

Taimyr Wild Reindeer Population: Current State, Challenges and Conservation Options

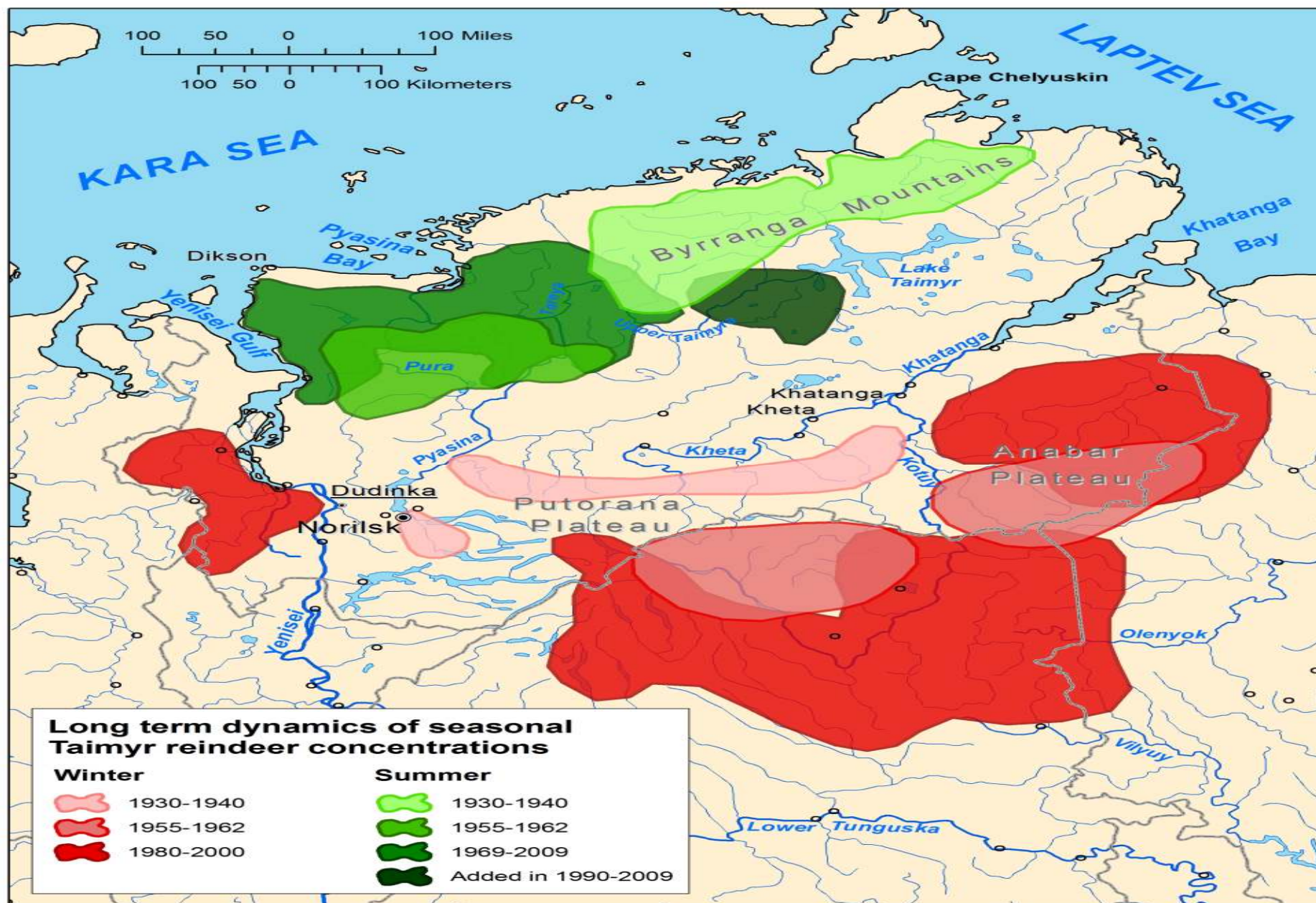
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Presented by: Andrey N. Petrov, *University of Northern Iowa, USA*

