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Headline: Norway gives Arctic foxes a helping hand amid climate woes

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A white Arctic Fox pup receives parasite medication, during a medical check-up at the Arctic Fox Captive Breeding Station run by Norwegian Institute for Nature Research (NINA) near Oppdal, Norway, July 25, 2023. As part of the state-sponsored program to restore Arctic foxes, Norway has been feeding the population for nearly 20 years, and the program has helped to boost the fox population from as few as 40 in Norway, Finland, and Sweden, to around 550 across Scandinavia today. "We've come a long way," said Conservation biologist Kristine Ulvund. "But I still think we have some way to go before we can say that we've really saved the species." REUTERS

A white Arctic Fox pup receives parasite medication, during a medical check-up at the Arctic Fox Captive Breeding Station run by Norwegian Institute for Nature Research (NINA) near Oppdal, Norway, July 25, 2023. As part of the state-sponsored program to restore Arctic foxes, Norway has been feeding the population for nearly 20 years, and the program has helped to boost the fox population from as few as 40 in Norway, Finland, and Sweden, to around 550 across Scandinavia today. "We've come a long way," said Conservation biologist Kristine Ulvund. "But I still think we have some way to go before we can say that we've really saved the species." REUTERS

OPPDAL, NORWAY — One by one, the crate doors swing open and five Arctic foxes bound off into the snowy landscape.

But in the wilds of southern Norway, the newly freed foxes may struggle to find enough to eat, as the impacts of climate change make the foxes' traditional rodent prey more scarce.

In Hardangervidda National Park, where the foxes have been released, there hasn't been a good lemming year since 2021, conservationists say.

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That's why scientists breeding the foxes in captivity are also maintaining more than 30 feeding stations across the alpine wilderness stocked with dog food kibble – a rare and controversial step in conservation circles.

"If the food is not there for them, what do you do?" said conservation biologist Craig Jackson of the Norwegian Institute for Nature Research, which is managing the fox program on behalf of the country's environment agency.

That question will become increasingly urgent as climate change and habitat loss push thousands of the world's species to the edge of survival, disrupting food chains and leaving some animals to starve.

While some scientists say it's inevitable that we'll need more feeding programs to prevent extinctions, others question whether it makes sense to support animals in landscapes that can no longer sustain them.

As part of the state-sponsored program to restore Arctic foxes, Norway has been feeding the population for nearly 20 years, at an annual cost of around 3.1 million NOK (€275,000) and it has no plans to stop anytime soon.

Since 2006, the program has helped to boost the fox population from as few as 40 in Norway, Finland, and Sweden, to around 550 across Scandinavia today.

With feeding programs, "the hope is that you can perhaps get a species over a critical threshold," said wildlife biologist Andrew Derocher at the University of Alberta in Canada, who has worked in Arctic Norway but is not involved in the fox program.

But with the foxes' Arctic habitat now warming roughly four times faster than the rest of the world, he said: "I'm not sure we're going to get to that point".

Feeding animals to ensure a population survives — known as "supplementary feeding" — can be contentious.

Most instances are temporary, providing food for a few years to help newly released or relocated animals adapt, such as the Iberian lynx in Spain during the 2000s.

In other cases, governments might assist animals in acute peril, such as Florida's decision to feed romaine lettuce to starving manatees from 2021 to 2023 after agrochemical pollution wiped out their supply of seagrass.

There are some exceptions. Mongolia's government, for example, has been putting out pellets containing wheat, corn, turnip and carrots for critically endangered Gobi brown bears since 1985.

READ: Receding ice leaves Canada's polar bears at rising risk

But for predators living close to human communities, that can be risky. Bears are known to change their behavior and can associate people with food, said Croatian biologist Djuro Huber, who has advised European governments on the feeding of large carnivores.

Feeding wild animals can also propagate diseases among the population, as animals cluster around feeding stations where pathogens can spread.

