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The Impact of COVID-19 on Mongolian Nomadic Society

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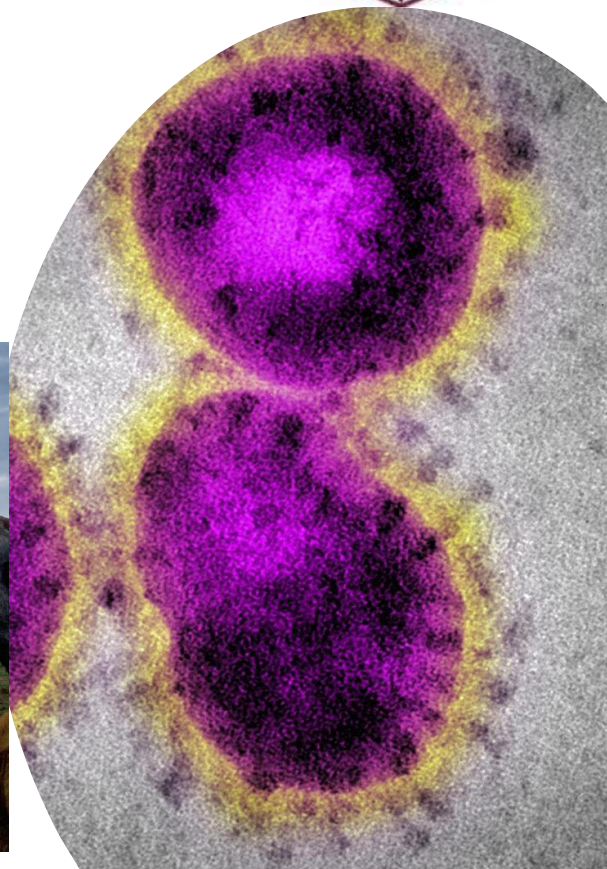


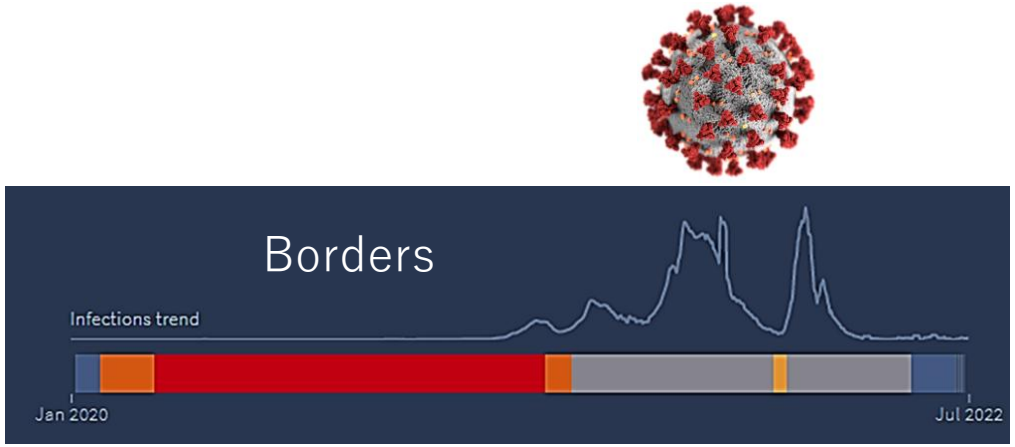
Introduction (1)

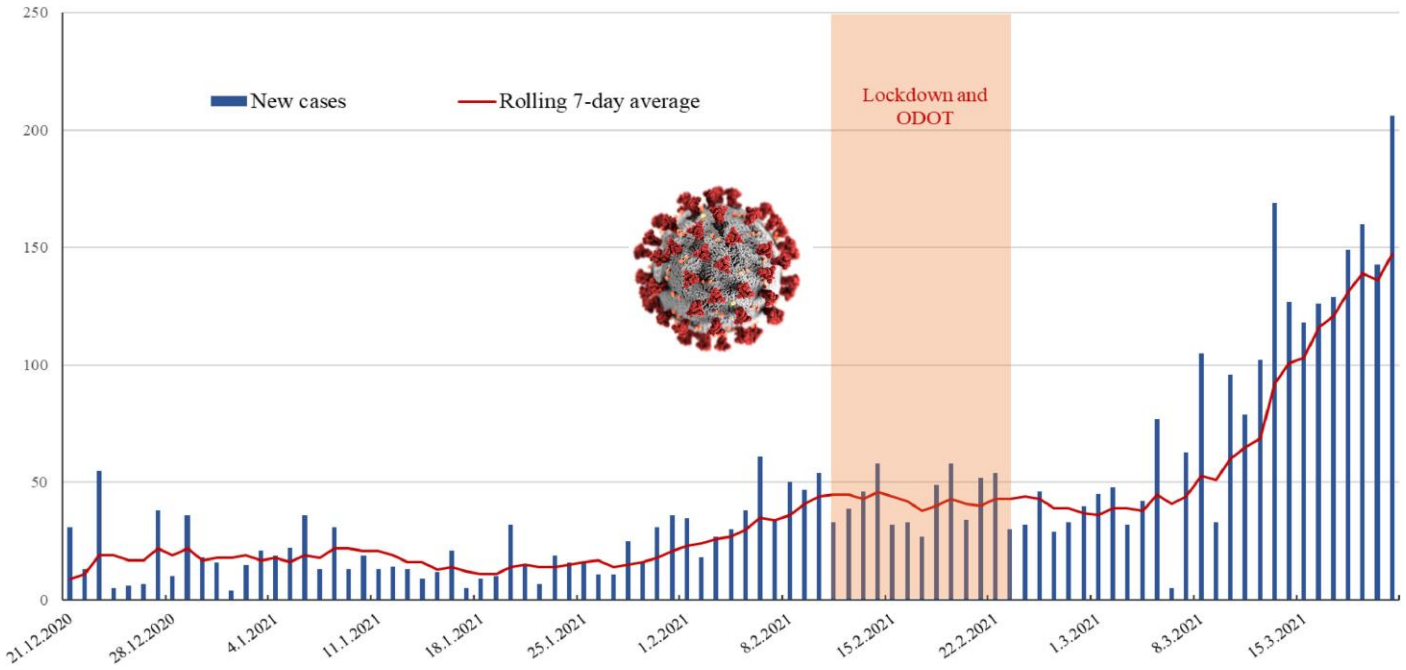
The COVID-19 pandemic, first identified in Wuhan, China in late 2019, was declared a global pandemic by the World Health Organization (WHO) on March 11, 2020. Mongolia, a sparsely populated country bordered by China and Russia, faced unique challenges due to the pandemic. With a population of 3.41 million, about half reside in the capital Ulaanbaatar, while approximately 142,500 nomadic families are scattered across 1.5 million square kilometers. This geographic and demographic makeup significantly influenced Mongolia's pandemic response. Total Livestock numbers is 70.0 million.

Introduction (2)

The Mongolian government implemented strict measures, including closing its borders with China, suspending international flights, and imposing nationwide lockdowns.

By the end of 2020, Mongolia had recorded 2,120 COVID-19 cases, with the majority in Ulaanbaatar. Although these containment efforts initially proved successful, the economic toll was severe, with the national economy contracting by 6% in 2020. The mining and quarrying sectors were particularly affected, shrinking by 30%, while other industries such as agriculture experienced modest growth.

