INDIGENOUS REINDEER HUSBANDRY

The impacts of land use change and climate change on indigenous reindeer herders' livelihoods and land management, and culturally adjusted criteria for indigenous land uses

A study submitted by Anna Naykanchina
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The present report is developed in cooperation with Association of World Reindeer Herders, UArctic EALÁT Institute, International Centre for Reindeer Husbandry, GRID-Arendal, Elle Bals, Anna Degteva, Ol- Johan Gaup, Alexander Grigorev, Inger Marie G. Eira, Kathrine I. Johnsen, Rebecca Lawrence, Anne-Maria Magga, Svein D. Mathiesen, Helena Omma, Konstantin Oshchepkov, Anders Oskal, Mikhail Pogodaev, Ellen Inga Turi, Philip Burgess,

Johan Mathis Turi, Johan Daniel Turi, Issat Turi, Ravdna B. M Eira, Ivan Tuprin, Igor Slepushkin, Alexander Serotetto, Mattias Åhrén and Björn Alfthan.

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Update on the outcomes of the 11th Session of the UNPFII

This current report is the result of a collective effort by the above-mentioned authors to provide a more visual assessment, including photographs and maps and graphics, that help to illustrate many of the issues mentioned in the original, official report submitted to the 11th Session of the UNPFII.

Since the publishing of the official study for the 11th Session of the United Nations Permanent Forum on Indigenous Issues, the Forum has issued the following relevant recommendations:

Report on the impacts of land-use change and climate change on indigenous reindeer herders land management:

15. The Permanent Forum recommends that the relevant United Nations agencies and Member States with reindeer herding peoples support training and education programmes for indigenous reindeer herding youth and communities in order to secure the future sustainability and resilience of the Arctic and sub-Arctic indigenous pastoral reindeer herding societies and cultures in the face of climate change, land-use change and globalization.

16. The Permanent Forum applauds the good work of the nomadic herders project on enhancing the resilience of pastoral ecosystems and livelihoods, led by the United Nations Environment Programme (UNEP)/GRID-Arendal and the Association of World Reindeer Herders. The Permanent Forum recommends that the Global Environment Facility Council approve the project as a good example of a transboundary project by and for indigenous peoples.

Regarding the half-day discussion at the 11th Session of the Forum on Central and Eastern Europe, the Russian Federation, Central Asia and Transcaucasia:

92. The Permanent Forum urges the Governments of Central and Eastern Europe, the Russian Federation, Central Asia and Transcaucasia regions to implement international standards and norms on the rights of indigenous peoples and ensure their rights to lands, territories and resources, in particular article 20 of the Declaration. This includes recognizing reindeer herders' use and management of grazing land and use of necessary biological resources by hunters, fishers and foragers.

Regarding the Future work of the Permanent Forum, including issues of the Economic and Social Council and emerging issues:

108. The Permanent Forum appoints Ms. Anna Naykanchina and Dalee Sambo Dorough, members of the Forum, to undertake a study on resilience, traditional knowledge and capacity-building in Arctic and sub-Arctic indigenous reindeer herding communities. It also appoints

Mr. Kanyinke Sena to undertake a study on resilience, traditional knowledge and capacity-building for pastoralist communities in Africa. Both studies are to have a focus on good practices and opportunities and be submitted to the Forum at its twelfth session.

INDIGENOUS REINDEER HUSBANDRY

I. Summary

At its tenth session in May 2011, the Permanent Forum appointed Anna Naykanchina, UN Permanent Forum for Indigenous Peoples, as Special Rapporteur to prepare a study on: Impacts of land use change and climate change on indigenous reindeer herders' livelihoods and land management, including culturally adjusted criteria for indigenous land uses and requested the report be submitted to the Permanent Forum's ninth session in May 2012. There is an urgent need to implement international laws on the rights of indigenous peoples into domestic and local legal systems, and further to ensure not only formal equality but equality in practice in the context of indigenous peoples and their rights to lands, territories and resources. This includes recognizing herders' use and management of grazing land by identifying culturally adjusted criteria and agreements for indigenous land uses. There is also a need to increase reindeer herders' capacity in negotiating with developers competing for their grazing land – be it public or private industrial development. New and better impact assessments and agreements for reindeer husbandry should be developed. There is a need to increase the transparency in decision-making concerning land use and resource exploration and to develop a reindeer watch monitoring system.

