

How extractive industries trigger multiple pressures on reindeer husbandry
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By examining trends of land-use on traditional grazing grounds of Laevas reindeer herding community in northern Sweden, we highlight hotspots of cumulative impacts and identify mineral exploration as the dominating land-use factor in this area. The impacts of mining go beyond the 'hole in the ground' and have triggered the build-up of multiple pressures since the turn of the 19th century that currently affect at least one third of the communities' reindeer pastures. Moreover, we show that in order to navigate through this highly impacted and fragmented landscape reindeer herders have to adapt management efforts by non-traditional means. Reindeer numbers at present only remain stable because fewer animals are slaughtered and sold. Future development goals such as increase of renewable energy production, production of metal ore and increased demands of electricity and linear infrastructure to support these will intensify the already grim scenario for Laevas reindeer herding community, pushing sustainable livelihoods with mobility to its margins. These developments are not restricted to northern Sweden but relevant to many resource rich regions in the Arctic and elsewhere.

With this study we hope to provide new insights that inspire the development of scientifically robust cumulative impact assessments through a combination of traditional ecological knowledge with historical data and mapping tools allowing us to assess the full impact and current status of multiple pressures affecting indigenous lands and the ecosystem services they provide. Our approach is geared to aid decision-making processes of land-use conflicts between industries and pastoralists facing multiple pressures globally.



Reindeer in Laevas reindeer herding community walking across a wasterock pile of the Kiruna mine, the largest underground iron ore mine in the world.

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