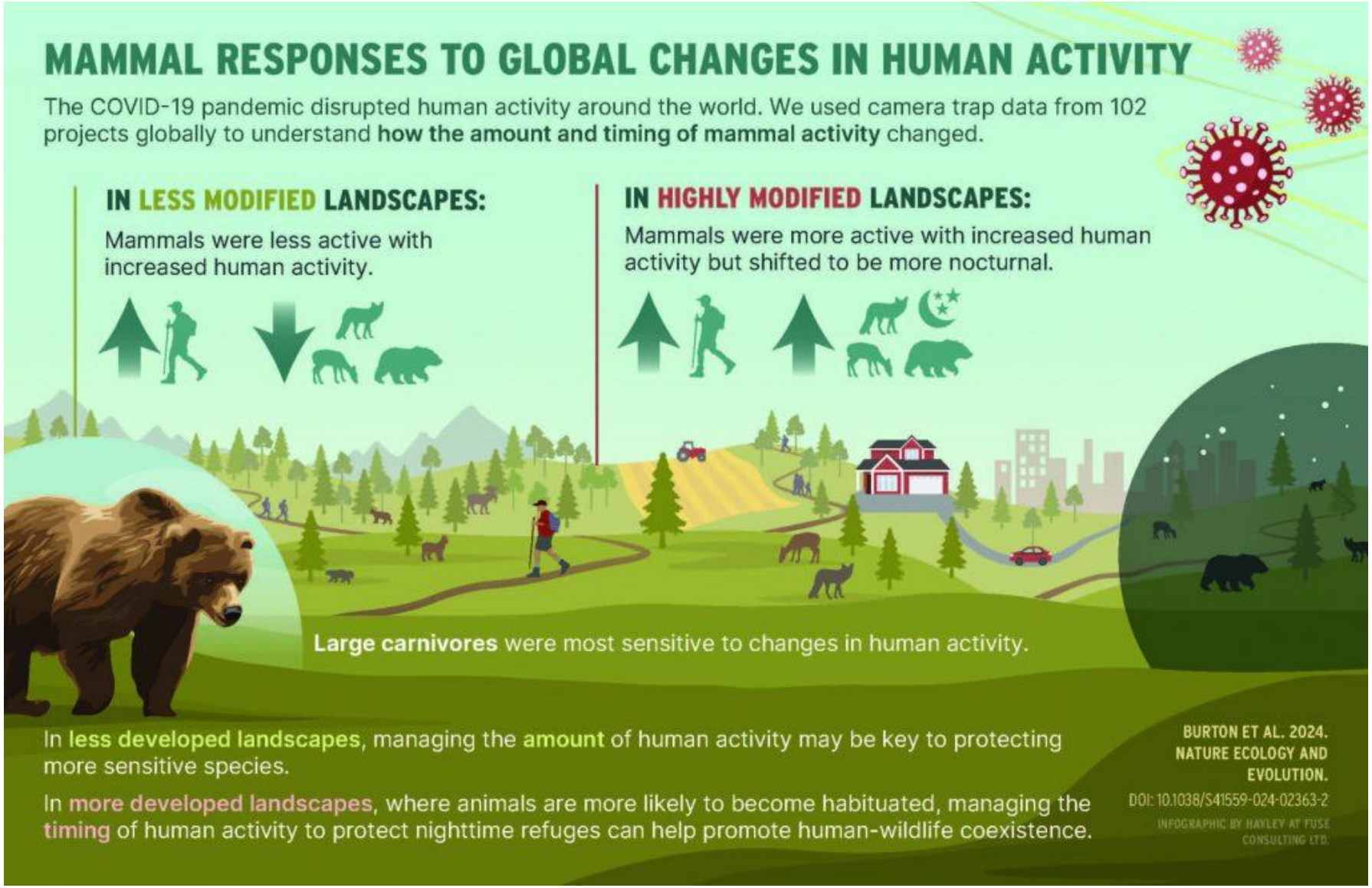




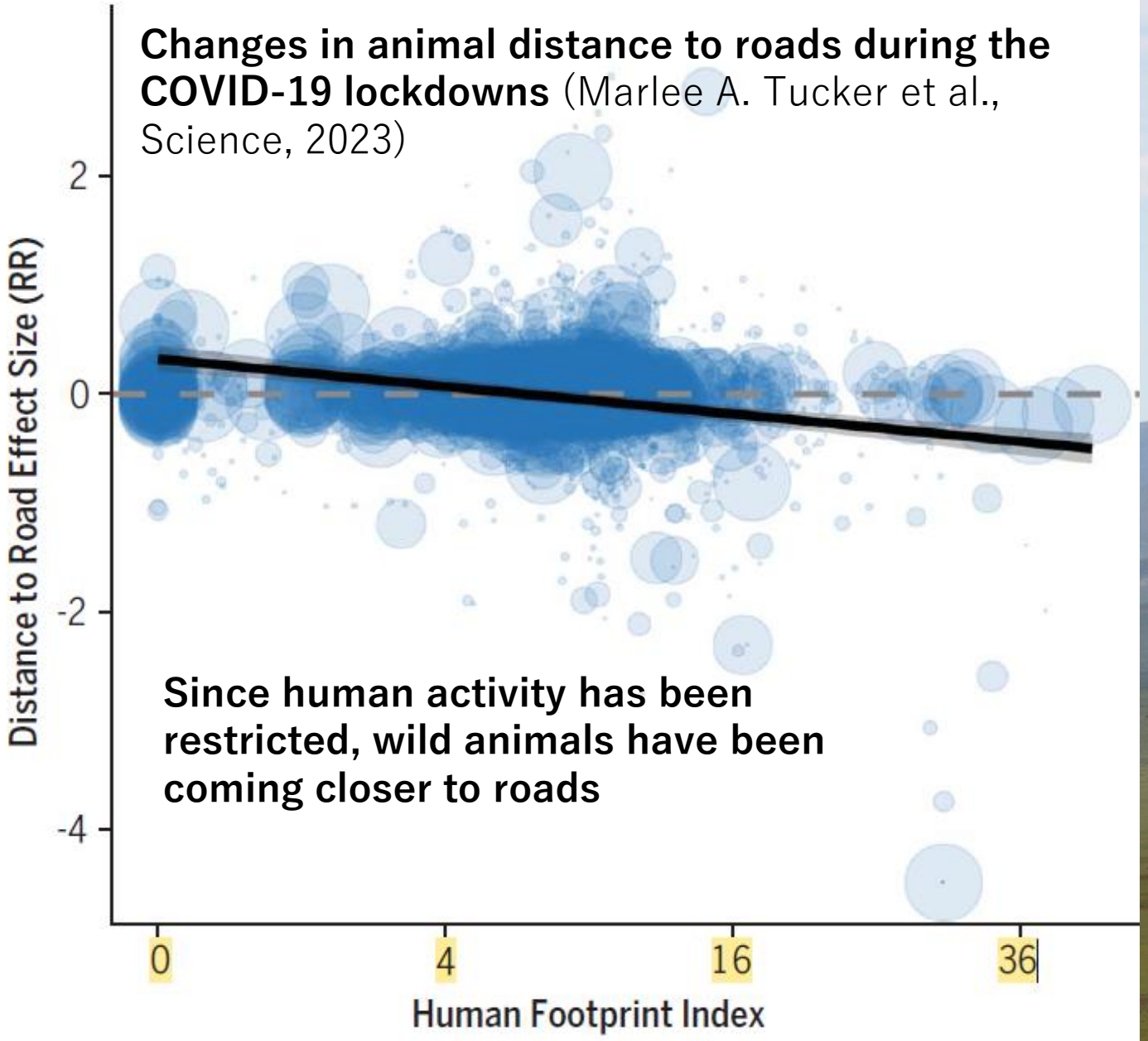
Introduction (3)

This study focuses on the socio-economic and cultural adaptations of nomadic populations living approximately 100 km southwest of Ulaanbaatar, in the Altanbulag sum and the adjacent Hustai National Park. Through structured interviews and GIS analyses, the study explores how these communities navigated the challenges of both the COVID-19 pandemic and the Dzud.

Impact of the COVID-19 Pandemic on Wildlife



Changes in animal distance to roads during the COVID-19 lockdowns (Marlee A. Tucker et al., Science, 2023)

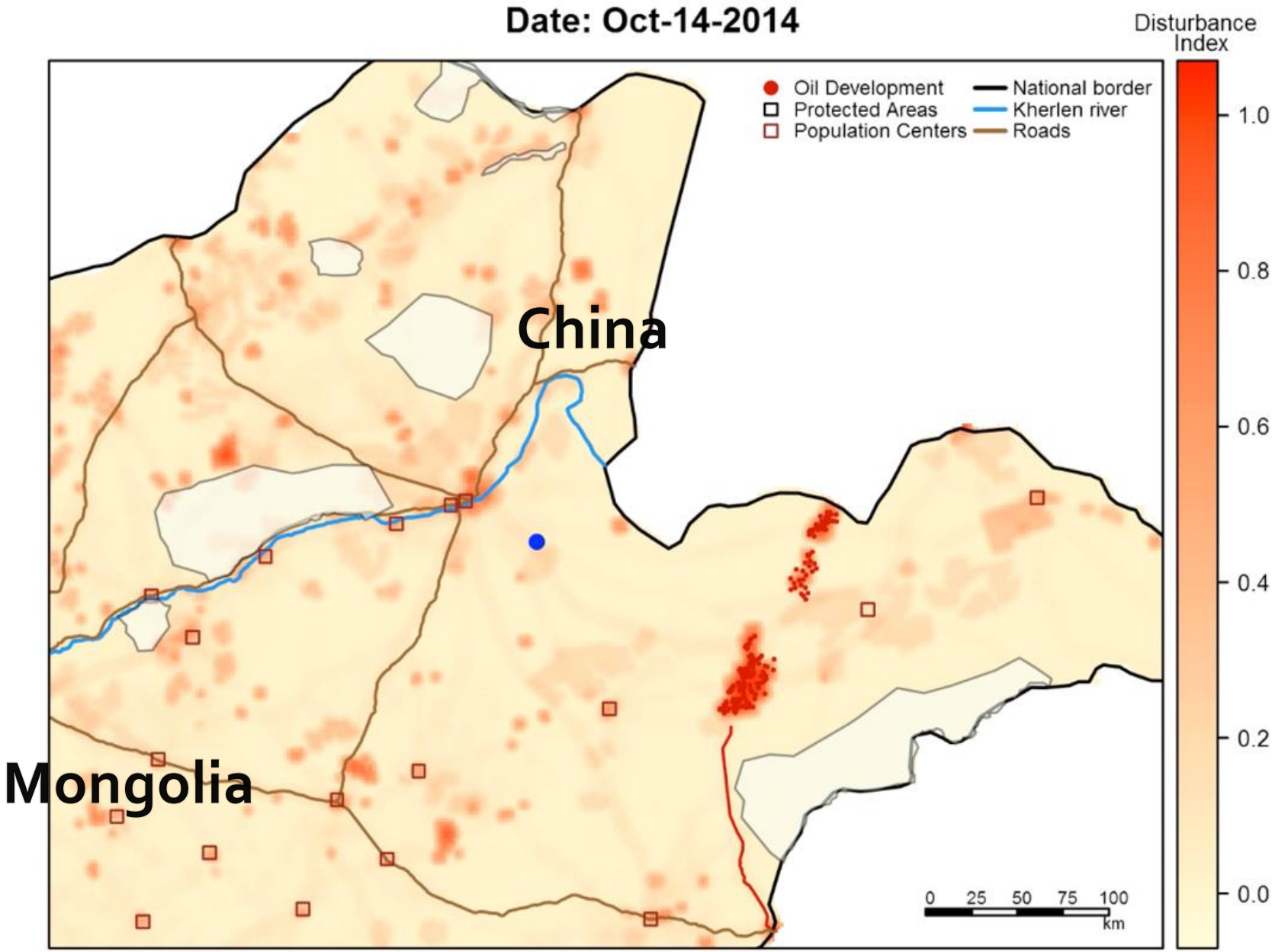


Since human activity has been restricted, wild animals have been coming closer to roads

Wild animals engage in roadside behavior when human influence is low.


Mongolian Steppe region
Uninhabited areas are a paradise for wildlife

Wildlife seasonal migration has no borders.



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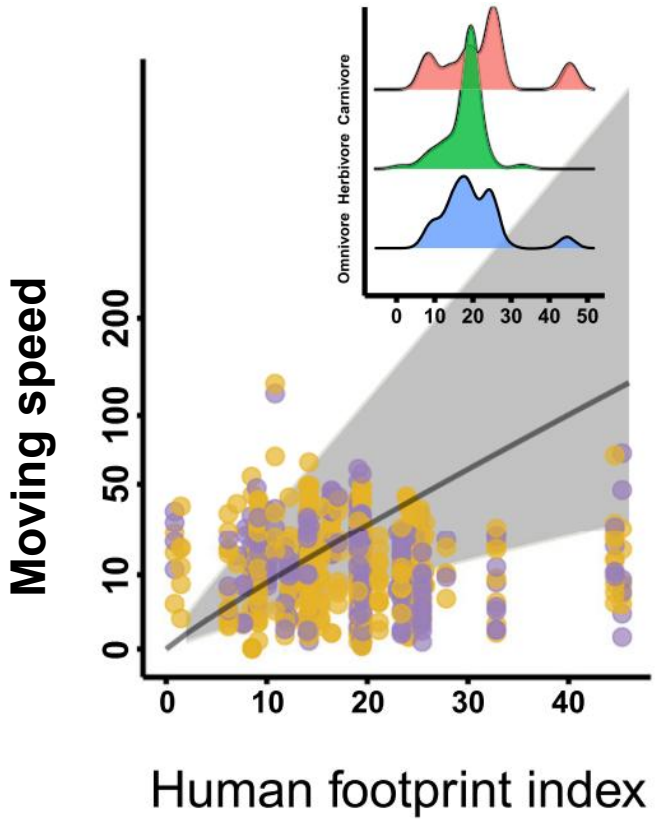
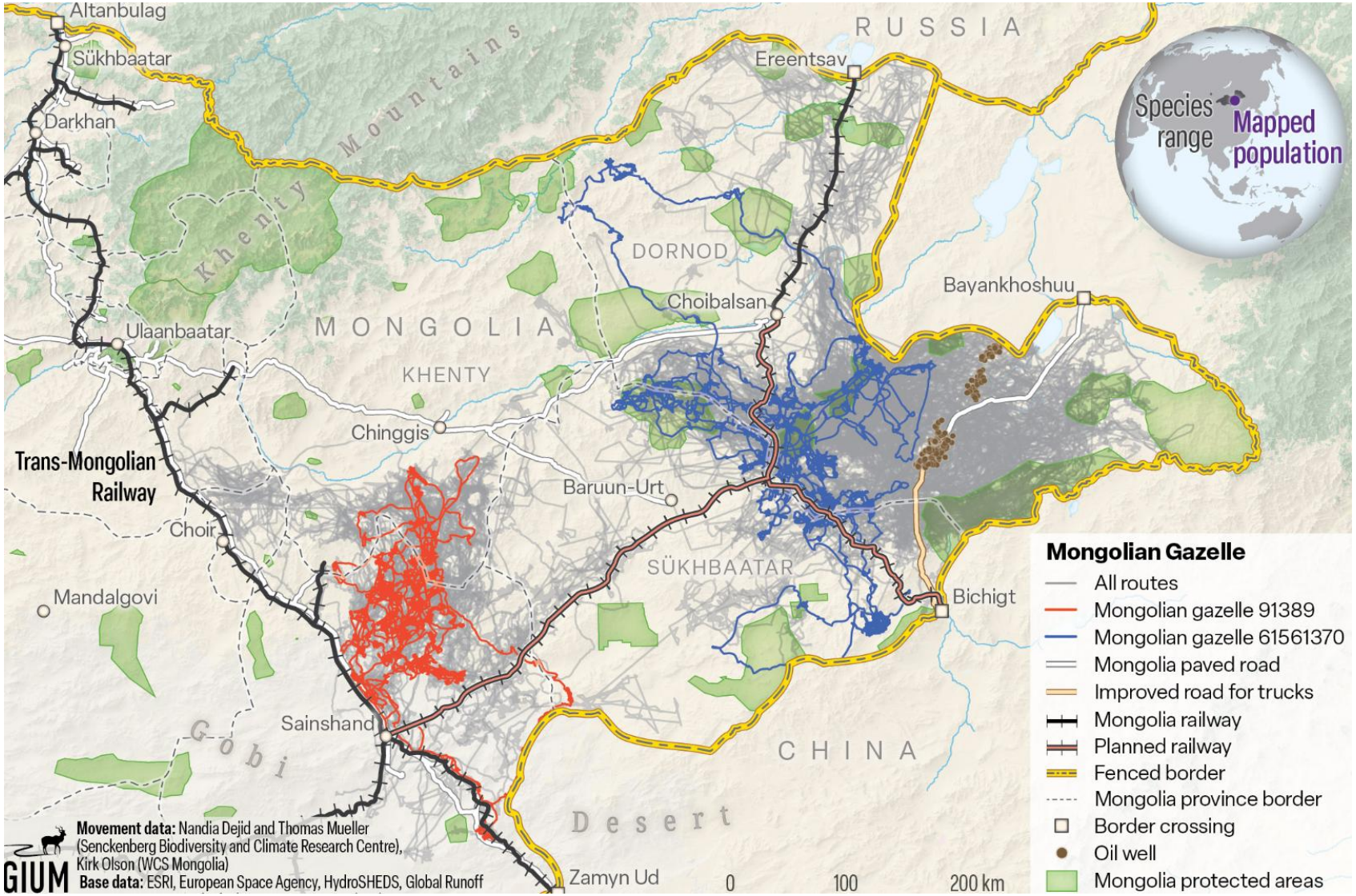


