Is the "new" Norwegian wolf really wild?

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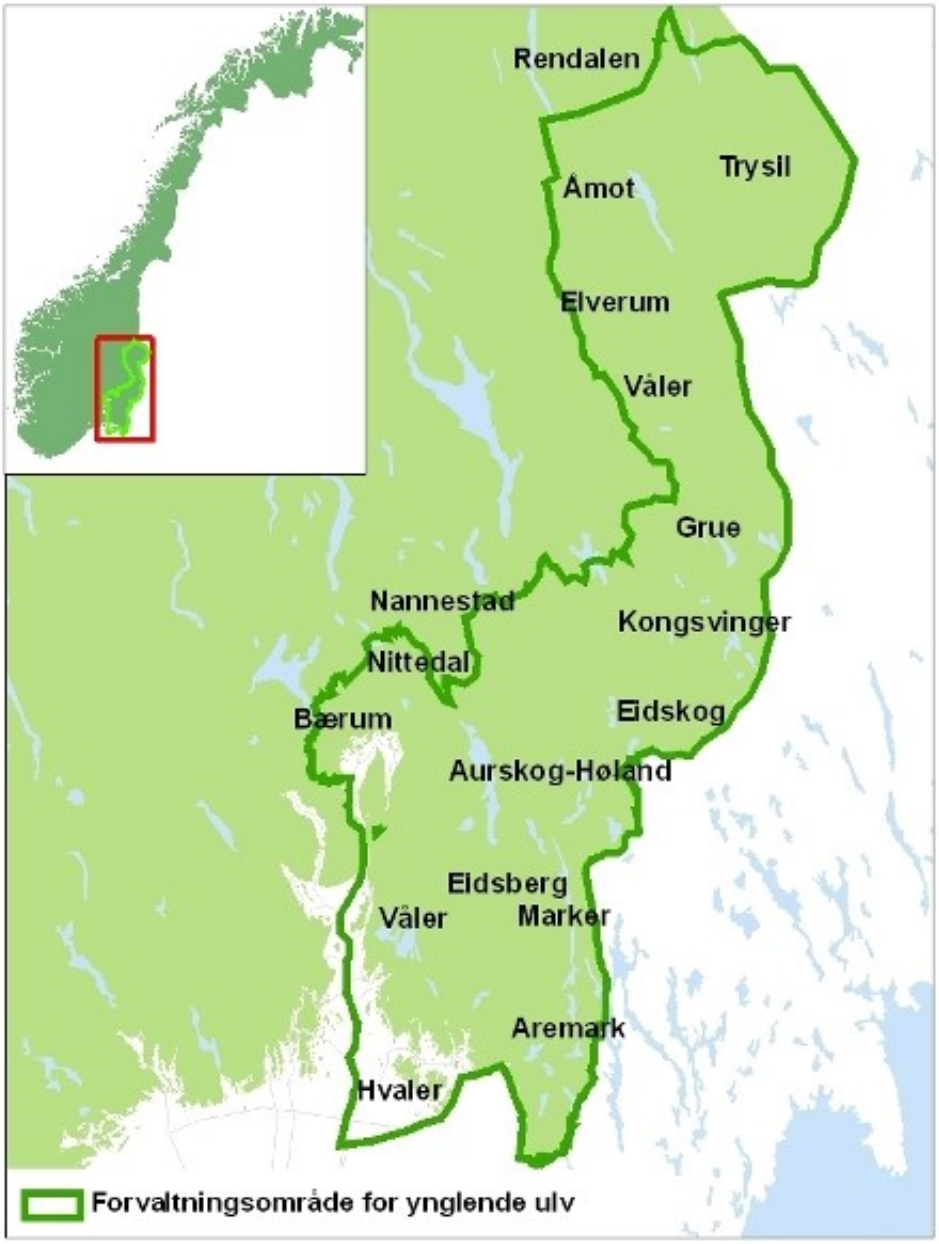

Wolf distribution in Norway. Credit: Norwegian Environment Agency

Loved and hated. Admired and feared. Almost wiped out and now restored. Wolves have a long and varied history in Norway and trigger strong feelings on both sides of the issue.

Norway is currently home to about 30 wolves, and about 50 wolves migrate between Norway and Sweden. The Norwegian wolves are primarily restricted to a "wolf zone" that extends from Rendalen in the north to Aremark in the south, and includes Oslo, Bærum and Hvaler. Wolves that establish themselves outside this wolf zone are usually killed.

The 30 Norwegian wolves in Norway are allowed to raise three litters a year. In principle, any additional litters can be shot.

Today's Norwegian wolves live fairly regulated lives. So how wild are they, really?

"Many people are concerned with keeping the wolf wild, natural and authentic. The challenge for the modern management programme is that detailed monitoring and management jeopardize the status of 'the new Norwegian wolf' as wild and authentic—and that people eventually won't see the value of preserving the wolf," says Håkon B. Stokland at the Norwegian University of Science and Technology's (NTNU) Department of Interdisciplinary Studies of Culture. He has written his PhD dissertation on how the conservation and management of wolves has been carried out in practice, and the consequences of these practices.

