Grazing animals and people transformed Hardangervidda into an open landscape

Today, there are fewer sheep and cows on Hardangervidda, and this has consequences for the landscape. The authorities must listen to people in the area, scientists say.



The fact that the herds graze in the mountains and around the summer farms makes the landscape open, as here in Jønndalen, Nore and Uvdal municipality. (Photo: Bolette Bele)

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PUBLISHED Monday, April 06, 2020 - 4:30 p.m.

Hardangervidda National Park is not an untouched nature, but it is shaped by 9500 years of human activity.

We must understand the connection between cultural heritage and natural heritage. This is the key to good management of the area, say researchers Véronique Karine Simon from NIKU and Bolette Bele from NIBIO. They want to learn from the locals.

The two researchers interviewed local people living on the outskirts of the north-eastern part of Hardangervidda. What do people think about the management of the area, with so many national directives on use?

- We have studied local cultural heritage, landscape, and natural diversity in the area around the historic trail *Store Nordmannsslepen*. And we have interviewed those who use the site on a daily basis, says Simon.

The trail *Store Nordmannsslepen* goes from Eidfjord and Ullensvang to the Numedal valley and Kongsberg. *Nordmannsslepene* is a collective term used to describe five historic trails that have been used across the Hardanger high plateau (in Norwegian *Vidda*).

Humans on the *Vidda* for 9500 years

When Hardangervidda became ice-free after the last ice age, it took only a few hundreds of years for the humans to follow wild reindeer and other prey to the high plateau.

The National Park has not remained untouched by humans, on the contrary.



"Locals and farmers who want to continue with their current practices in the area ought to meet a government that understands the landscape as a whole," says researcher Véronique Karine Simon. (Photo: Private)

Archaeological remains from the Stone Age, the Bronze Age and the Iron Age tell stories of migration and hunt on the high plateau. From the Iron Age until the end of the Middle Ages there was also extensive iron mining in Hardangervidda. Iron was found abundantly in the marshes. Transhumance and trade flourished.

In the first millennium after the ice age, Hardangervidda had many dense forest areas. Today, rests of aged pine trunks and stumps situated at 1250 meters above sea level testify of the presence of these primeval forests. Not only the forest gradually disappeared as the temperature dropped in the uplands, but also because of pastural activities, foot traffic, and the use of trees for fuel. People needed the wood for iron making and cheese-making at the mountain farms.

- The open landscape that many associate with Hardangervidda is also a result of human activity, not just climate change, says Simon.

Until the Second World War, Hardangervidda provided an important network of paths between the East and the West. It was also a meeting place for the exchange of goods.

- Several of today's footpaths were major traffic routes, used for commerce, grazing and pilgrimage. Hardangervidda had also several marketplaces. They were acting as gathering places for people from all the valleys around the Hardangervidda, Simon adds.



Hardangervidda is a popular place for tourism. Already in 1914, the Norwegian Tourist Association opened its first cabin there, Krækkja. (Photo: Andreas Wilse / Norsk Teknisk Museum, CC BY-SA 3.0)

Only one summer farm with milk production left

A significant part of the people's activity on the *Vidda* was about livestock and pasture. The first traces of this can be traced all the way back to the Neolithic, c. 3500 BC.

Summer farming is possibly as old as the first settlements in the area, but the intensity of activities has varied with the population and the need for summer pastures. The oldest mountain farms were first built close to the farms in the valleys, but by the 17th century, settlements were also built further on the *Vidda* itself.

"Although mountain farming reached its peak in the first half of the 19th century, several farmers maintained the tradition until the late 1970s", says Simon.

Today, there are only one milk production facility in operation in the area. There are mainly sheep grazing in the mountains.

The grazing of animals and the clearing of forests by people over a long period of time have had a great impact on the biodiversity.

The cattle spread seeds on the Vidda

- Farm animals play an important ecological role in this landscape. Grazing, livestock movements and natural manure have provided good living conditions for culturally dependent plants, insects, and other organisms, says Bolette Bele.