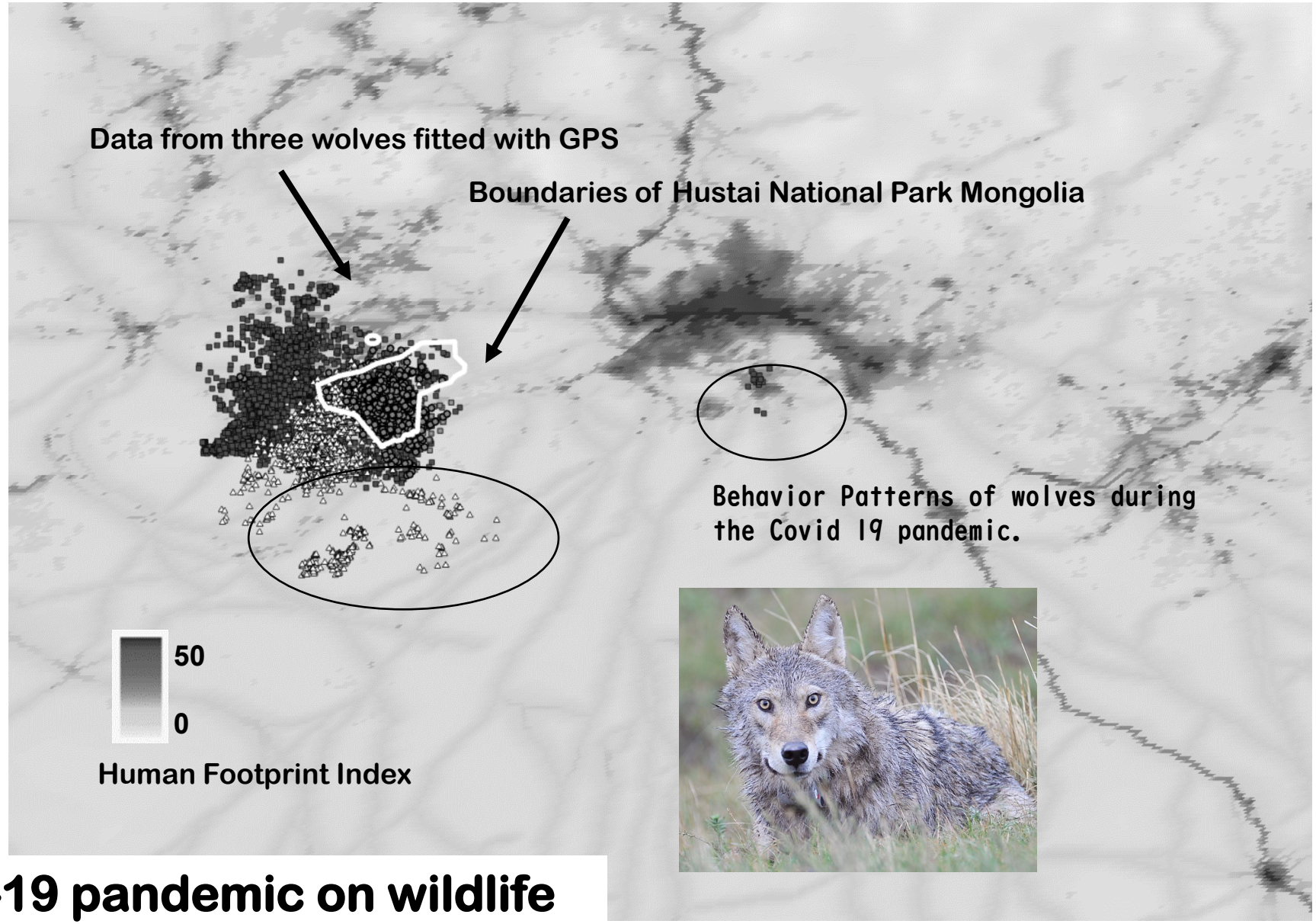


Mongolian Gazelle Behavior for during Covid-19 Pandemic

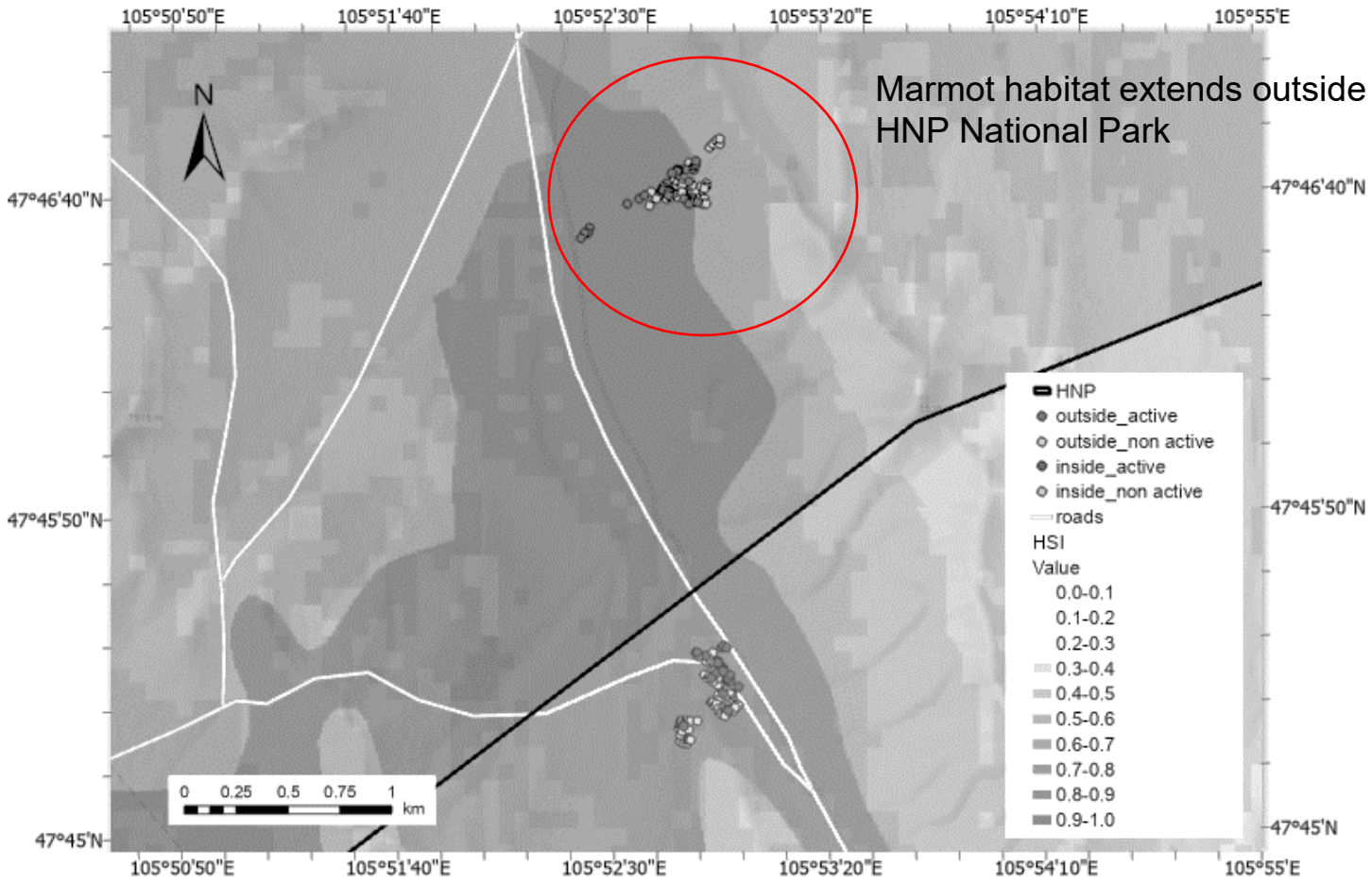
Behavior Patterns of wolves during the Covid 19 pandemic.

Behavioral responses of wild animals to COVID-19 lockdown in a national park distribution in the capital region of Mongolia

Behavior Patterns of wolves during the Covid 19 pandemic.



Impact of the COVID-19 pandemic on wildlife



Impact of the COVID-19 pandemic on wildlife

Behavior Patterns of Marmot during the Covid 19 pandemic.