On the brink for nearly 100 years

Wolves had been virtually extirpated in Norway when they gained protected status in 1973. Only a few transient individuals roamed

Norwegian forests. The wolf had been on the brink of extirpation for nearly a hundred years.

A profusion of wolves roamed Norway until the mid-1800s, but the creation of state bounties on wolves led to a shrinking population. Eventually various methods to capture wolves, including wolf traps, were developed. There were also "itinerant teachers" who went from place to place to teach hunting methods. Wolves were under great pressure, and the initiatives to eradicate predators peaked in the early 1900s.

"The population dropped considerably. The measures can be interpreted as a way to control nature, and to exterminate predators in favour of other wildlife. Fishing and hunting associations were a strong impetus here. These associations were often dominated by a cultural elite whose priority was hunting," Stokland said.

From intense hunting to protected status

The Norwegian State Game Research Institute was created in 1936, and eventually became the Norwegian Institute for Nature Research (NINA). However, wolves continued to be virtually non-existent as part of the native fauna for decades, and the government did not take action.

Then the 1970s brought an ideological shift in society. Ecological thinking flourished, both internationally and in Norway, and also influenced the management of natural resources.

"The thinking shifted from a purely utilitarian management approach—the idea of controlling nature solely with a view to maximizing resource utilization—to an approach that considers how nature should work on its own terms," says Stokland.

Predator status changed from a goal of eradication now to one of

protection. Supporters of this protection argued that the wildlife population had not grown, despite the practice of eradicating predators such as wolves. Norway decided to protect wolves permanently in 1973.

Wolves only slowly became part of the Norwegian wildlife ecosystem again. In the 1980s, the population gradually started to grow through migration from Sweden, Finland and Russia.

The new Norwegian wolf

When the wolf makes a comeback in Norway, it returns to a community that has changed significantly. The debate for and against wolf preservation is now raging in earnest, and the divide is wide. The ideological chasm has not diminished with the years.

"What's happened in the 150 years since wolves were last widespread in Norway, is that sheep and reindeer farmers have changed their pasturing and herding habits. Large flocks of sheep and reindeer are no longer herded continuously on outlying pastures, and this becomes problematic when wolves are brought back into the picture," Stokland says.

"What also happens when wolves start to come back is that we don't know how to manage them. Protected wolves are a new species to manage, and we need to figure out how protection on paper translates on the ground," he adds.

Wolves today are in many ways similar to wolves that lived in Norway in the 1800s. They hunt, eat, sleep, bear young and live alone or with family groups. But they are also quite different, in that they are restricted to a geographically limited area, and the population level is maintained at the low edge of what are considered viable numbers.

Migration from Russia prevents inbreeding

Stokland says, "I've examined how different instruments and techniques have been used to carry out wolf management and regulation. I call these management technologies. The use of management tools in Norwegian wolf management has increased significantly since the 1960s. This also seems to apply to nature management in general and internationally."

Wolf mapping and monitoring constitute one management tool. Current management practice requires detailed monitoring of the population. Currently, wolf tracking, genetic markers, GPS and radio tagging are the primary monitoring methods.

The humble beginnings of monitoring involved gathering reports of wolf sightings from newspapers. However, those observation turned out not to be reliable.

Then wolf tracks started to be recorded and counted, but this method is mainly restricted to the winter months.

With the advent of genetic markers as a mapping tool, scat, fur remnants and residual materials from dead wolves have been collected. These are analysed in a laboratory in Trondheim that creates gene profiles of the wolves.

Almost all the wolves dating back to 1983 are plotted onto a pedigree chart, and the family tree shows that almost all the wolves in the 1980s originated from two Russian wolves. Later, five Russian wolves joined the population (one in 1991 and four in 2007), which has helped the inbreeding problem.

"There's been a lot of debate about the Norwegian wolf not being Norwegian. Scandinavian and Russian wolves can be genetically

distinguished, but practically speaking they are virtually identical," Stokland said.

New methodology developed

"Not much research has been done on management technologies or their consequences. My project was to examine management in practice, as seen through an historical perspective. I wanted to open the "black box" of governance issues and look at processes- for example, how today's population goals were arrived at. And I wanted to study how management technologies affect the objects—wolves—that they're regulating. How do these practices change the wolves and the way we see them?" says Stokland.

He has developed a new approach to studying the management of endangered species. This method makes it possible to study the dramatic rise in management tools – and to look at all of these tools in relationship to each other.

"This has been a blind spot in the research. I think this method has good transfer value for studying and assessing the management of the other endangered species," Stokland says.

Controlling genetic development

According to Stokland, management tools also result in changes to the natural wolf and how the wolf is regulated by the state. State control and genetic markers mean that we can intervene and prioritize wolves with the most valuable genes. That is, we can control the genetic development to some extent. The new management challenge is that this intensive and detailed management can raise the question of how wild wolves are today.

"But," Stokland says, "wolf preservation would not have been possible in practice without management tools such as population goals, wolf zones, monitoring and genetic markers. To a great degree, this regulation has been necessary in order to preserve such a controversial species."

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