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# Saiga Antelope: Betpak-Dala, Kazakhstan

## Migration Description

The Betpak-Dala saiga population was once the largest saiga population in the world, with historical records indicating long distance migrations occurring throughout their range in north-central Kazakhstan. In the 1990s and early 2000s, illegal killing for male saiga's horns led to the herd's sharp decline. In 2015, disease killed 200,000 saiga in Betpak-Dala. Combined with an increase in linear barriers, these factors caused the population to separate into two groups and their migrations to become shorter. However, conservation efforts have allowed the saiga to persist, and amidst a changing landscape they still make long distance movements necessary to their survival on the Kazakh Steppe.

In general, saiga make latitudinal migrations that track vegetation green up in the spring and summer, and allow them to find refuge from harsh conditions during the winter. In the western part of the Betpak-Dala population's range, animals move northwards as the snow melts to reach their calving areas in early May. From there they continue north to summer pastures. In autumn, they move slowly to the south, gathering in the Irgiz-Turgai reserve for the rut and mating in November and December. Depending on winter severity, they may migrate further south. The population living further east typically migrates in and around the Korgalzhyn reserve. These saiga also calve in the northern part of their migratory range. In

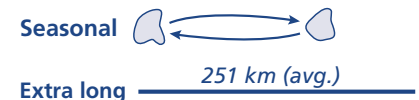
the winter, saiga migrate south, but are stopped by railways and roads, which keep most of the animals away from traditional wintering areas.

## Threats to Migration

The Betpak-Dala population's range is vast and remains relatively undeveloped with little human influence. However, rapid economic development in the region is fueling the development of roads and railways, which can partially or totally block saiga movements. Across Kazakhstan, the biggest threat to saiga migration is the increase in linear infrastructure, as saiga need vast and connected habitats for survival. Currently, the eastern portion of the Betpak-Dala population can't migrate as far south as they did historically due to the Zhezkazgan railroad. Fences are being constructed along the railroad to prevent livestock from approaching the tracks, which further compounds the barrier effect of the railway for saiga. There also is a new paved road planned to connect Astana to Irgiz, which will further bisect the saiga's migratory range. The potential for disease outbreaks, which periodically plague saiga populations, poses another threat. Additionally, the possibility of illegal killing for saiga horns remains a threat, and conflicts with farmers and livestock herders may lead to a restriction of available habitat.

## Local Population Facts

### Migration



### Threats



## Species Facts

**Common name:** Saiga antelope  
**Species name:** *Saiga tatarica tatarica*  
**Range:** Russia, Kazakhstan, Uzbekistan, and Mongolia (Mongolian subspecies: *Saiga tatarica mongolicus*)  
**Diet:** Herbivore  
**Global population:** ~3.9 million