The Impact of COVID-19 on Mongolian Nomadic Society

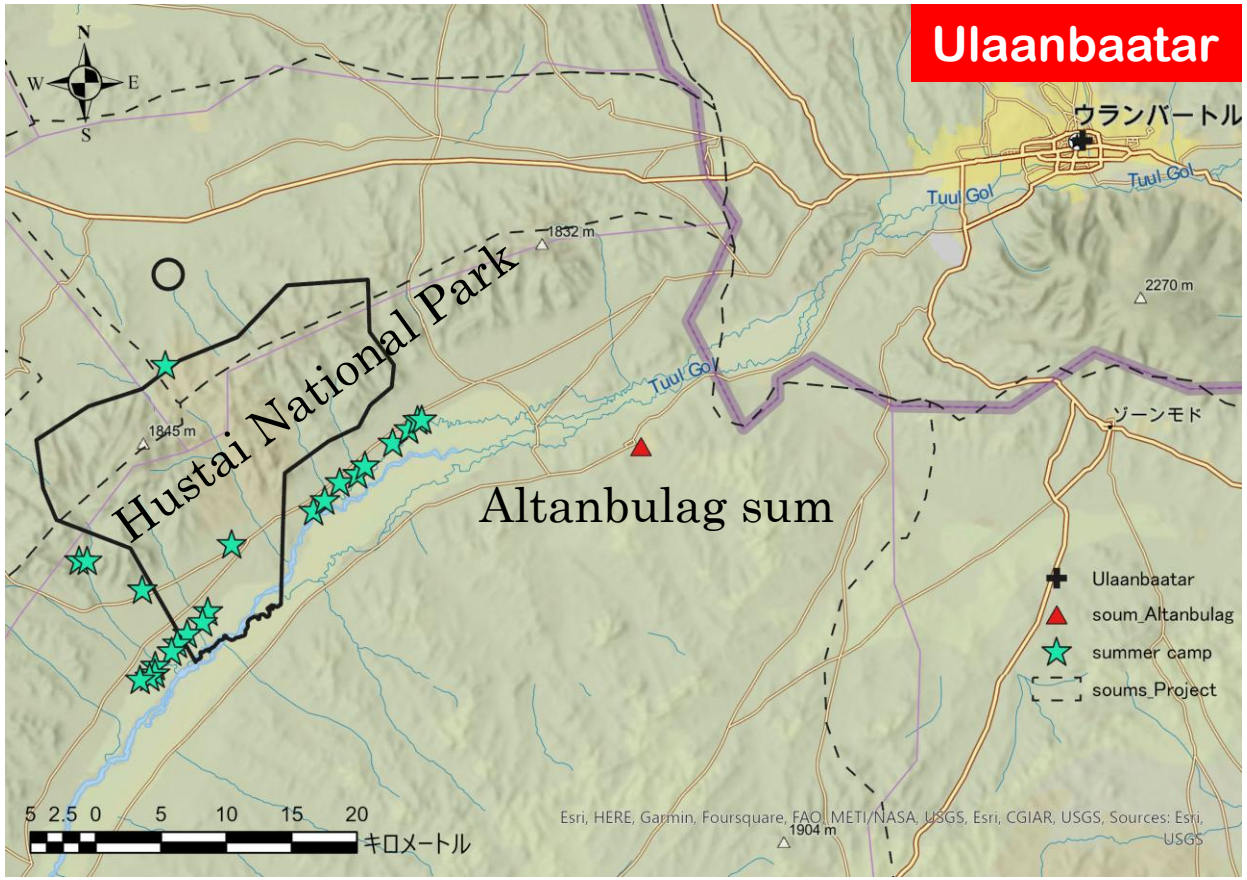
Study area and Methodology

Study area

The Altanbulag sum and Hustai National Park

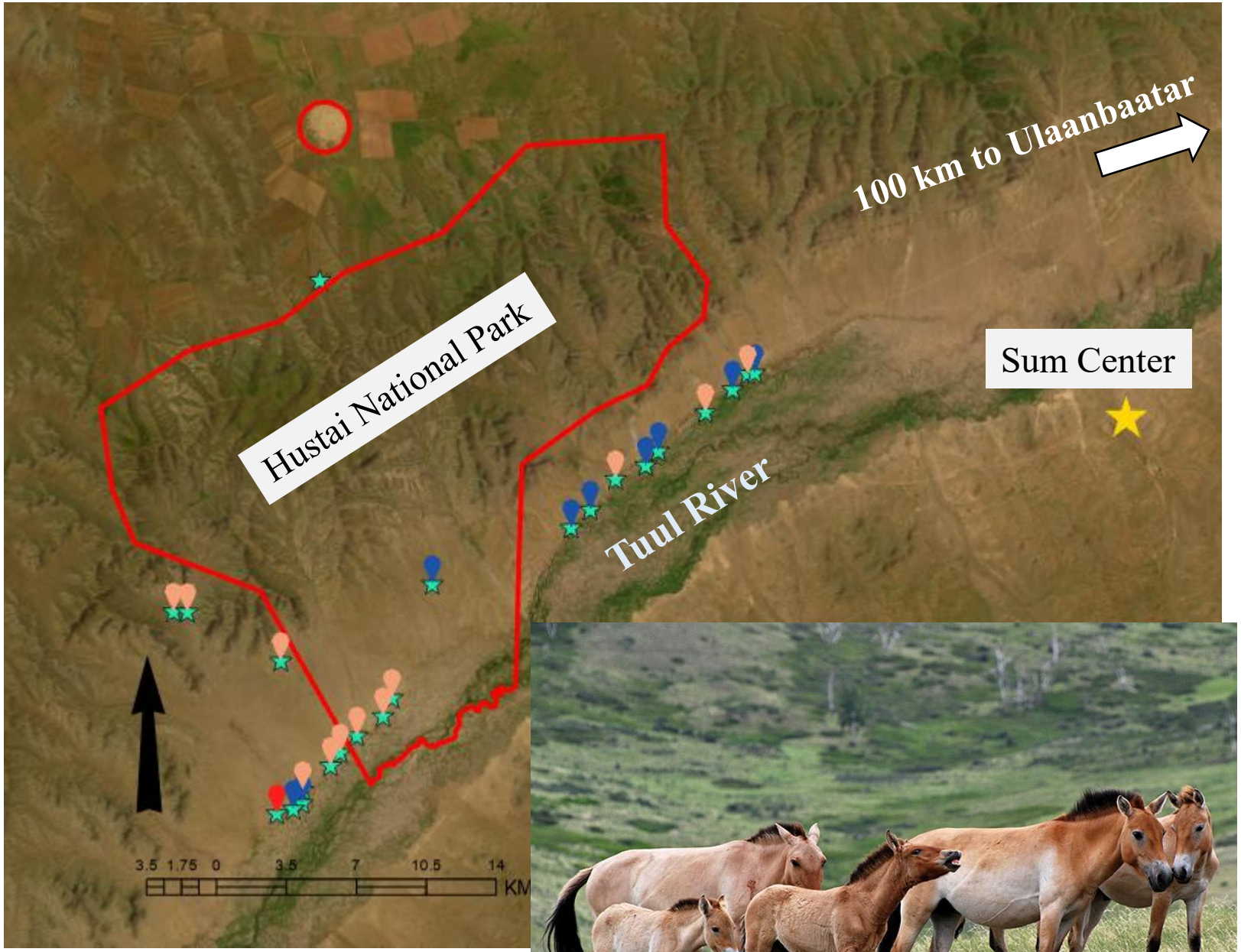
Methods

- Primary data were collected through structured interviews and questionnaires administered to 29 nomadic households in the study area in August 2023.
- Geographic Information Systems (GIS) spatial analysis was employed to map nomadic movement patterns and analyze how these intersected with pandemic impacts.
- Meteorological data from the Mongolian Meteorological Network were used to contextualize the effects of environmental factors on nomadic livelihoods.
- Statistical analysis was applied to the survey data to quantify the extent of the pandemic's economic and social impacts.



