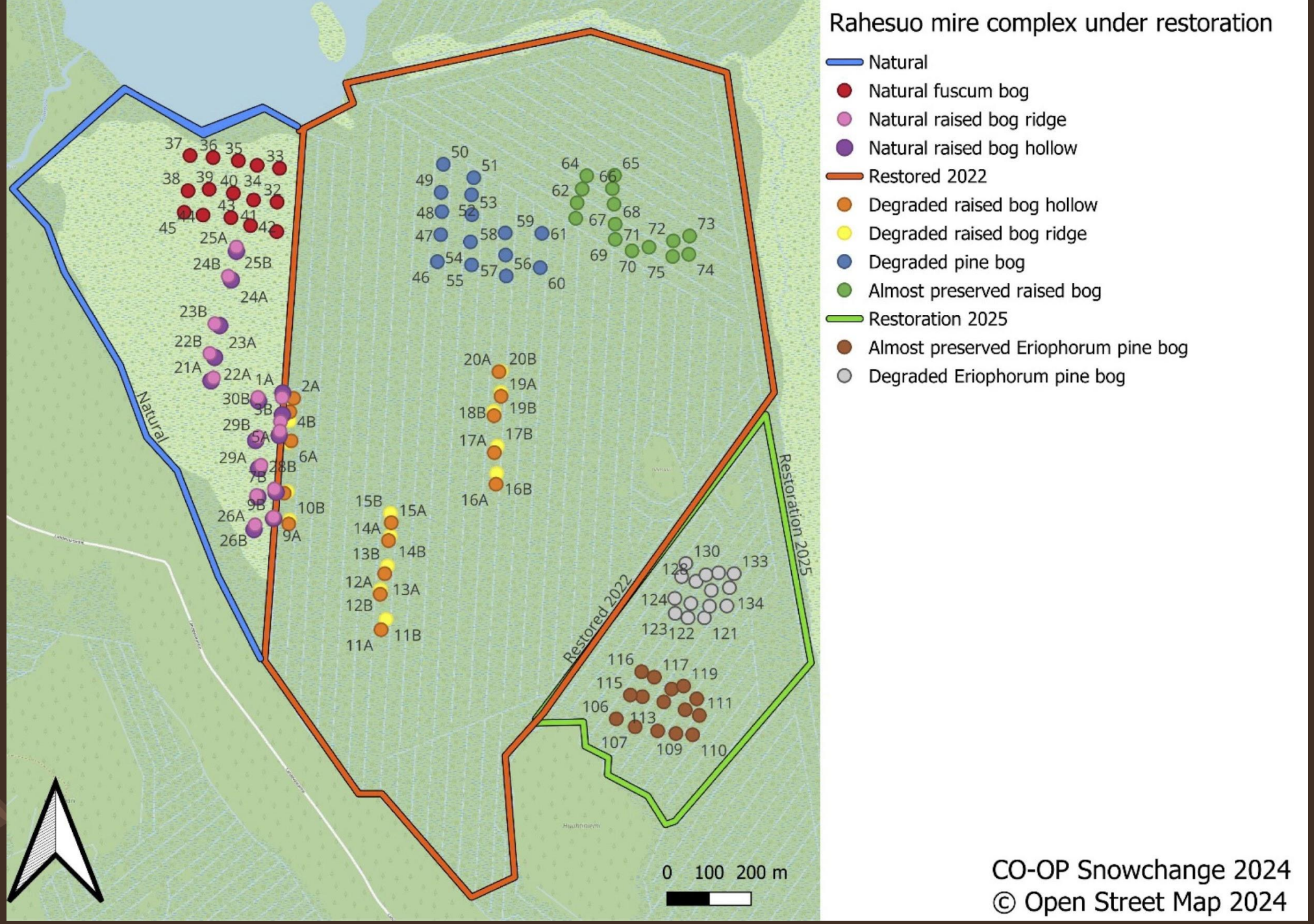
- Already established Maaherransuo, 418 hectares, a Natura 2000 site, for birds main species waders, cranes etc.
- Northeast of Maaherransuo a OGF protection area
- Establishment of 66 hectare ecological corridor through land purchases, including Oravasuo, 20 hectares