CARMA-9, Whitehorse, Canada
2018



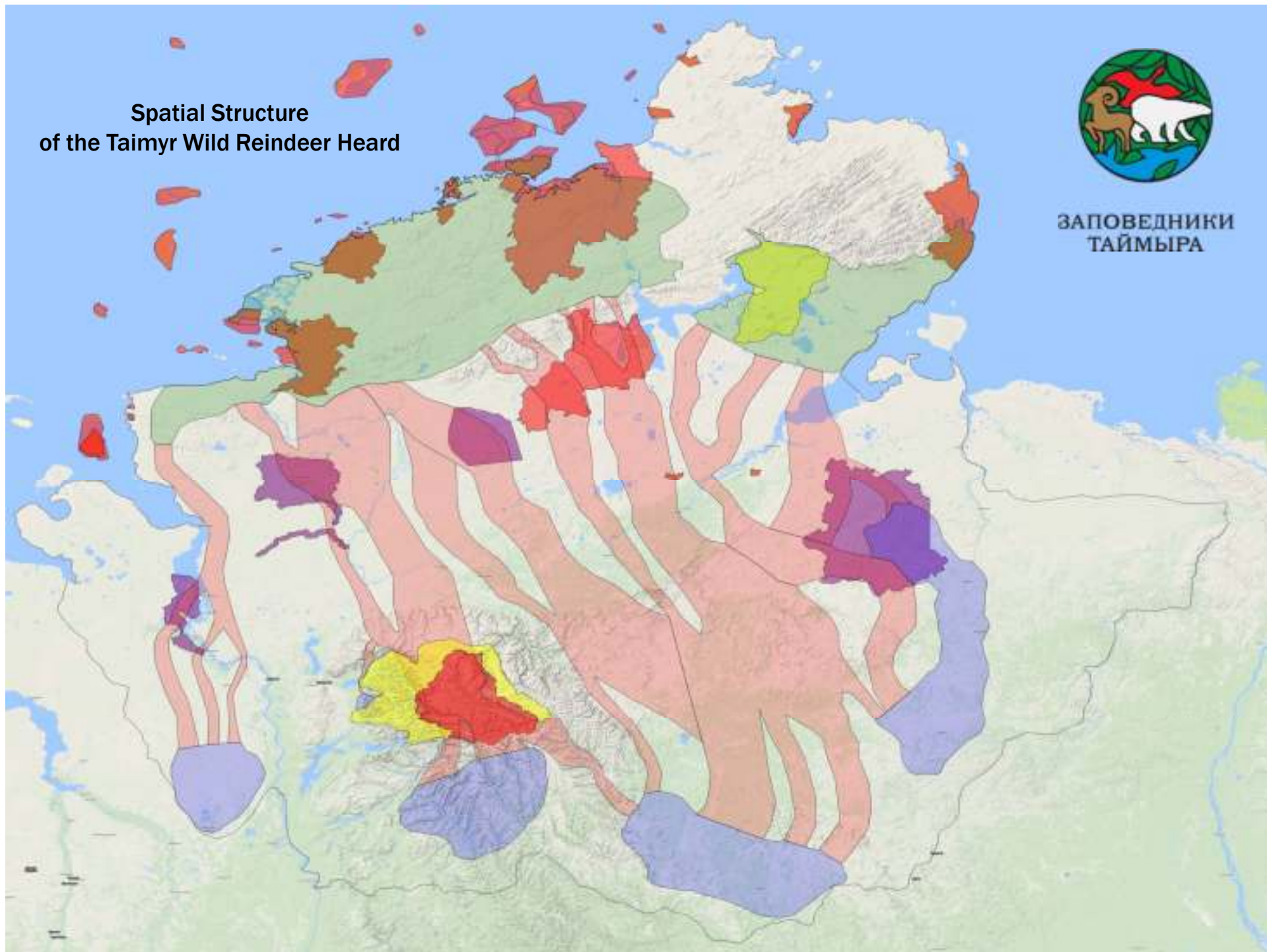
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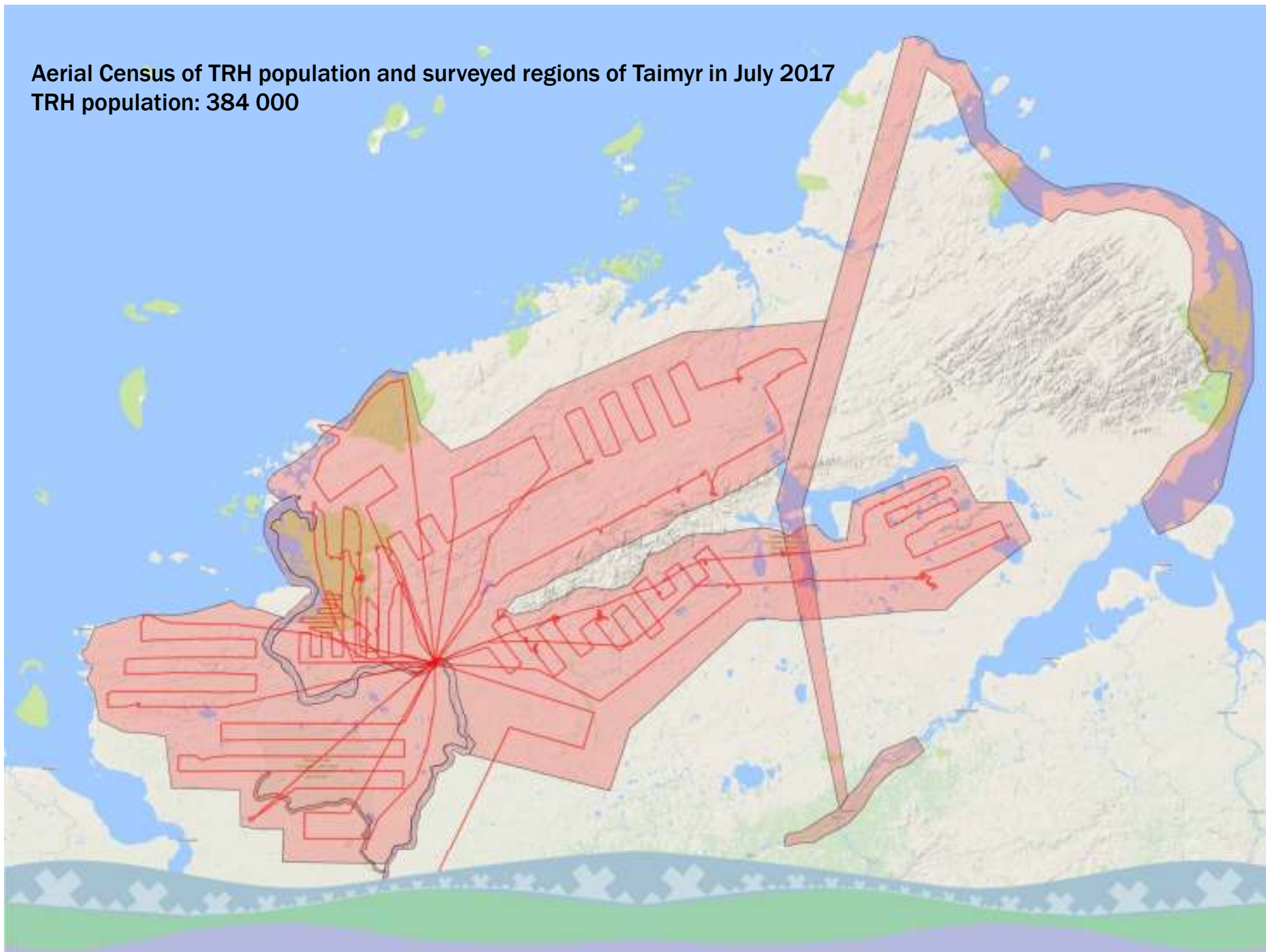
**Spatial Structure
of the Taimyr Wild Reindeer Herd**