A. Introduction

1. Reindeer pastoralism, ancient in origin in all its forms, represents models in the sustainable exploitation and management of northern terrestrial ecosystems that is based on generations of experience accumulated, conserved, developed and adapted to the climatic and political/economic systems of the North. Reindeer have major cultural and economic significance for indigenous peoples of the North. The human-ecological systems in the North, like reindeer pastoralism, are sensitive to change, perhaps more than in virtually any other region of the globe, due in part to the variability of the Arctic climate and the characteristic ways of life of indigenous Arctic peoples. More than 20 indigenous groups are reindeer herding peoples. Reindeer herders have managed vast areas in the Arctic since time immemorial. Reindeer husbandry is practiced in Alaska, Canada, China, Finland, Greenland, Mongolia, Norway, the Russian Federation and Sweden. It involves some 100 000 herders and 2,5 million semi-domesticated reindeer (Magga *et al*. 2011; Maynard *et al* 2011; Oskal *et al*. 2009; Turi 2002).

Reindeer Herders in Yamal. Photo: Ellen Inga Turi, ICR

Migration in Yamal, Russia.
Photo: Svein D. Mathiesen, ICR

2. Reindeer herders around the world, owing to their experience, traditional knowledge and skills, have developed unique management strategies for the protection of pastures, observation of changes and rational use of natural resources. Reindeer herders should have the right themselves to determine their own future, based on their own philosophy of life and

understanding of the world. They should be consulted, included and accepted as partners when development, research and monitoring takes place on their territories. For many indigenous peoples, reindeer represent their cultural, economic, social and spiritual foundation. The intimate connection between humans and animals is perhaps best embodied by this relationship, as reindeer husbandry represents a connection ancient in origin and is practiced almost identically wherever it is found.

3. Recent reports by John B. Henriksen (2007) and Lars-Anders Baer (2010) have focused on climate change and its impact in the Arctic on reindeer herding. In 2009, the Special Rapporteur on the Rights of Indigenous Peoples reported on the critical conditions related to the loss of grazing lands for Sámi reindeer herders in Finland, Norway and Sweden (Anaya 2011). Likewise, the Permanent Forum has also made recommends that States must ensure that transnational corporations and other business enterprises on indigenous peoples' traditional lands comply with specific standards contained in the United Nations Declaration on the Rights of Indigenous Peoples and the International Labour Convention No. 169 concerning indigenous and tribal peoples in independent countries, 1989. According to Magga *et al.* (2011), the future for reindeer herders' communities is dependent on reindeer herders' use of traditional knowledge and integrating scientific knowledge when considering risks as well as the diversity of reindeer herders and their social organizations and economies, and understanding biological diversity and the flexible use of pastures.

Tundra reindeer husbandry in Chukotka, Russia. Photo: Alexander Kutskiy

4. Likewise, the IPY EALÁT *Reindeer Herding and Climate Change Network* in cooperation with UNEP/GRID-Arendal and the Association of World Reindeer Herders held a side event in UNPFII (May 2011). Recommendations from the side event included:

i) An urgent need to implement international laws on the rights of indigenous peoples into domestic and local legal systems, and to ensure not only formal equality but equality in practice of indigenous peoples' rights to lands, territories and resources;

ii) A need to recognize herders' use and management of grazing land by identifying culturally adjusted criteria for indigenous land uses;

iii) A need to undertake a study on the impacts of land-use change and climate change on indigenous reindeer herders' economies and land management;

iv) A need to increase reindeer herders' capacity in negotiating with developers competing for their grazing lands (be it public or private industrial development) and provide access to free legal advice; and

v) A need to increase the transparency in decision-making concerning land use and resource exploration and exploitation.

