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EFFECTS OF CHANGING SNOW CONDITIONS ON REINDEER HUSBANDRY IN ARCTIC SWEDEN

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Changes in snow characteristics due to warmer and more snow rich winters have significantly affected reindeer herding practices during the past c. 50 years in Arctic Sweden. During this period the applicability of some of the traditional winter herding knowledge has been lost.

As winters are getting warmer, mid-winter melt periods and rain-on-snow events occur more frequently. The resulting ice layers pose severe challenges for reindeers to access their food (lichens) and an increase in reindeer mortality has been noted after such events. Changes in climate also influence the mobility of animals and herders. Hard crusts that used to form in the uppermost snow layer during the spring at night are now rare. Such conditions provided good opportunities for animals and herders to move long distances and allowed the reindeers to more easily escape from predators.

Predictions of future climate (until 2100) indicate that winters will become even warmer, the number of days with snow cover will decrease and winter precipitation will increase. To meet these challenges we monitor changes in weather and snow pack characteristics (depth, hardness, density, ice layer presence) at important grazing areas. Real-time data allow choices of best herding strategies and aid adaption.