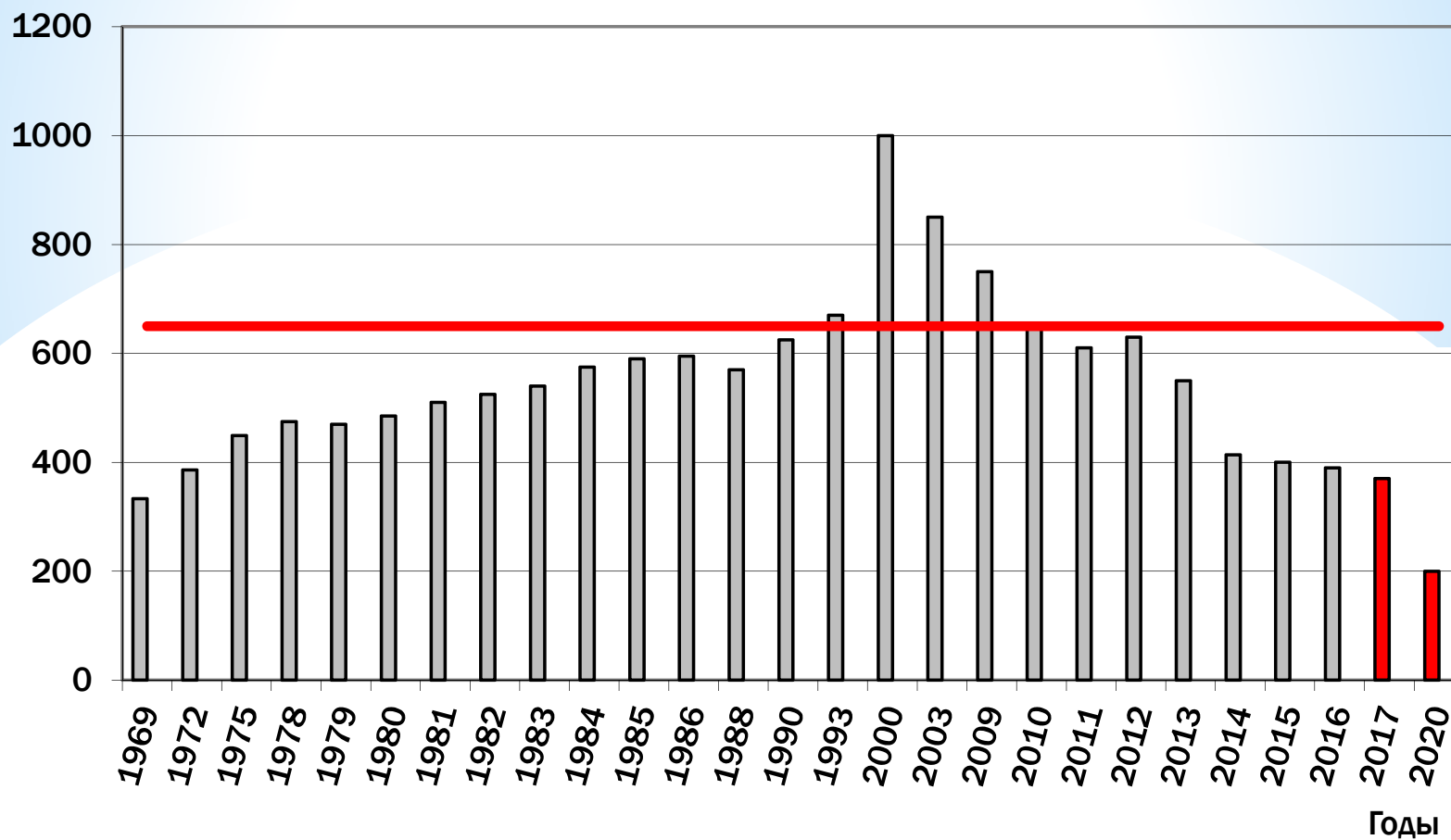
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Aerial Census of TRH population and surveyed regions of Taimyr in July 2017
TRH population: 384 000



