



**MOUNT
RESILIENCE**

Building resilience to safeguard Arctic livelihoods and ecosystems

Climate change adaptation
in mountainous areas

Lapland, Finland



MOUNT RESILIENCE



MountResilience supports European regions and communities located in mountainous areas to increase their capacity to adapt to climate change and to transition towards a climate-resilient society. The project is conceptualising, testing and scaling up climate adaptation and nature-based solutions to respond to policy and societal needs. Additionally, it seeks to influence citizen behaviours to effectively address specific climate impacts in mountainous regions.



Lapland, Finland's northernmost region, is a sparsely populated rural area defined by its fell landscapes and rich biodiversity. It is **home to the Sámi**, Europe's only recognised indigenous people, whose livelihoods are closely tied to nature. Climate change is already transforming this fragile Arctic environment, with **rising temperatures, reduced snow cover, and shorter winters**. As the Arctic warms much faster than the global average, these changes threaten biodiversity and traditional livelihoods such as reindeer herding, fishing, and tourism.

Adapting to Climate Change

Climate risks:

Ice and snow changes, precipitation changes, temperature increase



An app to identify and monitor climate change impacts in Lapland

Climate change is rapidly transforming Lapland's ecosystems, highlighting the need for better data monitoring. Engaging communities in collecting local data can **strengthen adaptation and support timely responses** to emerging risks. To address this, Finnish partners are developing a **Public Participation Geographic Information System (PPGIS)**, an online tool that gathers observations from residents to track climate impacts. This participatory approach aims to raise awareness, support adaptation measures, and help identify environmental changes across the region.

Climate risks:

Ice and snow changes, precipitation changes, temperature increase

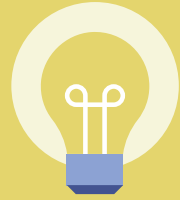


Municipalities, reindeer herders and tourism companies working together to improve climate resilience

Climate change is already affecting Lapland's winter season: delayed snowfall, shorter snow periods, sudden temperature changes, and more frequent storms are reducing the reliability of snow. This is particularly critical in a region where nature-based livelihoods, such as reindeer herding and tourism play a central role. To address these challenges, the MountResilience partners in Lapland are collaborating to (1) **develop regional adaptation plans** based on risk mapping and analysis, (2) design tailored **training materials to raise awareness** on climate change and the needs for adaptation, and (3) provide **coaching opportunities** to support the transition towards more climate-adapted communities.



How to foster collaborative adaptation planning to preserve nature-dependent livelihoods in the Arctic?



MountResilience partners in Lapland have adopted a **multi-actor approach**, involving municipalities, researchers, reindeer herders, and tourism companies in developing tailored adaptation plans. Through surveys, workshops, and a PPGIS tool, stakeholders share knowledge on observed environmental changes and adaptation needs. This approach supports a broader understanding of climate impacts, considering both economic activities and cultural traditions, with **particular attention to the Sámi people**. It also helps collect local data, raise awareness, and strengthen capacity to respond to climate change.





Contact

Project contact:

mountresilience@unimi.it

Regional demonstrator:

lotta.eriksson@lapinliitto.fi



Co-funded by
the European Union

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor CINEA can be held responsible for them.