CMS GIUM

Global Initiative on Ungulate Migration

FACT SHEET

Red deer © Erling Meisingset

Red Deer: Møre og Romsdal, Norway

Migration Description

Red deer populations in Norway have increased rapidly over the past 30 to 40 years. The annual harvest peaked above 50,000 red deer in 2021-2022, and the population size is more than 250,000 individuals. Red deer distribution spans the whole southern part of the country, but the species is most abundant along the southwest coast. Populations in this region are partially migratory, which means they consist of both migratory and resident individuals. Red deer typically migrate from lower elevation winter ranges toward higher elevation summer ranges. Migration is more common for red deer living in the central mountains where steep environmental gradients occur, compared to populations near the coast. In More og Romsdal, red deer migrate up in elevation to follow the green-up of spring vegetation, and they return in the fall with the onset of hunting, snowfall, or cold temperatures. Winter ranges are mainly restricted to lower elevation valleys, or near the coastline. Red deer frequently feed on agricultural grasslands during the spring and fall and typically migrate alone or in small family groups. Their migratory routes can stretch across large parts of the landscape.

Threats to Migration

Red deer are able to migrate in most of their range in Norway, contending with natural barriers like fjords and mountains which limit connectivity to some degree. Red deer are generally able to adapt to human disturbance, and they frequently cross roads during their seasonal migrations. Nevertheless, fencing for migrating deer is mandatory for heavily trafficked highways to avoid deer-vehicle collisions. In some areas of Norway, fencing limits the deer's ability to cross during migration, and fencing is expected to increase as roads continue to be upgraded. Climate change is leading to more rapid and variable snowmelt across the landscape, which in turn leads to a shortened period where deer can access nutritious early plant growth. Because temperate ungulates like red deer migrate to take advantage of spring green up, warming is therefore anticipated to lead to a higher proportion of resident individuals in the future.

Local Population Facts

Migration

Seasonal

Short *18.7 km (avg.)*

Threats

Climate change

Energy dev.