Population, 000s



Observed change



Forecast



Optimal level

GOAL and OBJECTIVES

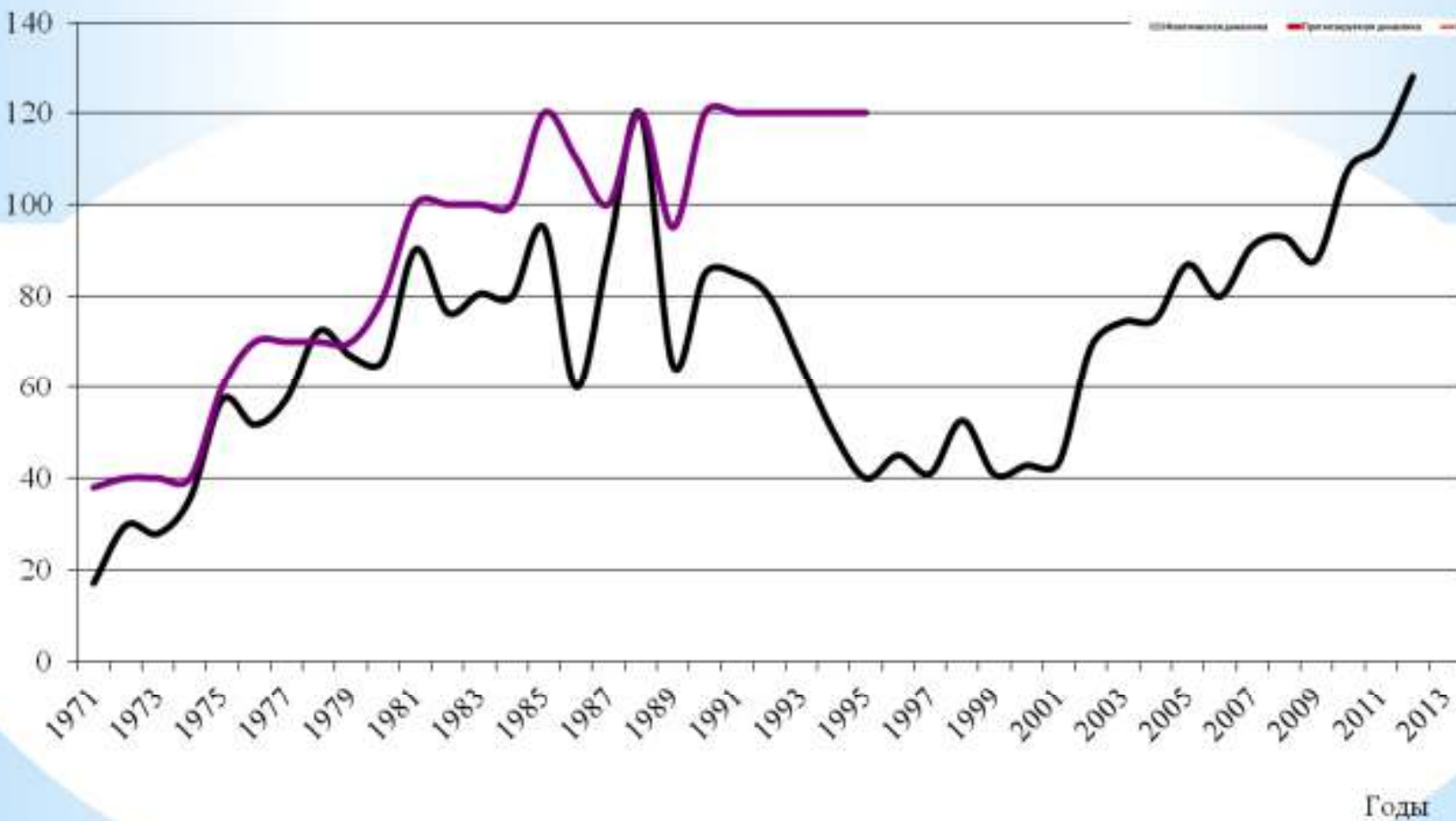
Goal:

- Ensure sustainable use of TRH population without population decline and structural disintegration

Objectives:

- Periodic updates on the population, demographic and spatial structure
- Identification of threats and limiting factors affecting TRH
- Determination of hunting limits and quotas
- Consideration of the impacts on socio-economic and cultural well-being of Indigenous peoples in Taimyr who use THR for hunting