The fact that the cattle moved between the farms and the mountain farms, and further upwards to the pastures in the mountains, facilitated the spread of seeds along the trails and paths.

- We find many of these plants again, including along the trail *Store Nordmannsslepen*. They tell us about the close relations that exist between animals and plants, says Bele.

It is therefore important that grazing is maintained if we want to preserve the landscape and the biodiversity of the plateau today, the researchers believe.



Bolette Bele from NIBIO has interviewed the locals in the north-eastern part of Hardangervidda. (Photo: NIBIO)

Utilizing outfield resources keeps the cultural heritage alive

Summer farming and traditional dairy activities (in Norwegian *seterdrift*), as well as the use of outfields (in Norwegian *utmark*, typically as grazing pastures) are not just about biology. This is also a living cultural heritage that can only be taken care of by the farmers who still use the semi-natural grasslands.

Véronique Karine Simon reminds us that the cultural heritage of the high plateau is not just about the physical artifacts. There is just as much intangible cultural heritage, such as practical knowledge, customs and long traditions.

- Seterdrift still is testament to a rich and complex social structure, based on a sustainable use of natural resources, says Simon further.

The landscape changes when no animals are grazing

The number of mountain dairies in use has declined sharply. The traditional and all-around use of the natural grasslands is virtually gone.



The open landscape that is typical of Hardangervidda is shaped by people and animals. (Photo: Ilya Grigorik, Wikimedia Commons CC BY-SA 3.0)

The researchers interviewed people who report that the landscape has changed drastically and that much of the cultural landscape has now become overgrown.

Because of reduced pastural activity, the forest line is now moving upwards. The part of the landscape that is open is getting smaller.

- If we want to preserve our cultural landscape, with its cultural heritage and biological diversity, we depend on the use of pasture resources by the local farmers in the area, says Bele. - This is how tourists can still experience an open landscape.

Do not understand that it is allowed to drive a tractor

Farmers still have cattle grazing on the Hardanger plateau during the summer.

- Yet they can be met by tourists who find it difficult to understand that they are allowed to drive a tractor in a protected area, says Simon.

The condition of use and access of areas in the National Park are strictly regulated. It is a challenge for the farmers when nature conservation makes animal husbandry impossible.

- It is precisely where an understanding of animal husbandry as an integral part of Hardangervidda's natural and cultural heritage is particularly necessary. Local communities and farmers who want to continue working in the area need a conservation policy that adopts an integrated approach to landscape management, says Simon.

People who live in the area are not heard

One of the most important goals of the research project is to lay the foundations for a comprehensive environmental policy and cultural heritage management. Sustainable use and the preservation of the cultural heritage are basic objectives.

To achieve this, the local population must become more involved in political processes surrounding the development of the area, the researchers believe.

The way it works today is that decisions are often made before the population and the local authorities get a chance to participate. Therefore, the knowledge of the local communities about pastoralism and the use of the area is not considered.

- As a result, there is little public trust in government, the elected institutions, and the researchers. We are also losing an opportunity to develop better ways of preserving our natural resources and safeguarding our cultural and natural heritage, says Véronique Karine Simon.



There are few mountain farms left in Hardangervidda. Sheep are still grazing there. But cows are rarely seen nowadays. (Photo: Paul A. Røstad, 1956 / Norwegian Technical Museum, CC BY-SA 3.0)

Research on environmental goods

- The study is conducted by project manager <u>Véronique Karine Simon</u> at NIKU and researcher <u>Bolette Bele</u> at NIBIO. It is part of the PARKAS research project.
- PARKAS (Building trust to environmental policy as catalyst for a green transition) is an interdisciplinary research project funded by the Research Council of Norway over four years through the MILJØFORSK national research program.
- The project is managed by NIKU, together with NIBIO, NIVA, Nordland Research and NINA as research partners, as well as a group of researchers from several European countries and a large Norwegian reference group.



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This article is produced and financed by NIKU - https://www.niku.no/en/