II. Taiga and Tundra Reindeer Husbandry

Taiga reindeer husbandry in Aldan, Republic of Sakha (Yakutia). Photo: Anders Oskal, ICR

5. The 1600s are said to mark a transformation of indigenous reindeer economies as competing nation States began a process of colonizing indigenous peoples by encroaching on their lands and utilizing their resources in the Arctic. For some, this represented an opportunity as reindeer herds grew to feed the growing markets. Russian expansion into the vastness of Siberia in search of fur was enabled by reindeer as both food and transportation. Today, there is a difference between tundra and taiga reindeer husbandry. *Tundra* reindeer husbandry refers to long migrations, often many hundreds of kilometres, in the summer to coastal or mountain areas to flee insects and access better pastures. Winter marks a return inland to shelter, a more stable climate and a change in diet. There is a focus on meat production and herds tend to be large, up to several thousand. This type is practiced by Sámi, Nenets, Komi, Eveny, Chukchi and Koryak. *Taiga* reindeer husbandry is geographically widespread, and is characterized by smaller herds, by riding the animals, and much shorter migration routes in forested or mountainous areas. Animals are primarily used for transportation and milk production (Johnsen *et al*. 2012).

III. Climate Change and Reindeer Husbandry

IPY EALAT fieldwork: Reindeer grazing in winter, Yamal Nenets AO, Russia. Photo: Ellen Inga Turi, ICR

6. Climatic and socio-economic changes are now evident across the Arctic, and changes are particularly evident in reindeer herding cultures and in their traditional areas (Oskal *et al*. 2009; Magga *et al* 2011). Global and regional scenarios project dramatic changes in temperature, precipitation and snow conditions in the key areas for reindeer herding, and projecting equally dramatic social-economic changes for reindeer herding communities in the Arctic. Climate scenarios indicate that winter temperatures in Finnmark, Norway and the Yamal Nenets Autonomous Okrug, Russia may increase by 7 °C to 8 °C in 100 years (Benestad 2011). The largest temperature increase is projected mainly for the inland, but a warming is expected also for the Yamal peninsula in the Russian north. Future scenarios indicate that Yamal Nenets Autonomous Okrug winter temperatures in the period from 2070 to 2100 may be comparable with inland Finnmark winter temperatures during the period 1961 to 1990. Inland temperatures in Finnmark, Norway, may also resemble those of the coastal area of Finnmark (Nordreisa) today. More detailed scenarios for Finnmark (Engen-Skaugen 2007) show that the annual precipitation may increase by 5 % to 30%, the snow season may be one to three months shorter.

7. Indigenous traditional knowledge, culture, and language provide a central foundation for adaptation and resilience to the rapid changes in the Arctic. Reindeer herding cultures and traditional knowledge are inevitably affected by institutional governance, economic conditions and other regulatory practices and conditions. Both scientific and traditional experience-based knowledge, knowledge transformation, and the education and training of future leaders, especially reindeer herding youth, are key factors for the future sustainability of reindeer herders' societies and their cultural foundations. A vision of a self-sustained and adaptive reindeer community in the circumpolar North is increasingly faced with rapid climate change, regulatory challenges, and altered or degraded pasture lands. Addressing climate change in reindeer herding societies might require novel methodological approaches. Recognizing the ability to adapt to change, as demonstrated by reindeer herd-

ing, is based on knowledge embodied in the language, the institutions of pastoralism and the knowledge and actions of individual herders, which should also be documented, analyzed and combined with data in social and natural sciences (Magga *et al*. 2011).

Reindeer grazing in the city of Hammerfest, Norway. Photo: Kathrine Johnsen, UMB.

