

Supporting the adaptation of reindeer husbandry to climate change in Finland

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Text Abstract

Alongside with threats related to land use, climate change is one of the most important issues affecting reindeer husbandry. The impacts of climate change are already visible in the reindeer management area which is located in the rapidly warming sub-Arctic climate zone. Climate change, manifesting itself as long-term warming and changes in precipitation and snow conditions, is expected to have both positive and negative impacts on reindeer husbandry.

In practice, climate change is experienced among the herding community by changes in seasonal weather conditions. Weather is a key factor affecting the daily working environment of reindeer herders and each season is characterized by particular weather-related risks requiring strategic responses from the herders. Coping strategies to deal with adverse weather and pasture conditions are largely based on traditional knowledge which may become insufficient in rapidly changing conditions.

In building adaptive capacity, knowledge and learning are important components. Adaptation actions need to be acceptable and actionable by herders, but adaptation also requires collaboration with other land-users within the reindeer management area. Eventually, necessary adaptation may also mean cultural changes and losses to herding communities. Nevertheless, adaptation to climate change requires relevant and understandable information as well as political support for planned adaptation.

Climatological maps and time series constitute an easy starting point for discussions with local practitioners. For this purpose, we have put together a set of climatic indices relevant for reindeer husbandry. The indices, related to temperature, precipitation and snow conditions, were based on literature and interviews with the reindeer herders. Changes in climatic conditions within the reindeer management area during the last 60 years are inspected based on these indices.