Bjorn Rangbru, a senior advisor on threatened species with the Norwegian Environment Agency, said the supplementary feeding – together with the breeding program – was crucial in raising the numbers of Arctic foxes in the wild.

"Without these conservation measures, the Arctic fox would surely have become extinct in Norway".

The government has so far spent 180 million NOK (€15.9 million) on the program – or about €34,000 for every released fox.

Some of those foxes have crossed the Swedish border. After Norwegian scientists released 37 foxes near the Finnish border from 2021 to 2022, Finland saw its first Arctic fox litter born in the wild since 1996.

But the program is not even halfway to the goal of around 2,000 wild foxes across Scandinavia, which scientists say is the population size needed to be able to withstand low rodent years naturally.

Arctic foxes are not the only species in trouble in the Far North. Polar bears are fast losing their hunting habitat as Arctic sea ice melts away. Migrating caribou sometimes arrive in summer pastures only to find that they missed the plant green-up because of a warmer-than-usual spring.

The foxes had been driven to near extinction across Scandinavia by hunters seeking their winter-white fur, before they gained some reprieve in hunting bans and protections introduced in the 1920s and 1930s.

The Arctic fox has since emerged as a symbol of the Far North. It is featured in the logos for both the Arctic Council and Swedish outdoor brand Fjallraven.

A female and a male white Arctic fox play after mating inside their enclosure, at the Arctic Fox Captive Breeding Station run by Norwegian Institute for Nature Research (NINA) near Oppdal, Norway, March 23, 2023. As part of the state-sponsored program to restore Arctic foxes, Norway has been feeding the population for nearly 20 years, and the program has helped to boost the fox population from as few as 40 in Norway, Finland, and Sweden, to around 550 across Scandinavia today. "Without these conservation measures, the Arctic fox would surely have become extinct in Norway," said Bjorn Rangbru, a senior advisor on threatened species with the Norwegian Environment Agency. REUTERS

In Finnish Lapland, the northern lights are called 'revontulet', which means 'fox fires'. Legend says the lights were ignited by the great fox spirit sweeping its tail against the snow and spraying it up into the night sky.

But as rodent populations have fallen away, Arctic foxes have struggled to recover on their own. And it's been a particularly tough year for the captive breeding program.

Normally, Jackson and fellow project leader Kristine Ulvund would have had about 20 pups to release. But of the eight breeding pairs in captivity, only four females gave birth last spring – two of which then lost their entire litters.

Nine pups were ultimately raised in the outdoor fenced enclosure near Oppdal, a remote site some 400 kilometers (250 miles) north of Oslo. Two pups were kept to be part of future breeding efforts. Then, golden eagles snatched another two just weeks before their Feb. 8 release, leaving only five.

Surviving in the wilderness can be tough. While the wild population now stands at around 300 in Norway, the scientists have bred and released nearly 470 foxes since the program's start. Foxes only live three to four years in the wild.

Aside from dodging predators, the foxes need to hunt enough lemmings to make it through the long winters.

Climate change is making this tough, as warming temperatures cause precipitation to fall more often as rain instead of snow. When that rain freezes, it can block the lemmings from burrowing into dens for their own warmth and reproduction.

The rodents' once-reliable population cycles – which saw numbers of the rodents swell and fall in regular three- to five-year intervals – have become unpredictable and population peaks are lower.

The foxes seem to prefer to hunt for themselves. "We'll see them passing the feeding stations with mouths full of rodents," Ulvund said – the rodents presumably being juicier and tastier than dry dog kibble.

The scientists said the foxes still only breed really well when there is a peak in the rodent population. But a 2020 study in the Journal of Wildlife Management found that foxes in dens located near the feeding stations were more likely to successfully breed than those located farther away.

"We need to get the populations up to a sustainable level before we stop feeding them," said Ulvund.

At the current growth rate, scientists said it could take another 25 years to reach the program's goal of 2,000 Arctic foxes running free through Scandinavia – provided the foxes' bellies are kept full.

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