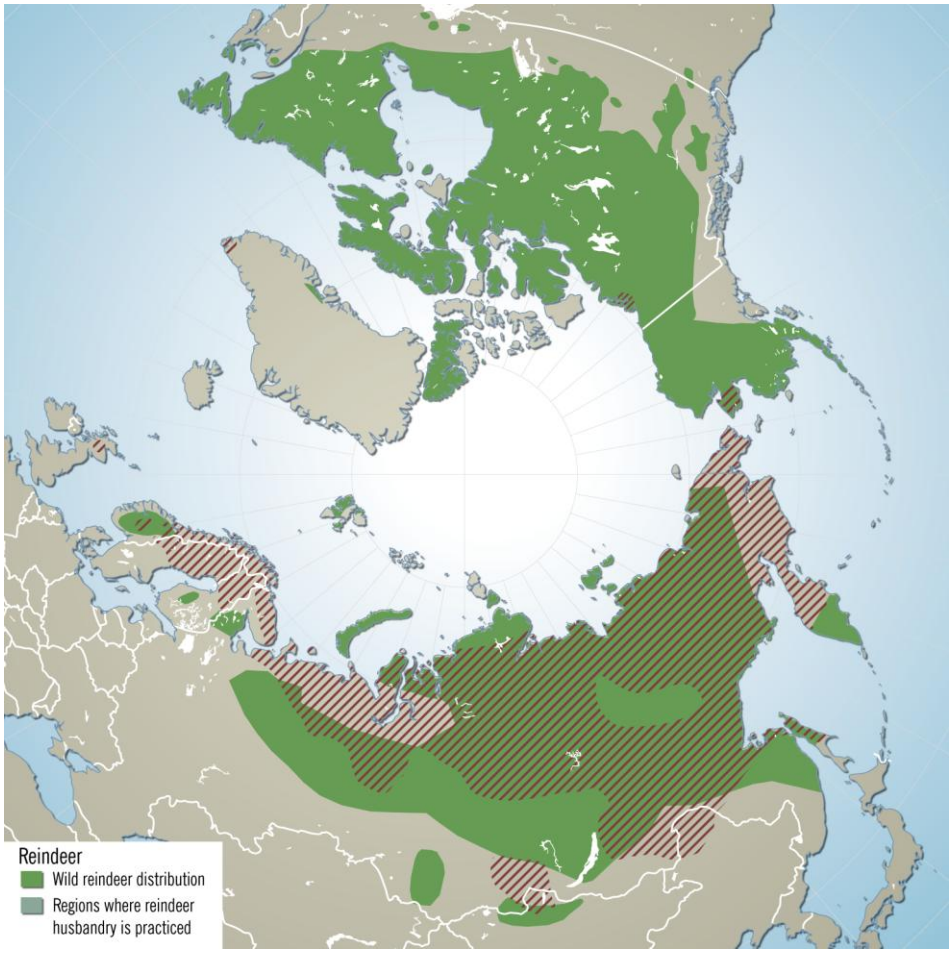
IV. Land Use Change and Reindeer Husbandry

8. It is important to recognize that reindeer nomadism is a highly extensive form of land use. The degradation of pasture lands, combined with the consequences of a changing climate, presents substantial challenges to the future of reindeer husbandry (Vistnes *et al*. 2009). For herders, the principle issue is the securing of habitat and landscapes in which to graze their reindeer at different season and conditions. Indeed, the progressive and effectively irreversible loss of the uncultivated lands that reindeer use as pasture is probably the single greatest threat to reindeer husbandry in the circumpolar North today. The preservation of pastures is, likewise, perhaps the single greatest priority for sustaining the resilience of reindeer herding confronted by changes owing to climate change, and the socio-economic environment. It is important to recognize the special rights of indigenous rein-

deer herding peoples to their traditional living areas, and that these rights also include the right to land use, management, protection and natural resources.