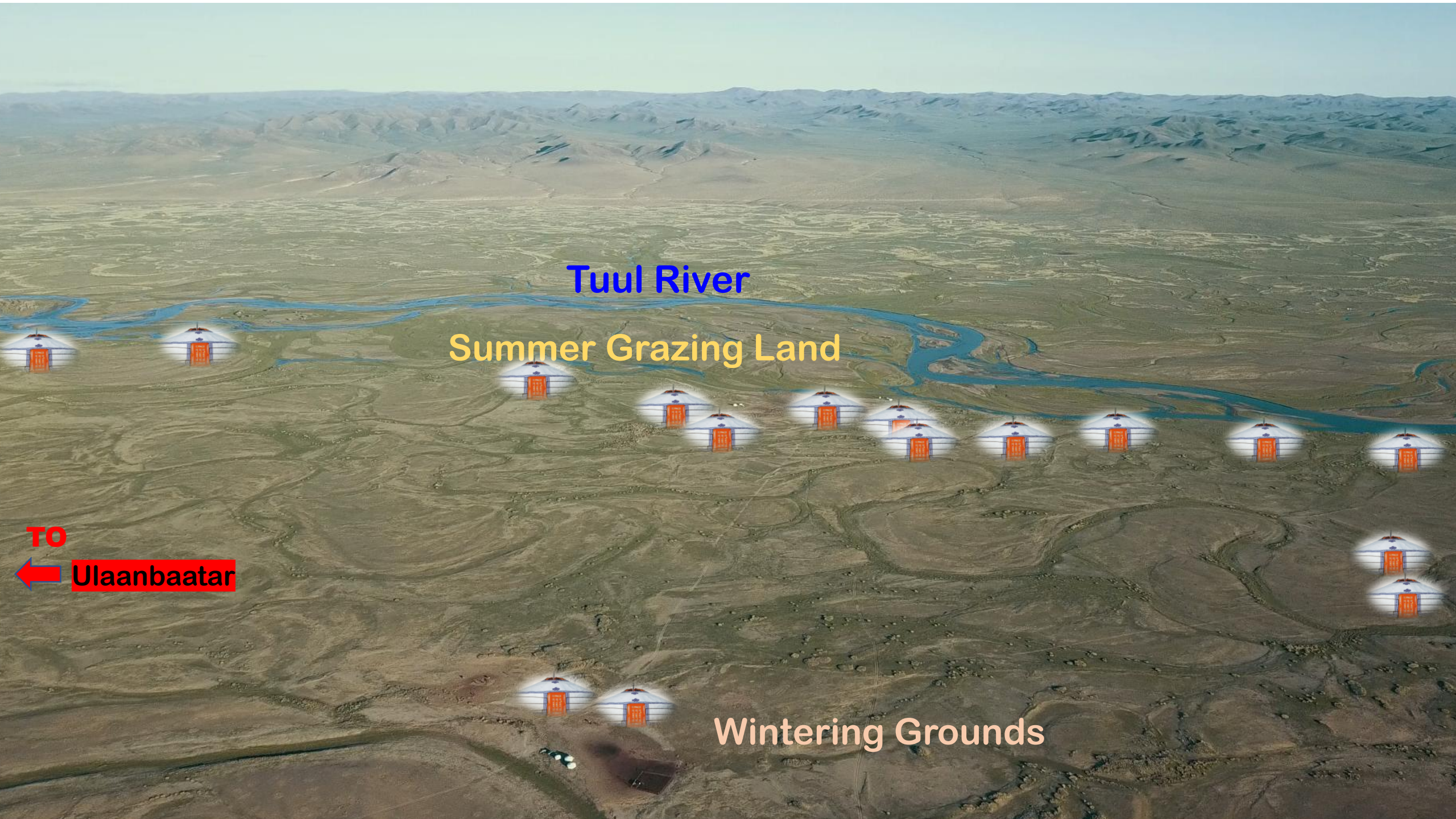
The study area

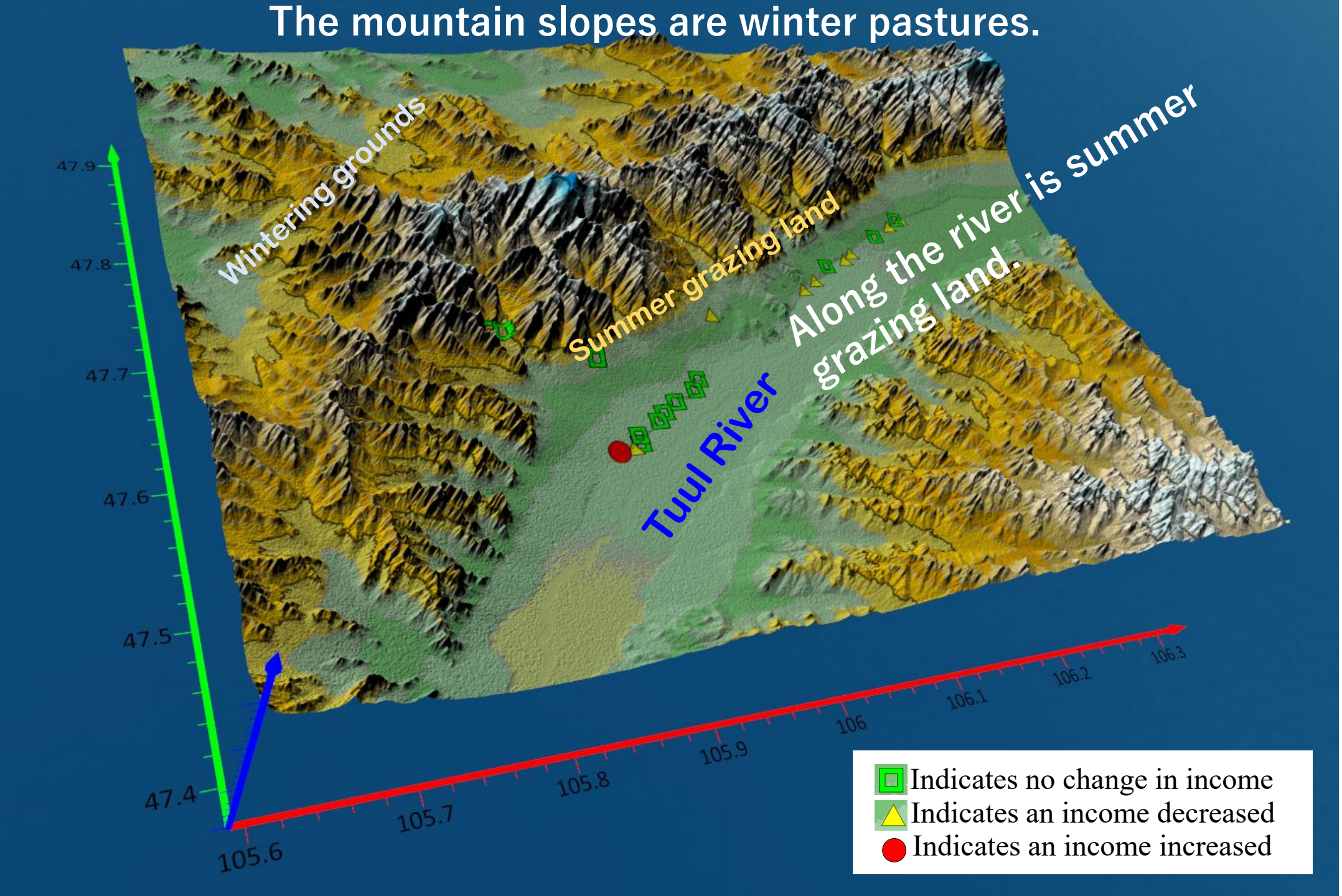
Primary data were collected through structured interviews and questionnaires administered to **29 nomadic households** in the Altanbulag sum and Hustai National Park region in August 2023.

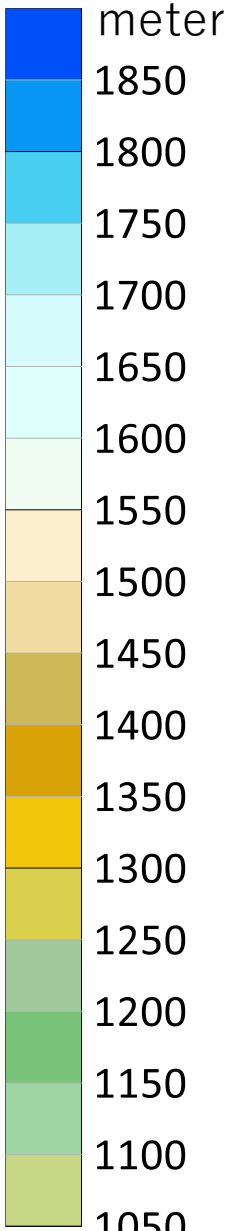

100 km to Ulaanbaatar
Hustai National Park
Sum Center
Tuul River
3.5 1.75 0 3.5 7 10.5 14
KM