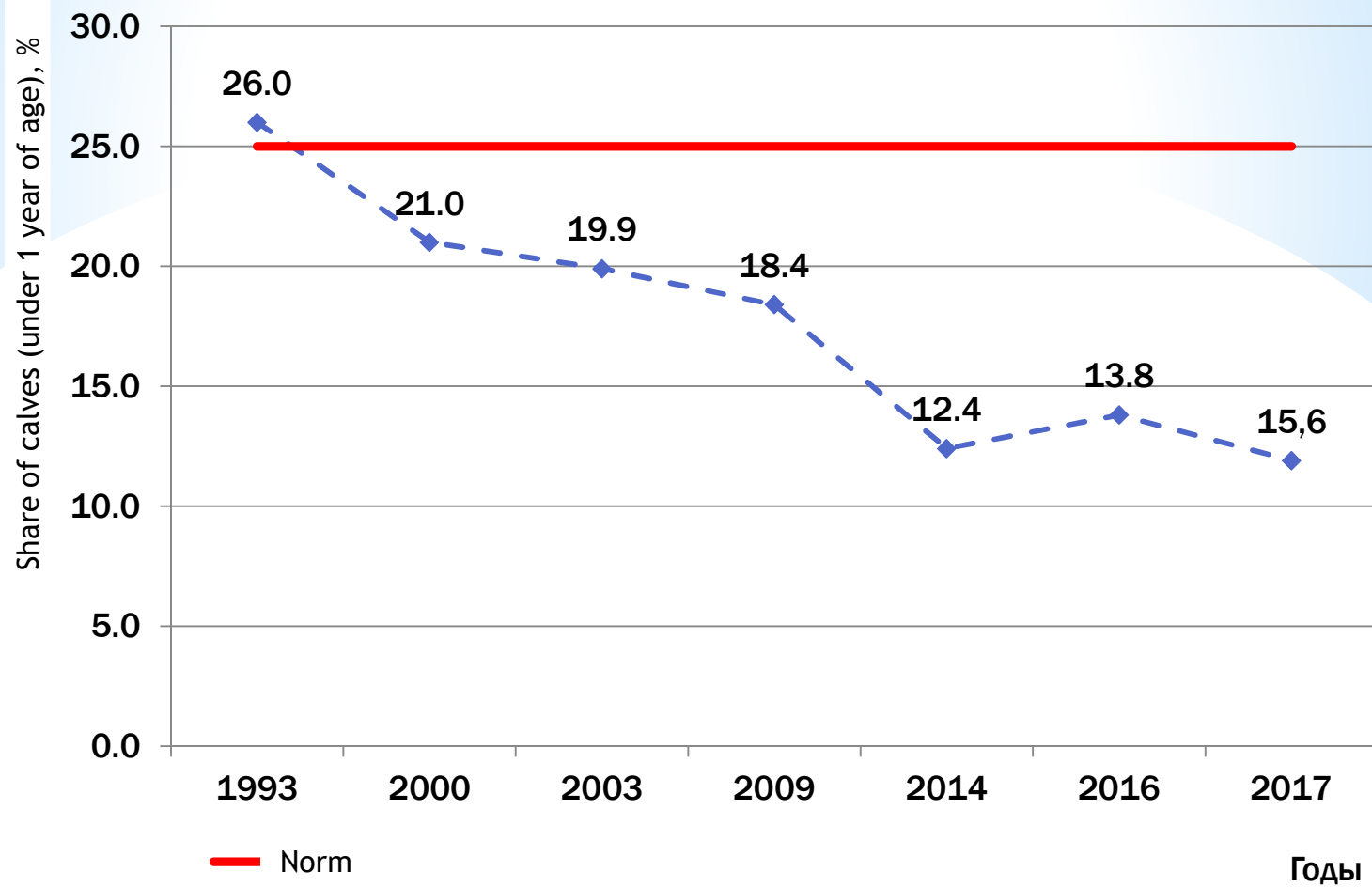
Reindeer count, 000s



harvest



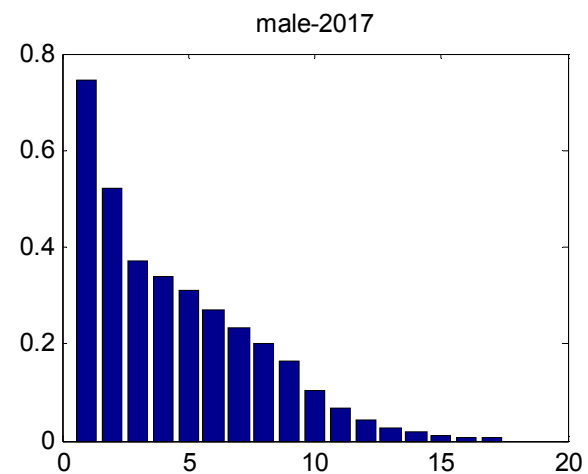
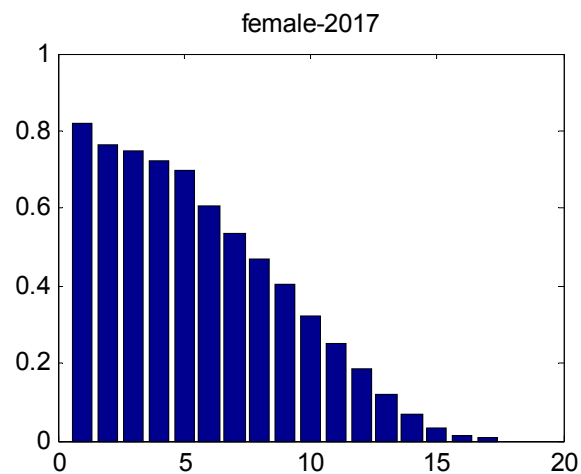
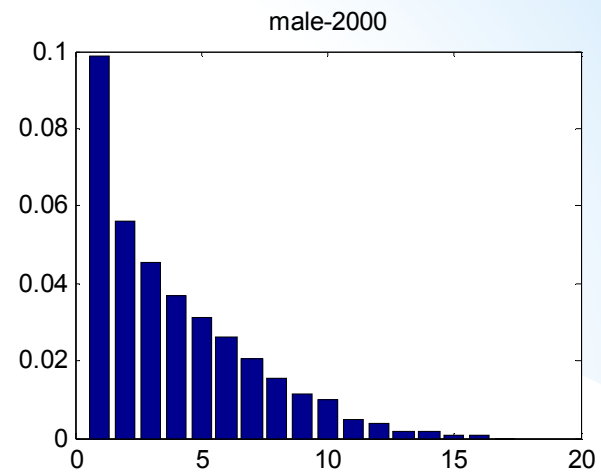
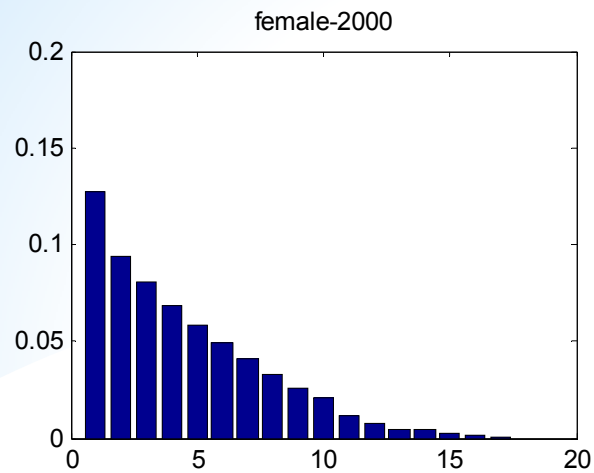
recommended quotas