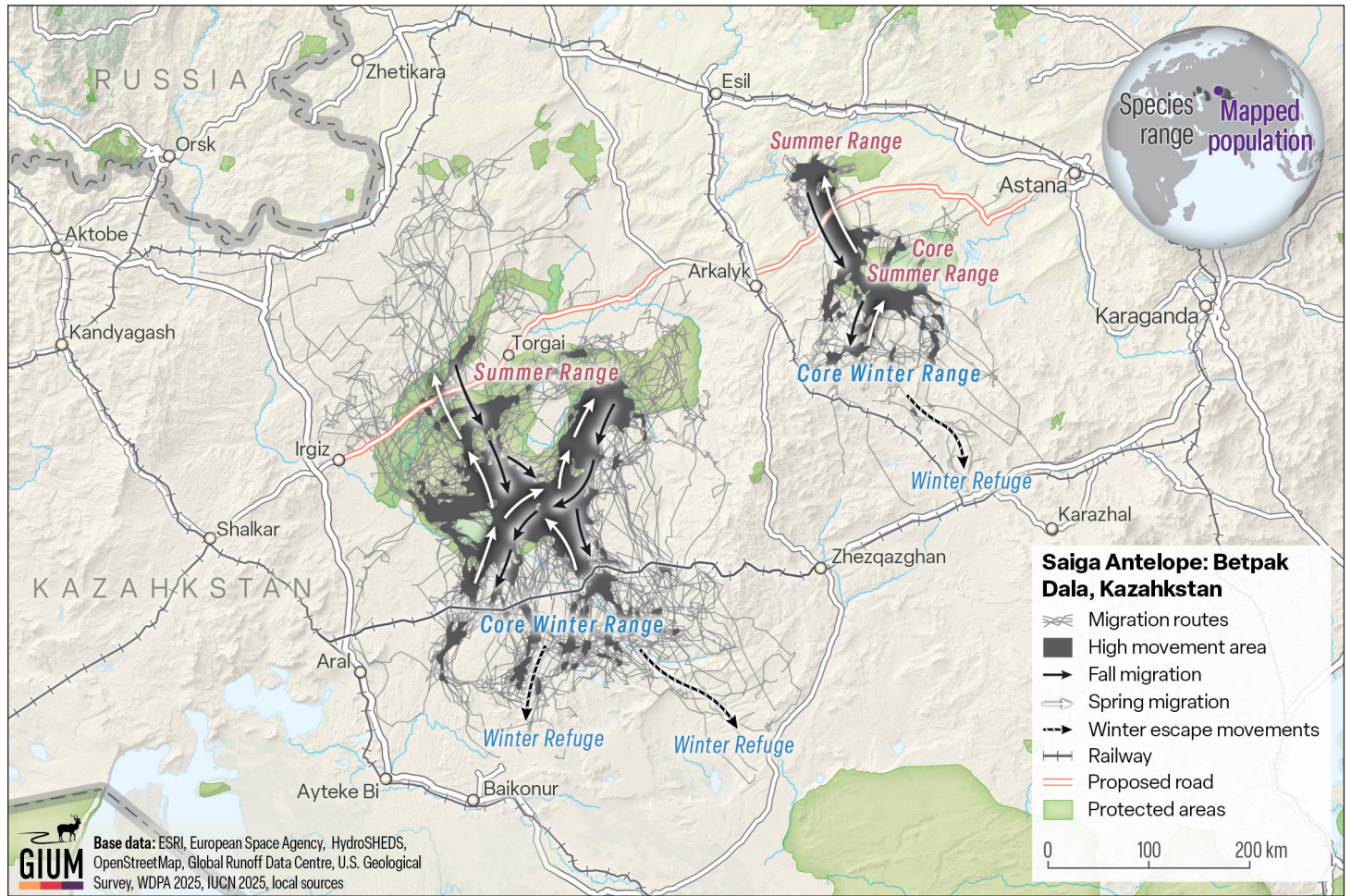
### IUCN Conservation Status

**NT** Near threatened

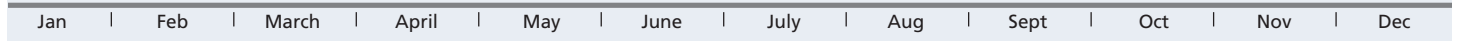
### CMS Status

**Appendix II** Migratory species conserved through agreements

# Saiga Antelope Migration



## Semi-nomadic seasonal movement



## Study Information

### Sample size

96, (61 migratory)

### Relocation frequency

4–24hrs

### Project duration

2009–2023

## Data Analysis

### Delineation of migration periods

Net squared displacement to delineate migration between seasonal ranges.

### Models derived from

Brownian Bridge Movement Model (fixed motion variance 6000)

## Route Summary

Saiga antelope are generally considered nomadic or semi-nomadic. The timing and length of their movements may vary greatly from year to year depending on environmental conditions. However, unlike other nomadic ungulates, the Betpak Dala saiga do show a seasonal pattern, making general latitudinal migrations as the seasons change. In the fall and onset of winter, the saiga may migrate south seeking milder conditions. The extent of their winter migrations depends on winter severity. As spring returns, they range further north, with calving occurring in May. On average, the saiga migrated 250 km in the course of a year, with some animals traveling over 500 km (distances calculated from data between 2.5th and 97th percentiles).

## Data Providers

Data were collected and provided by Albert Salemgareyev and Steffen Zuther from the Altyn Dala Conservation Initiative implemented by the Association for the Conservation of Biodiversity of Kazakhstan together with the Committee of Forestry and Wildlife of the Ministry of Ecology and Natural Resources of Kazakhstan, supported by Fauna & Flora, Frankfurt Zoological Society and the Royal Society for the Protection of Birds.

## In partnership with:



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.



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

Zuther, S. and A. Salemgareyev. 2026. Saiga antelope: Betpak Dala, Kazakhstan Global Initiative on Ungulate Migration, editors. *Atlas of Ungulate Migration*. Convention on the Conservation of Migratory Species of Wild Animals.