Income decreased

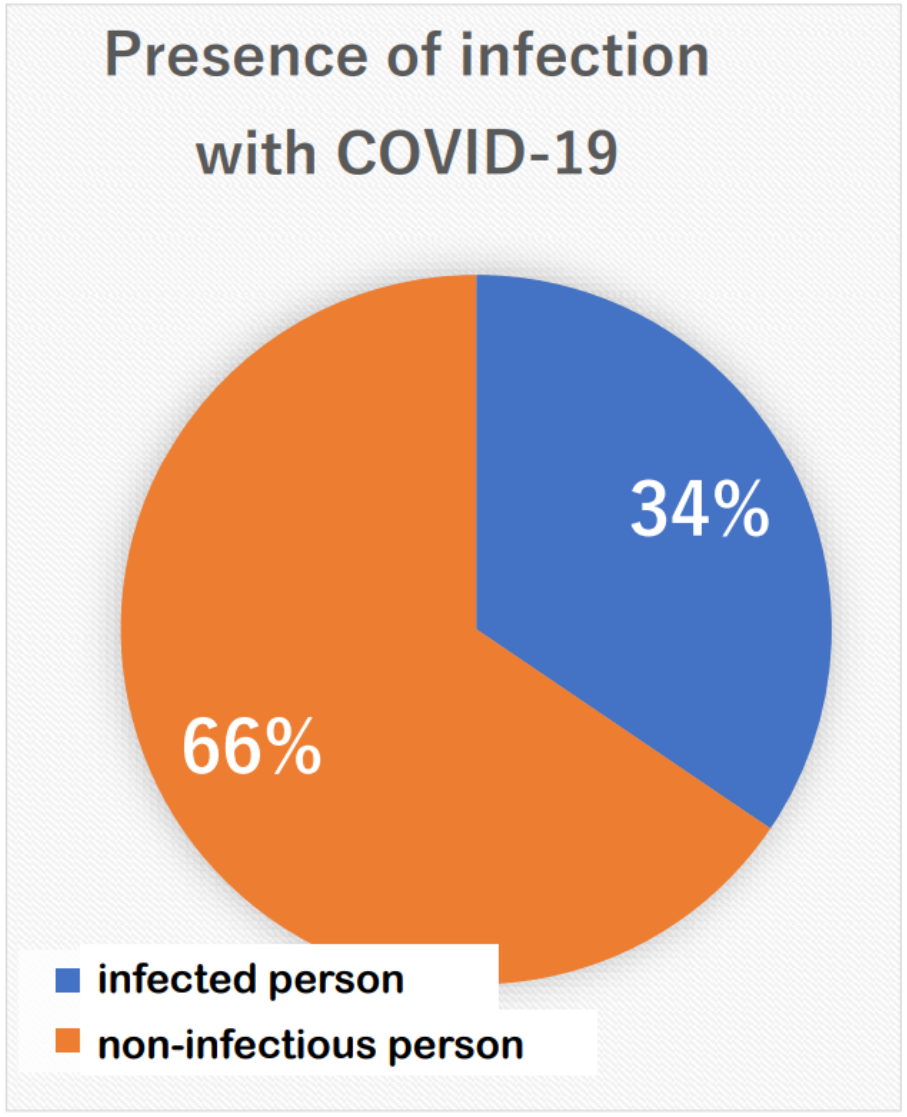

No change in income

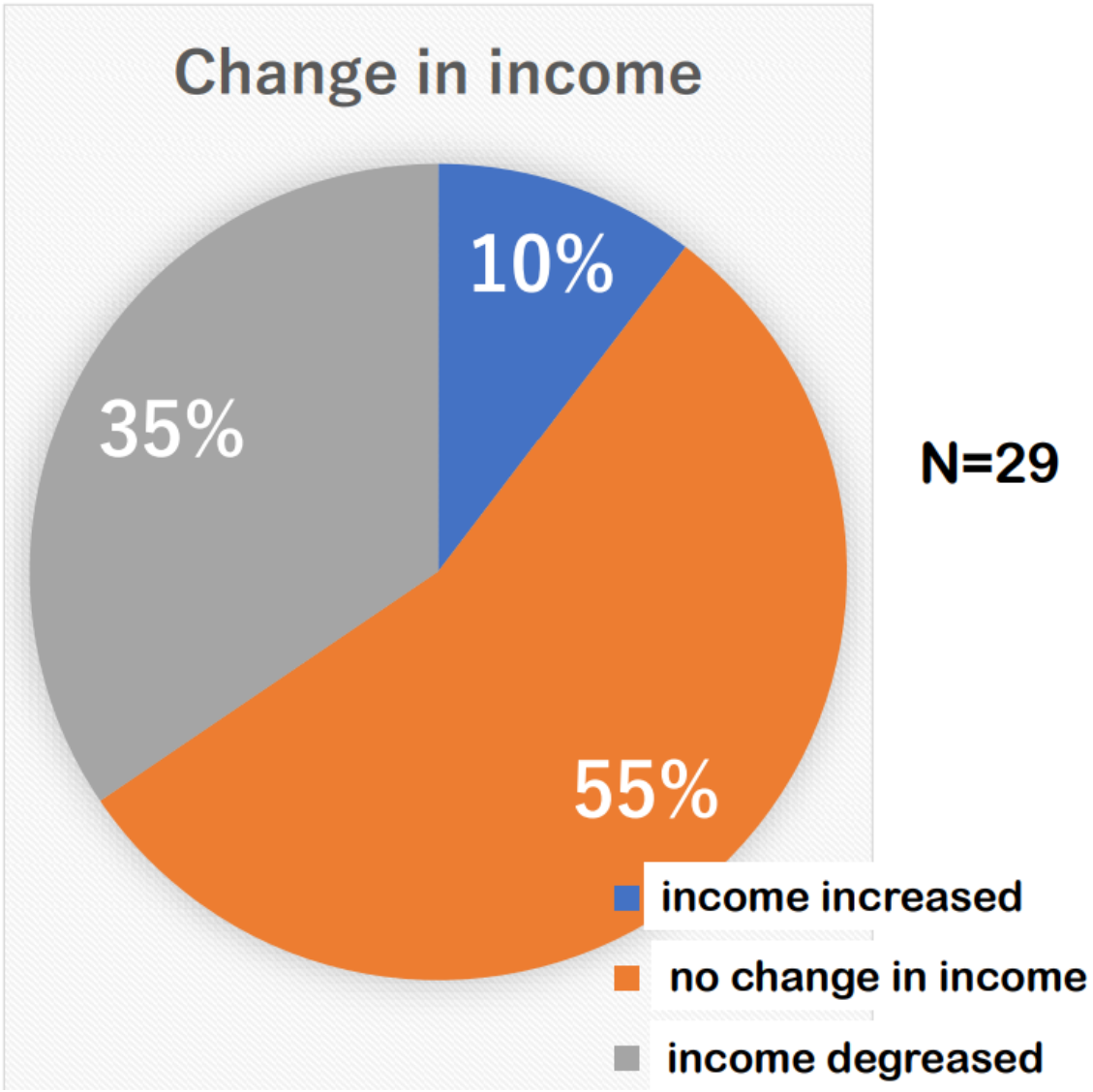

Tuul River
Summer Grazing Land
TO
Ulaanbaatar
Wintering Grounds


The mountain slopes are winter pastures.
Wintering grounds
Summer grazing land
Along the river is summer grazing land.
Tuul River
47.9
47.8
47.7
47.6
47.5
47.4
105.6
105.7
105.8
105.9
106
106.1
106.2
106.3
Indicates no change in income
Indicates an income decreased
Indicates an income increased


meter
1850
1800
1750
1700
1650
1600
1550
1500
1450
1400
1350
1300
1250
1200
1150
1100
1050

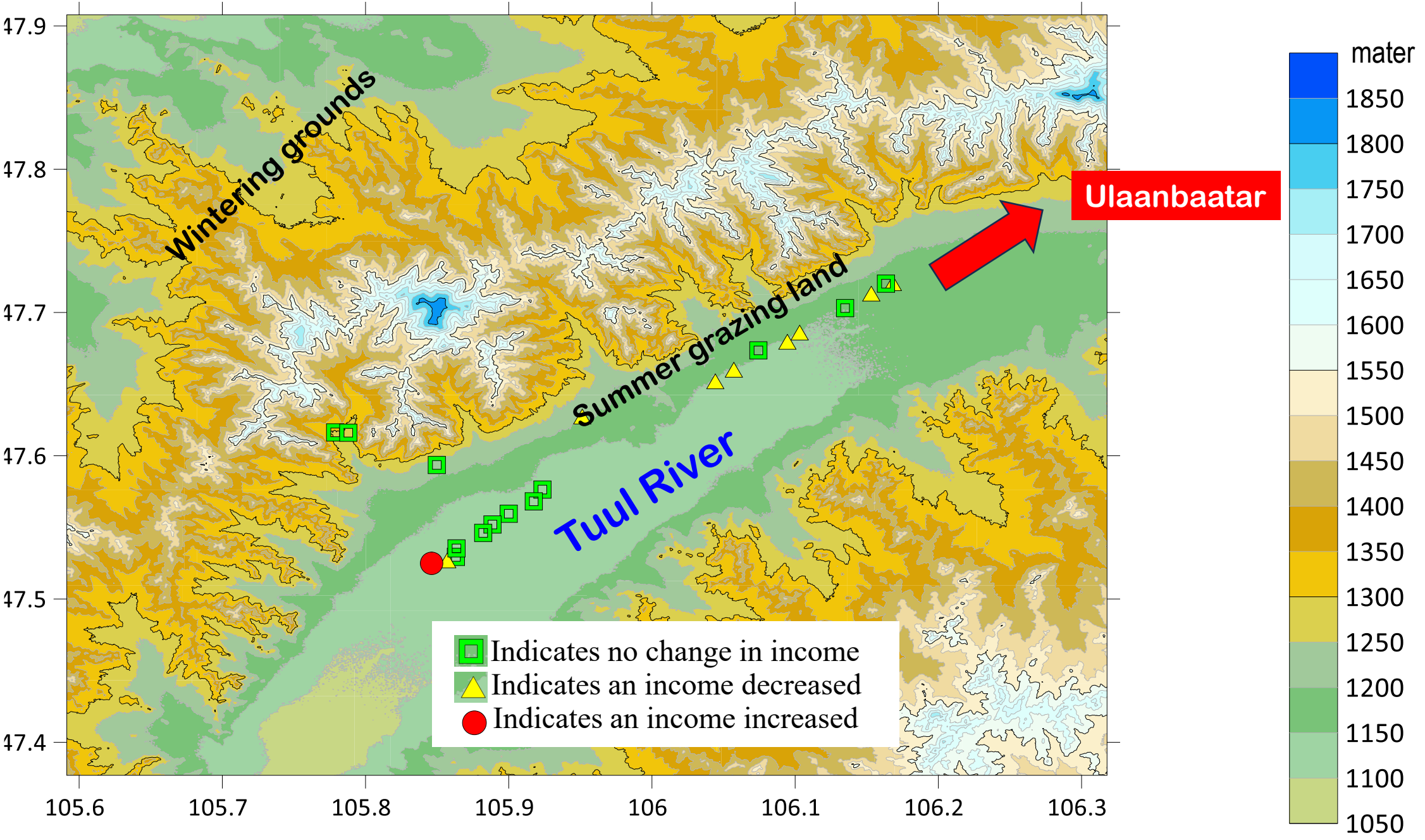
Some Results





N=29

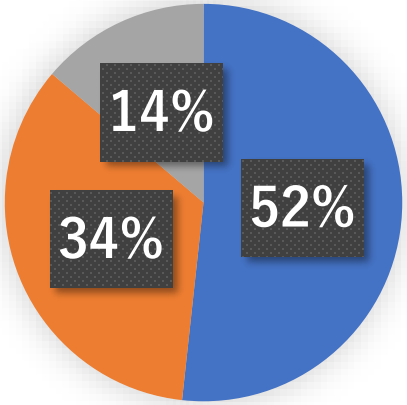
Location of nomadic summer camps and changes in their income



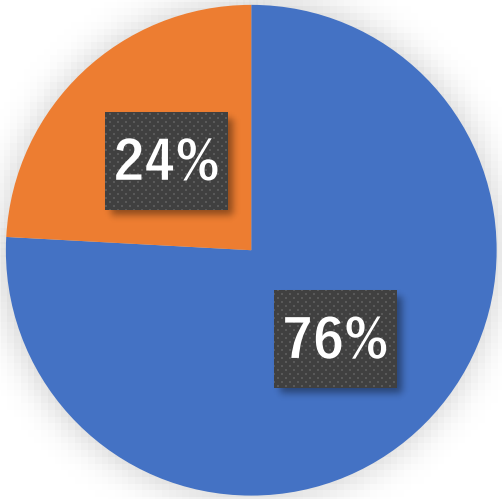
Changes in the frequency of visits to public institutions during the new corona pandemic (degreased or never visited)

Change in Expenditures (increased)

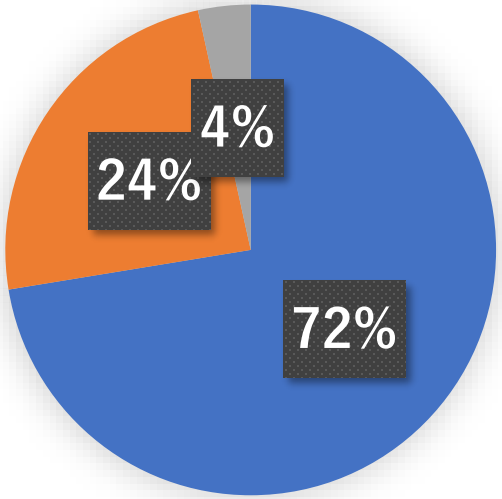
Postage (communication expenses)



Daily necessities



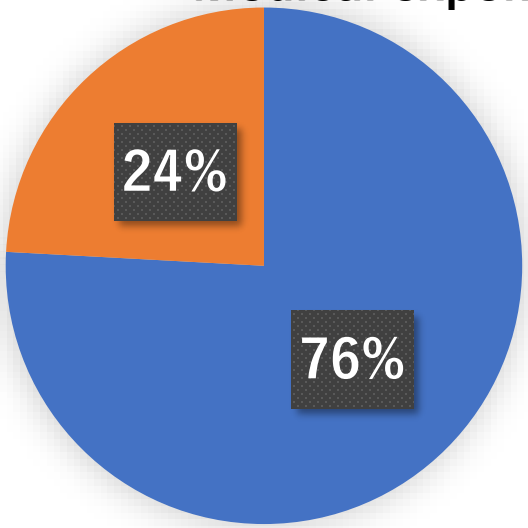
Food expense



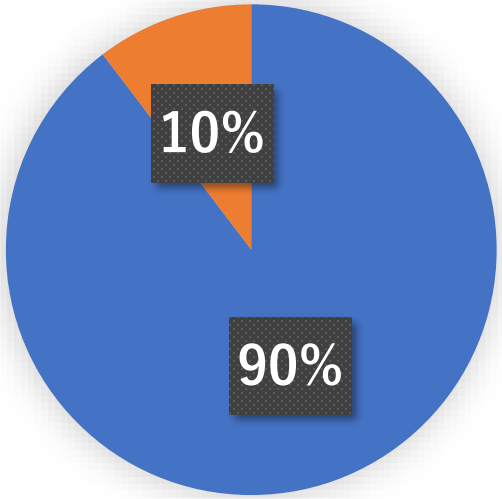
- Great increased
- Some increased
- No children
- Somewhat decreased
- Sharp decrease