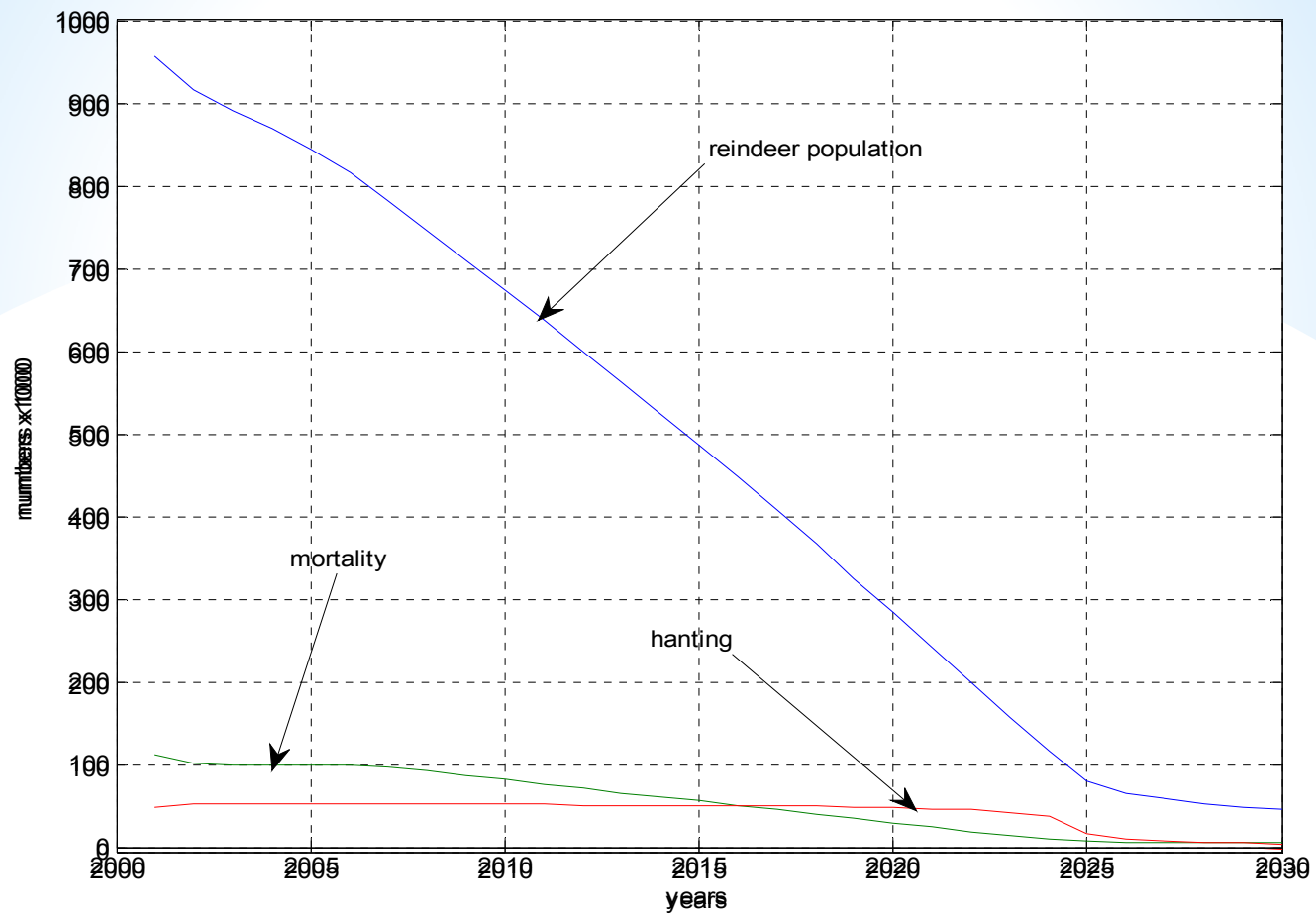
Velvet antler production



Share of adult bulls (4+) was 18,3% (n=40361 голов), with cut velvet antlers - 8% (n=5040 голов).
With the population of 350-400,000 the volume of harvested antlers in 2017 was approx. 12.6-14.4 ton.
Officially in 2015 Taimyr exported 61048 kilograms of antlers

