

## **Cumulative worries in Sápmi – the interplay between climate change and other threats to reindeer herding in Sweden and Norway**

Authors: Bostedt, Borge Johannesen, Dancke Sandorf & Slettemoen Helgesen

*Competing land uses, climate change and state regulations pose stress to Saami reindeer herders in Norway and Sweden. Saami reindeer herding is a nomadic tradition relying on huge natural pastures, often with long distance migration between seasonal pastures, and the foremost strategy to cope with changing environments has been flexible use of pastures. However, the adaptive space of reindeer herding is under pressure which may threaten the sustainability of Saami reindeer both economically and culturally. The ability to adapt to external pressures has been of focus in several studies of reindeer herding, but few have analyzed cumulative sources of worry as perceived by herders. Using data from a survey among reindeer herders in Norway and Sweden, we describe and analyse factors causing worry and cumulative concern. Overall, results show that the challenges within a country and region are the main drivers of the differences in worry, while other characteristics of the respondents, with some exceptions, does not significantly explain the degree of worry. A principal component analysis showed that underlying traits that could be interpreted as land use change have the highest factor loadings. Another principal component analysis of questions on the effects of climate change suggests that there are two groups of reactions among reindeer herders, either a general worry and insight that some undefined changes in management needs to be done, or an insight that current reindeer husbandry is unsustainable, given the effects of climate change, and willingness to take concrete action.*

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