N=29

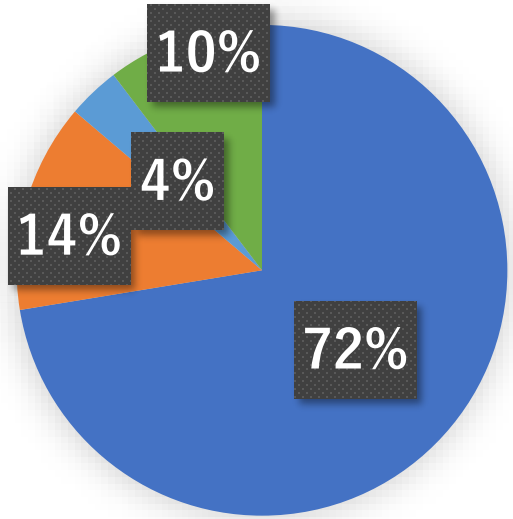
Medical expenses



Traveling expenses

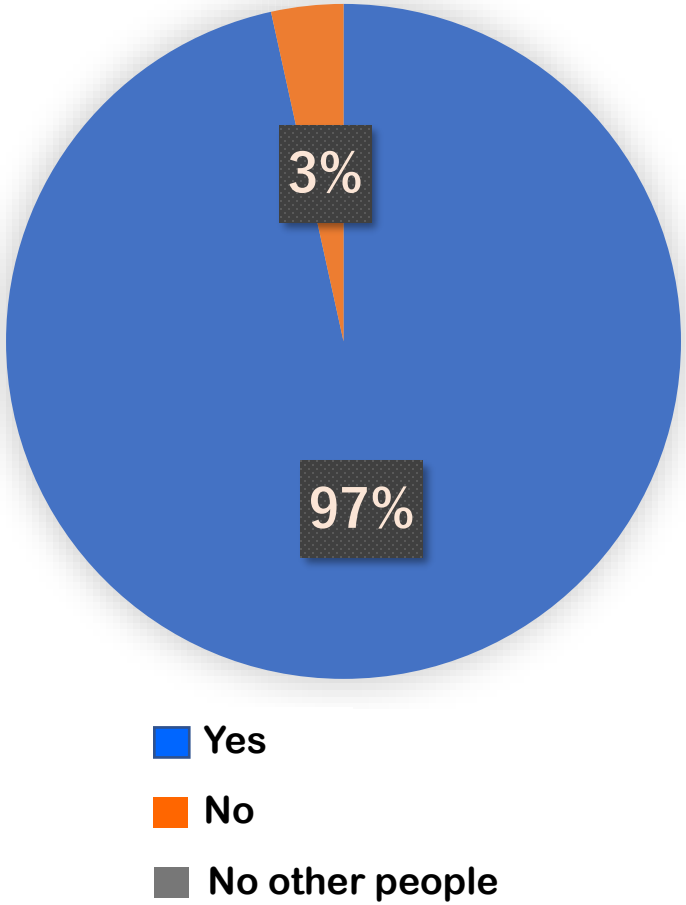


School expenses

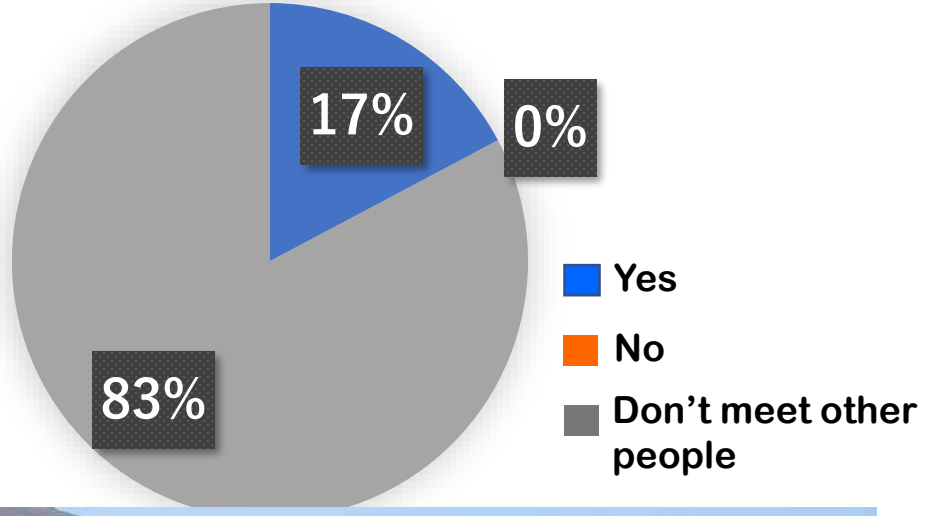


General preventive measures against Covid-19

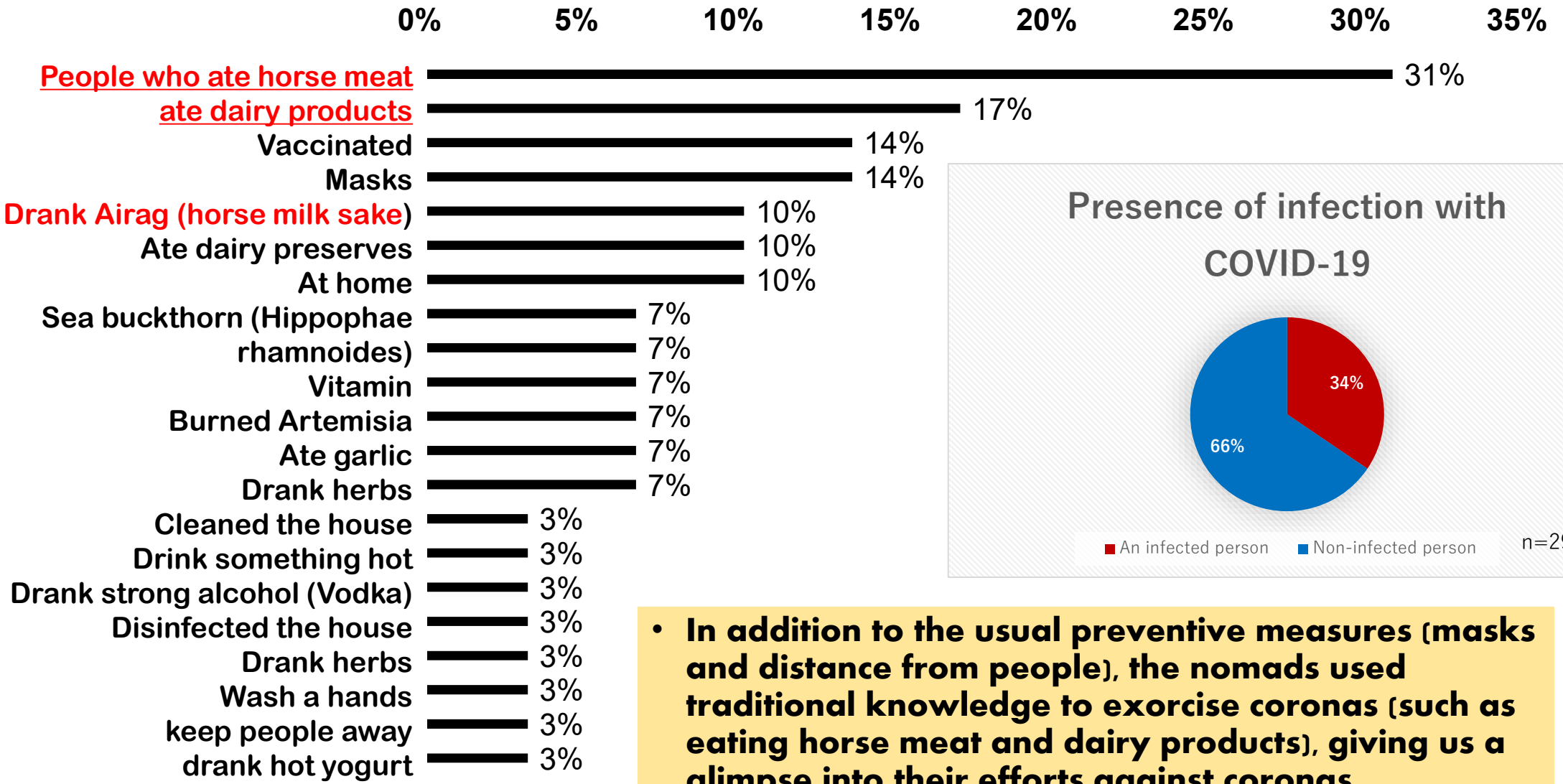
General and traditional preventive measure