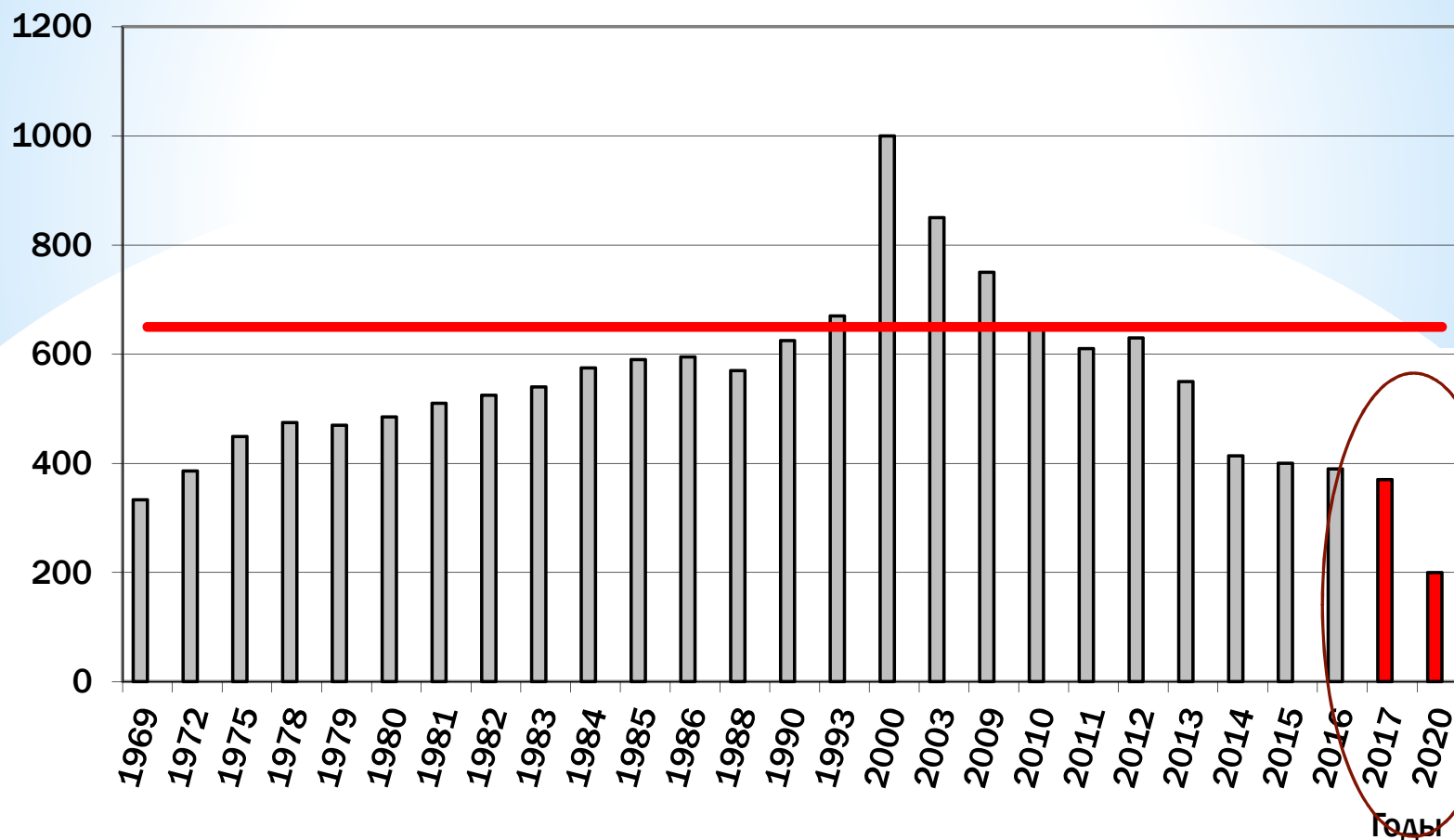


* Change in the sex-age structure of the Taimyr wild reindeer population between 2000 and 2017 (modeling)