Urban sprawl

Linear barriers

Agriculture

Livestock

Illegal killing

Other

Species Facts

Common name: Red deer

Species name: *Cervus elaphus*

Range: Europe, western part of Asia, northernmost tip of Africa

Diet: Mixed-feeder herbivore

Global population: > 2 million

IUCN Conservation Status

LC Least concern

CMS Status

Not listed

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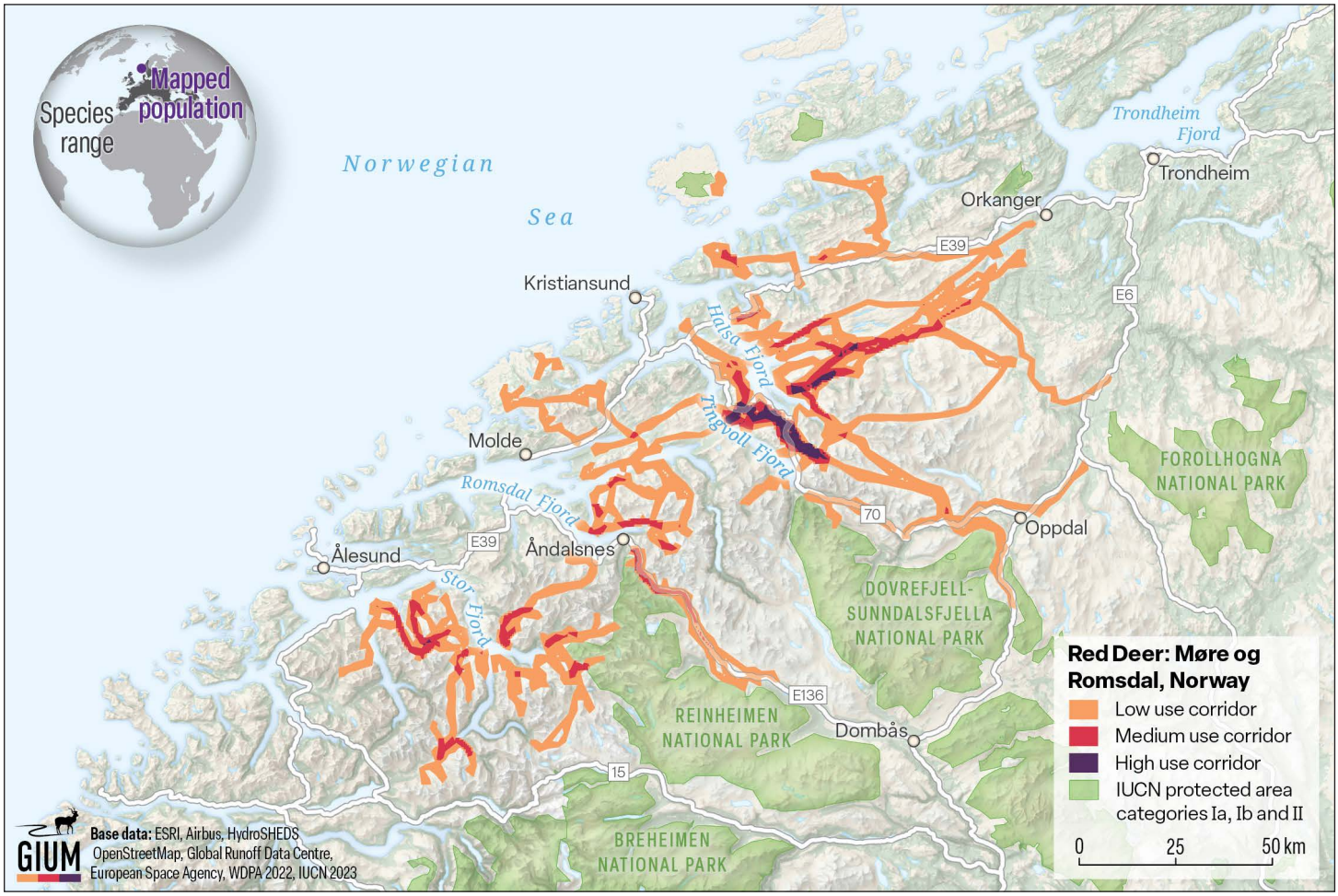
Red Deer Migration



Winter range			Spring migration		Summer range			Fall migration			Winter range
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Study Information

Sample size
115 individuals

Relocation frequency
1-2 hours

Project duration
12 years, 2007–2018

Data Analysis

Delineation of migration periods
Net squared displacement to delineate migration between winter and summer ranges

Models derived from
Line buffer method (1.5 km width)

Route Summary

Migration start and end date (median)
- Spring: May 06–May 17
- Fall: October 02–October 11

Average number of days migrating
- Spring: 9.9 days
- Fall: 9.0 days

Migration route length
- Min: 1.1 km
- Mean: 18.7 km
- Max: 96.2 km

Data Providers

Data was collected and provided by Erling Meisingset at the Norwegian Institute of Bioeconomy Research and Atle Mysterud with the University of Oslo.

In partnership with:

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CMS www.cms.int

The Convention on the Conservation of Migratory Species of Wild Animals (CMS), also known as the Bonn Convention, is an environmental treaty of the United Nations that provides a global platform for the conservation and sustainable use of terrestrial, aquatic and avian migratory animals and their habitats.

GIUM www.cms.int/gium

The Global Initiative on Ungulate Migration (GIUM) was created in 2020 to work collaboratively to: 1) create a Global Atlas of Ungulate Migration using tracking data and expert knowledge; and 2) stimulate research on drivers, mechanisms, threats and conservation solutions common to ungulate migration worldwide.

View and Download Map Data from the GIUM Migration Atlas

Meisingset, E. and A. Mysterud. 2024. Red Deer: Møre og Romsdal, Norway. Global Initiative on Ungulate Migration, editors. *Atlas of Ungulate Migration*. Convention on the Conservation of Migratory Species of Wild Animals.