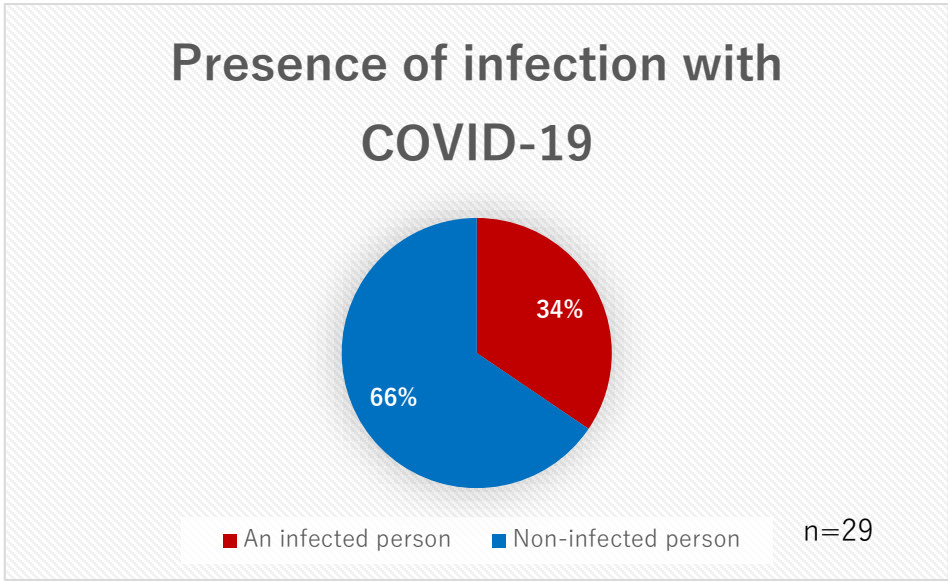


Preventive measures in common watering holes

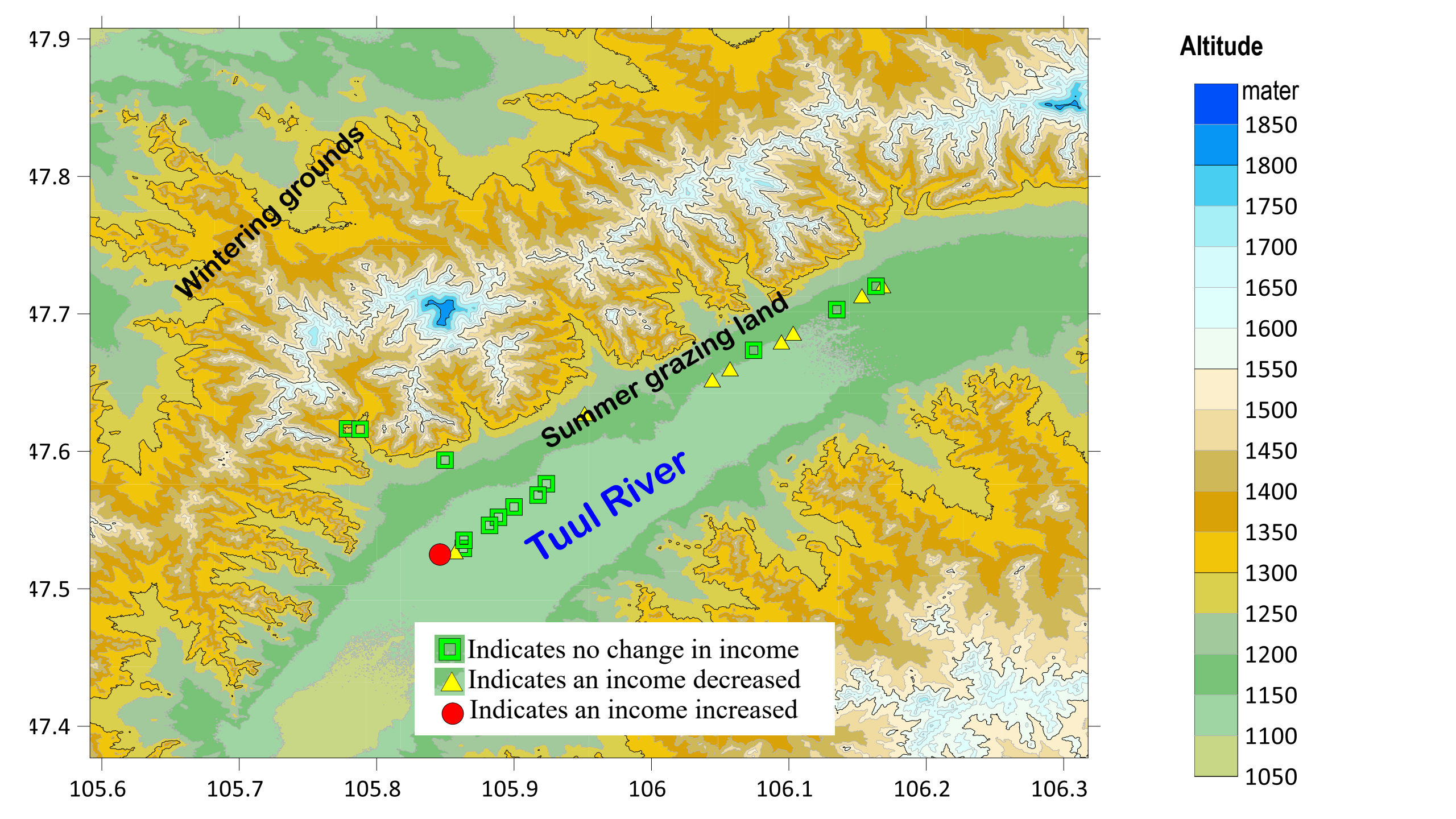


WHAT DID YOU DO TO EXORCISE CORONAVIRUS? (WITH MULTIPLE RESPONSES)





- **In addition to the usual preventive measures (masks and distance from people), the nomads used traditional knowledge to exorcise coronas (such as eating horse meat and dairy products), giving us a glimpse into their efforts against coronas.**


Wintering grounds
Summer grazing land
Tuul River
Indicates no change in income
Indicates an income decreased
Indicates an income increased
47.9
47.8
47.7
47.6
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47.4
105.6
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105.9
106
106.1
106.2
106.3
Altitude
mater
1850
1800
1750
1700
1650
1600
1550
1500
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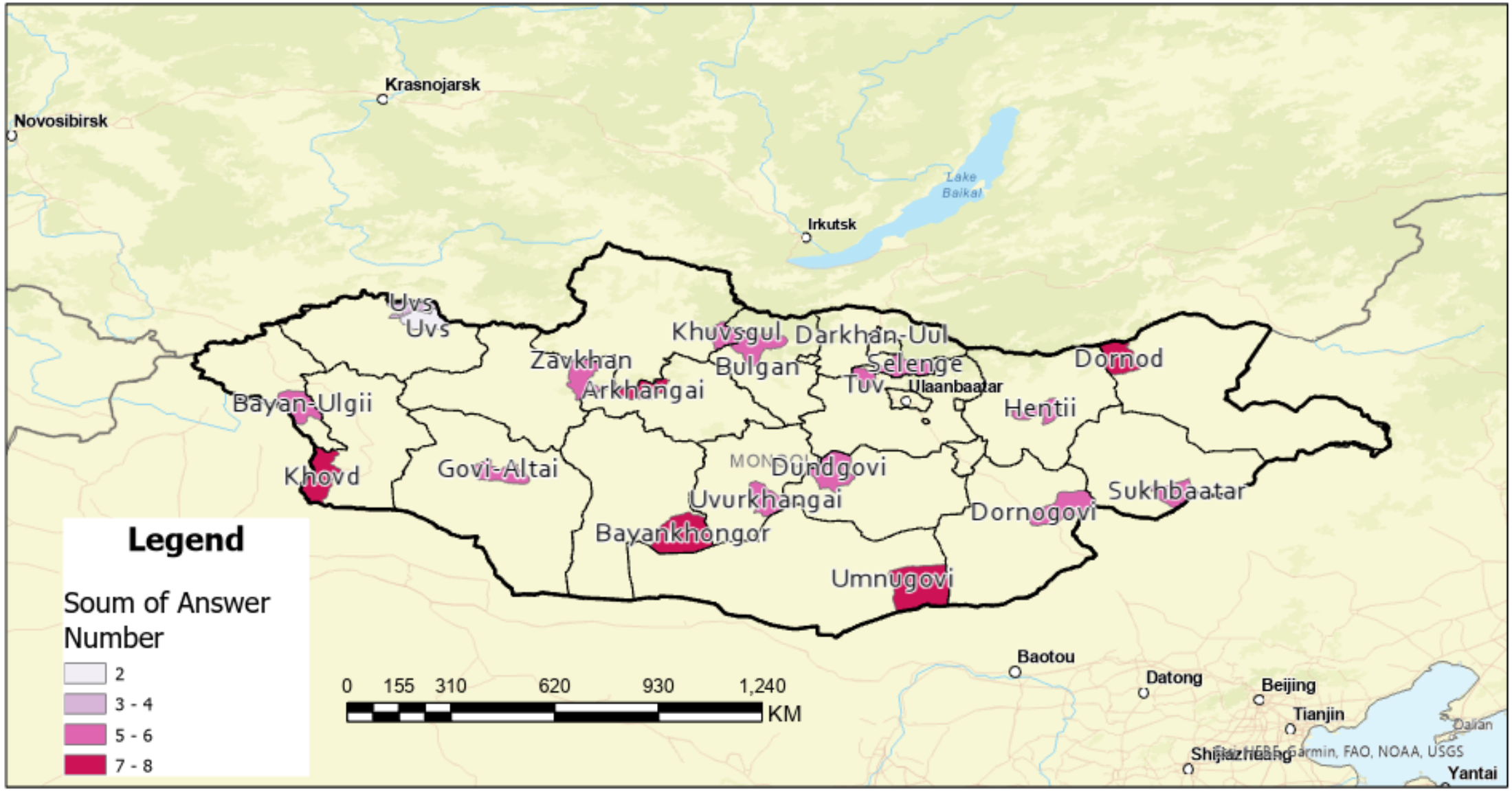
1300
1250
1200
1150
1100
1050

We used the Mongolian Meteorological Service network to survey nomads across the country about the impact of COVID-19

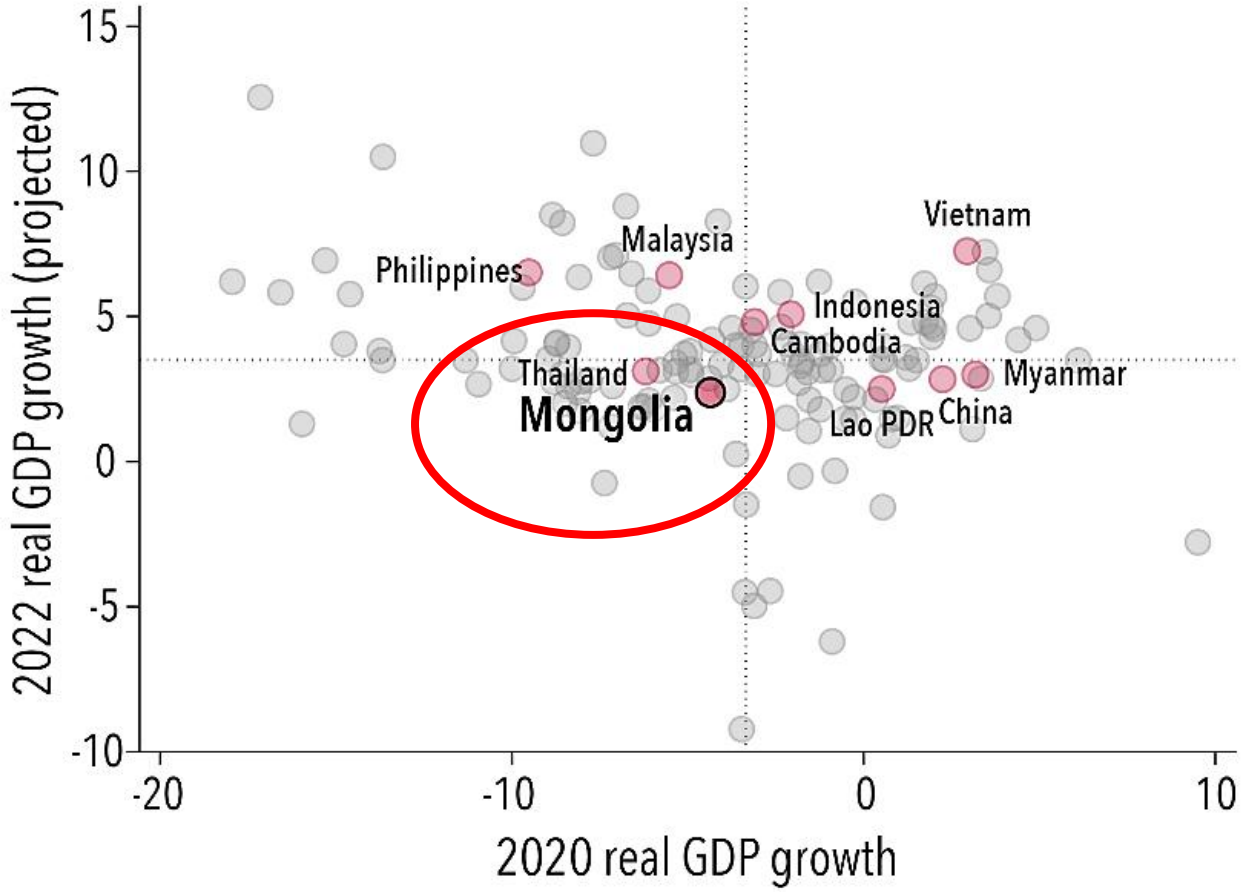


Nomads' Requests to the Mongolian Government

What do you want most? (N = 121) (Request)							
Medical	Inflation	Food	Economic	Education	Political	A human Being	Other topics
32	43	12	28	6	25	28	29

Rising prices are putting pressure on people's lives.

Figure 1. Real annual GDP growth (%): 2020 vs. 2022 (projected)



Many countries in the East Asia and Pacific (EAP) region have emerged from the pandemic on a robust economic recovery trajectory, but Mongolia stands out as having made slower progress. This is because Mongolia's main industries are mineral exports and tourism.

Conclusion

- This study provides a detailed examination of the spread of COVID-19 within Mongolia's rural areas, particularly its impact on nomadic communities, their economic stability, and their use of traditional knowledge to mitigate health risks. Despite Mongolia's low population density, the study revealed that COVID-19 infections spread even in remote regions, primarily due to movement between rural areas and the capital, Ulaanbaatar.
- In conclusion, this study demonstrates that the impacts of global health crises, such as COVID-19, extend far beyond urban centers and reach into the most remote and rural regions. The economic effects of the pandemic were found to vary significantly depending on individual livelihood strategies, with some nomads adapting more successfully than others. The role of traditional knowledge emerged as crucial in these communities, offering valuable insights into how indigenous practices can be effectively integrated into modern public health responses. These findings emphasize the importance of tailoring pandemic responses to local conditions and respecting the resilience and traditions of nomadic populations, both in Mongolia and globally.

Thank you for your attention !