Modeling of population dynamics, natural mortality and hunting

Population, 000s



Observed change



Forecast



Optimal level

Environmental impacts on reindeer habitat



Empty fuel barrels



Industrial waste polluted with oil products and chlorines
соединениями



Tundra disturbance by heavy vehicles



Fuel tanks



Abandoned industrial facilities



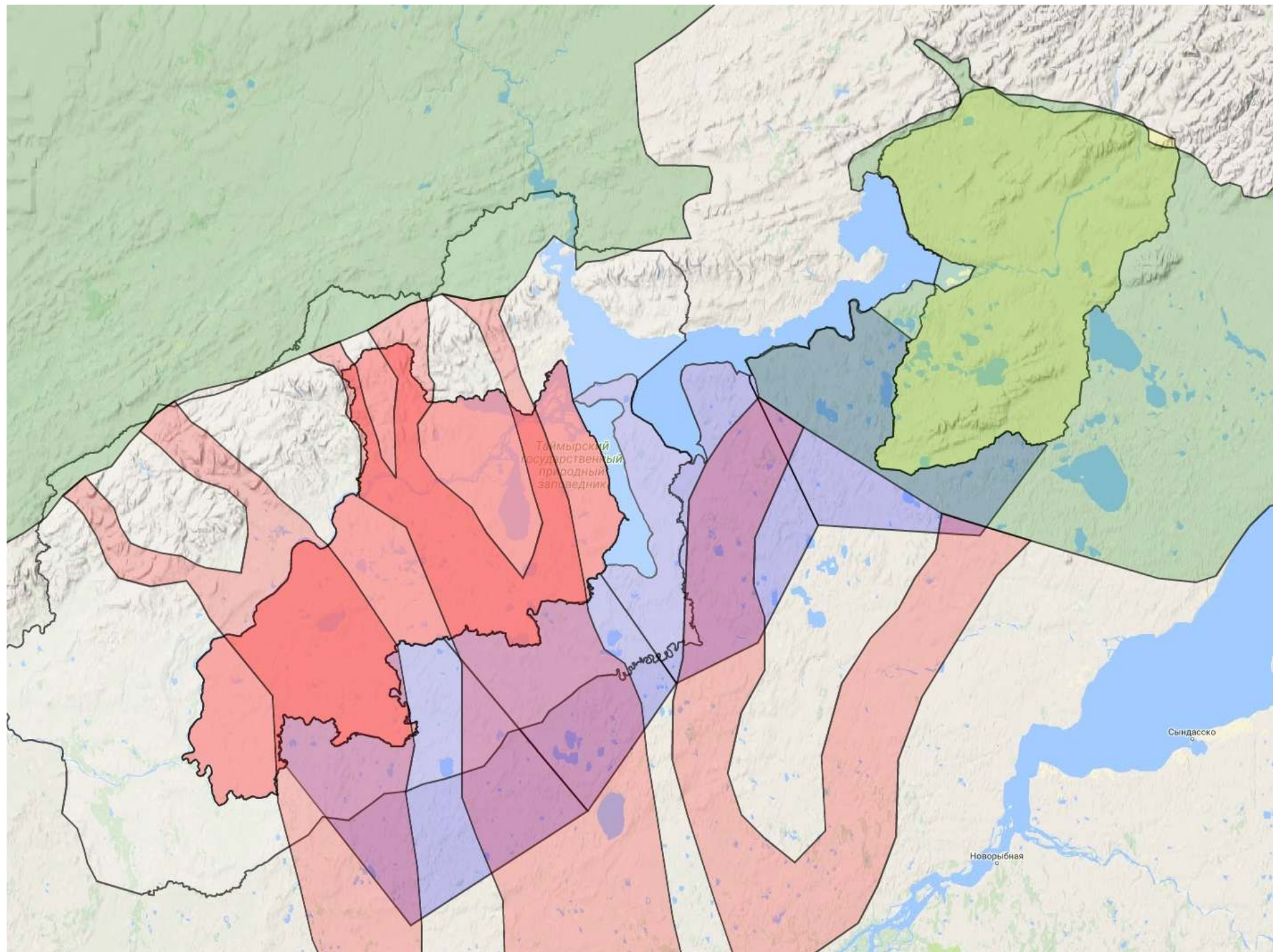
Industrial waste



Reindeer hunting allotments cross the entire width of the TRH migration flows

The map shows a geographical area with green patches representing hunting allotments. A red rectangle highlights a specific region in the lower half of the map. Three blue arrows point downwards from the top of the map, indicating migration flows. The bottom of the map features a decorative border with a blue and white patterned band above a solid green band.

Reindeer hunter allotments in 2017



Problems

- The assessment of the population, its protection and rational exploitation are performed in a haphazard manner;
- We do not know the actual headcount of the Taimyr population and its sex and age structure;
- The current condition of pastures (reindeer capacity) has not been studied well enough;
- There are no data regarding the proportion of poaching. It has become destructive.
- Mineral resources in wild reindeer habitats are often mined without taking into account “the reindeer factor”;
- The epizootic condition of the population is not taken good care of; veterinary protection measures have not been developed.
- Veterinary rules of utilizing the remains of killed reindeer are not followed;
- The problem of the relations between wild and domestic reindeer is not being tackled;
- The work on determining the scientifically substantiated quota is not getting sustainable funding;
- Deficient hunting laws and regulations

Proposed solutions and actions

- To develop and approve the Guidelines for the state system of accounting, national land management and national monitoring of fauna items.
- To approve the Program of monitoring and protection of the Taimyr wild reindeer population, as well as the Immediate plan of action;
- To conduct the aerial survey census of wild reindeer, study the sex and age structure and determine the commercial hunting quotas of the Taimyr population in accordance with the approved techniques
- In order to determine the quota we should implement the system of monitoring animals movement via space telemetry which helps to spot migration routes, wintering areas, with the subsequent calculation of wild reindeer headcount
- To create the group for the monitoring and protection of hunting resources, including the Taimyr population of wild reindeer - “The Northern Patrol”;
- In 2018-2020 to make an inventory of damaged pastures (habitats) of wild reindeer and estimate reindeer capacity in the key habitats of the Taimyr population.
- A law should be passed to make offenders compensate for damaging pastures (habitats) of wild reindeer;
- To make an inventory of anthrax focal points (high mortality areas) within the habitat.
- To organize the monitoring of the epizootic condition of the Taimyr population, increase control over the compliance with the rules of the disposal of killed reindeer remains.



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Thank you!

Mikhailov, V., & Kolpaschikov, L. (2017). Population dynamics of the Taimyr wild reindeer herd. *International Journal of Environmental Studies*, 74(5), 862-883.