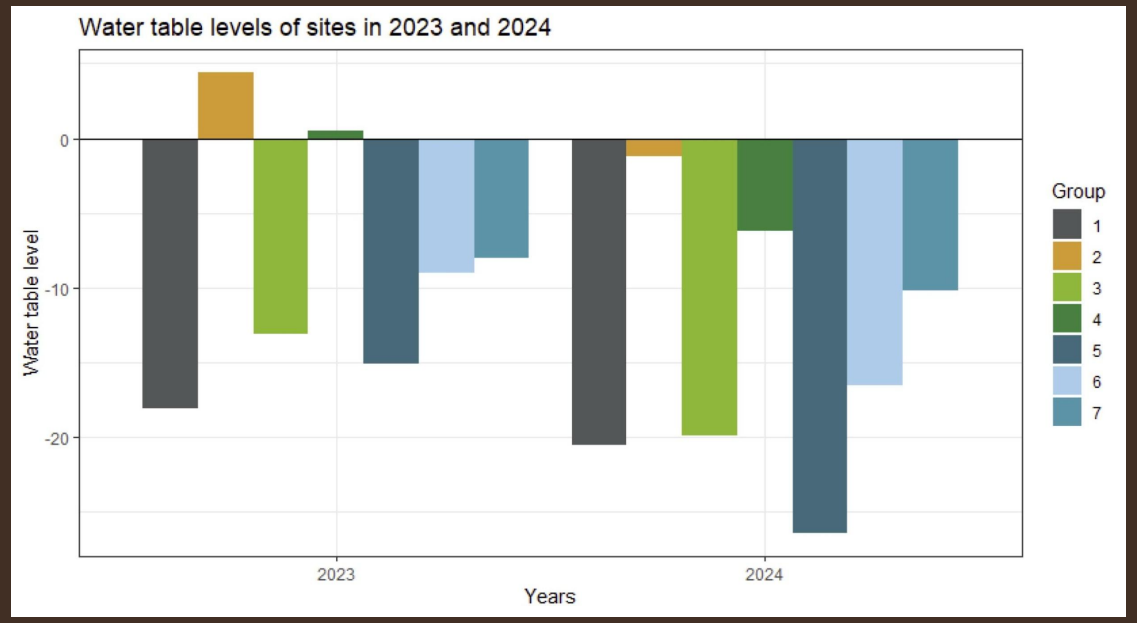


Science and local knowledge intertwine in large scale monitoring

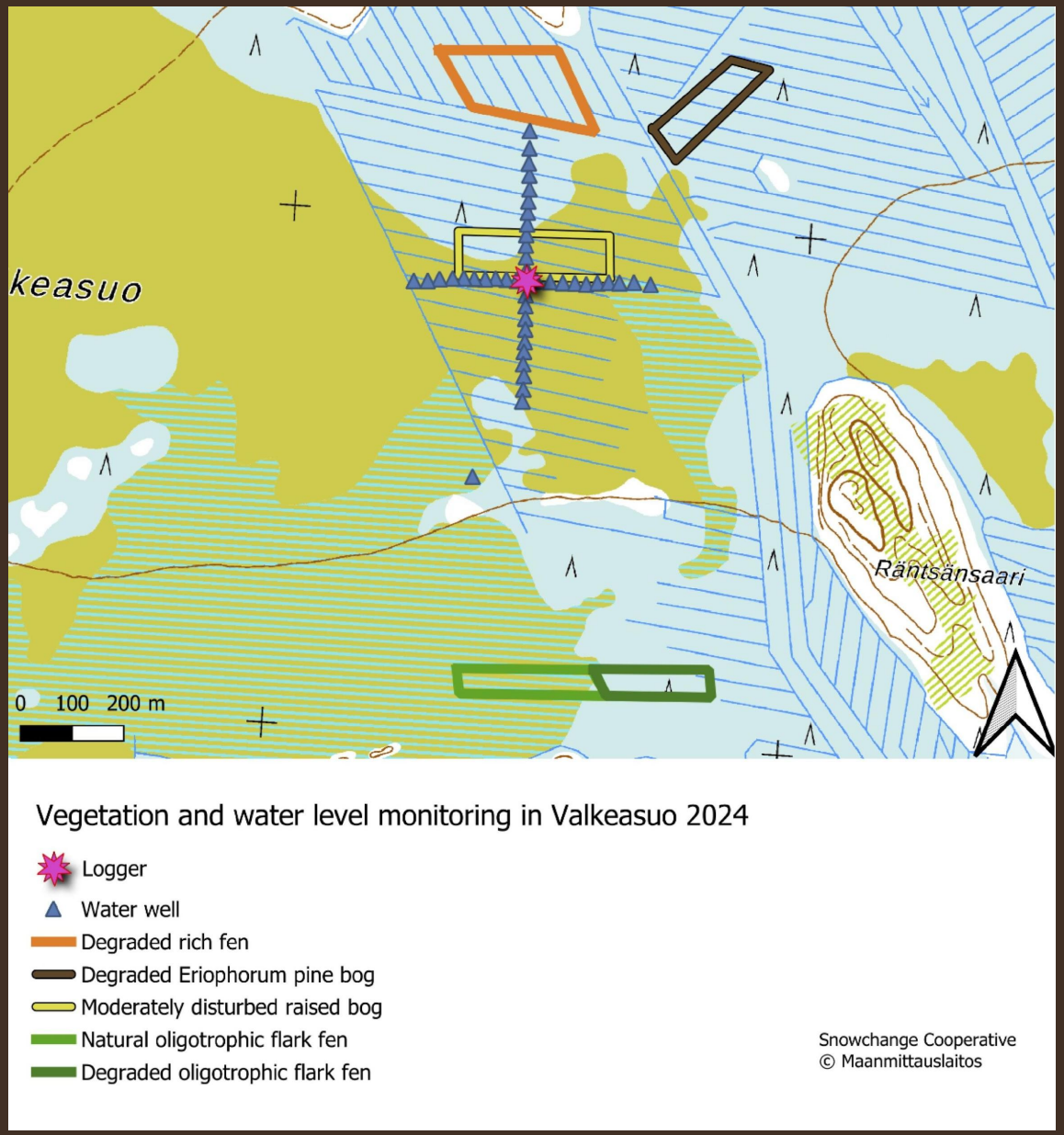
Birds:
Transsects, Nesting Locations
-an example from a boreal peatland of Lakkasuo, Ilomantsi




Rahesuo mire complex under restoration
Natural
Natural fuscum bog
Natural raised bog ridge
Natural raised bog hollow
Restored 2022
Degraded raised bog hollow
Degraded raised bog ridge
Degraded pine bog
Almost preserved raised bog
Restoration 2025
Almost preserved Eriophorum pine bog
Degraded Eriophorum pine bog
Natural
Restored 2022
Restoration 2025
0 100 200 m
CO-OP Snowchange 2024
© Open Street Map 2024



Site	Variables	May 2024	November 2024
Likosärkkä	Aluminium (µg/l)	95	180
	COD-Mn (mg/l)	15	13
	Color (mg/lPt)	260	230
	Conductivity (µS/cm)	26	31
	Cu (µg/l)	0,8	<1
	DOC (mg/l)	15	9,2
	Iron (µg/l)	9700	20000
	Mn (µg/l)	210	250
	Organic matter (mg/l)	11	35
	pH	6,9	6,7
	Total Nitrogen (µg/l)	390	930
	Total Phosporous (µg/l)	25	30
	Turbidity (FNU)	14	11



The River Guardian Programme

- **Core community-based environmental observations:**
- Collection of critically important environmental information - detection of endangered willow ptarmigan stocks and populations, extremely endangered salmonids and early detection of the wild forest reindeer (Rangifer) movements in the Koitajoki basin in addition to local status and trends of animals, fish and birds
- **Oral histories and backcasting change:**
- Using land practices, place names and oral histories the Koitajoki ecological baselines and histories have emerged and positioned present into a continuum of little-known pasts
- **Cultural indicators:**
- Linguistic, cultural and biological indicators within traditional knowledge has helped whitefish (Coregonus) habitat and restoration actions pointing to the role of dialects and local concepts that convey TEK