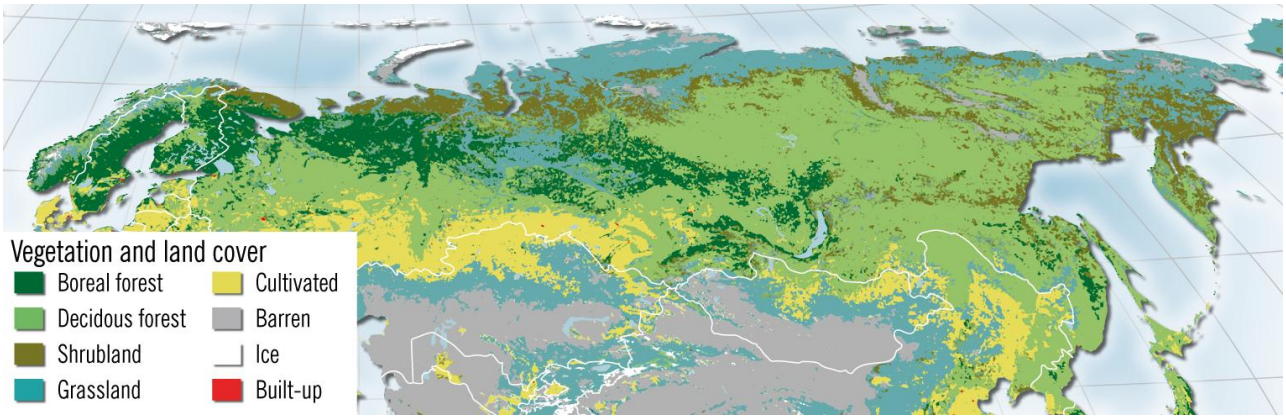
9. Mattias Åhrén, President of the Sámi Council, on the occasion of the sixth Ministerial Meeting of the Arctic Council, held on 29 April 2009 in Tromsø, requested States to be mindful that their claims to natural resources in the Arctic are claims concerning indigenous territories. Likewise, the International Polar Year EALÁT pointed out that the ability of reindeer herders to adapt to climate change would be jeopardized by industrial development and would impact on the nature-based livelihoods of indigenous peoples.

V. Maps of the Eurasian Reindeer Husbandry Region



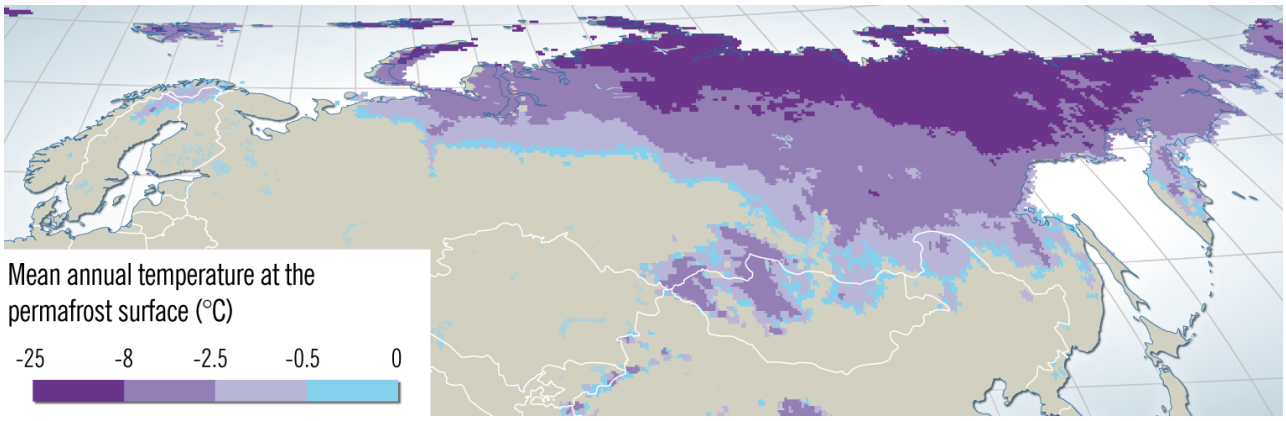
Distribution of reindeer/caribou. *Data sources: IUCN Redlist, 2010 and International Centre for Reindeer Husbandry, 2009. Graphic: Hugo Ahlenius, Nordpil, 2010*

Topographic map of Northern Eurasia. *Graphic: Hugo Ahlenius, Nordpil, 2010*

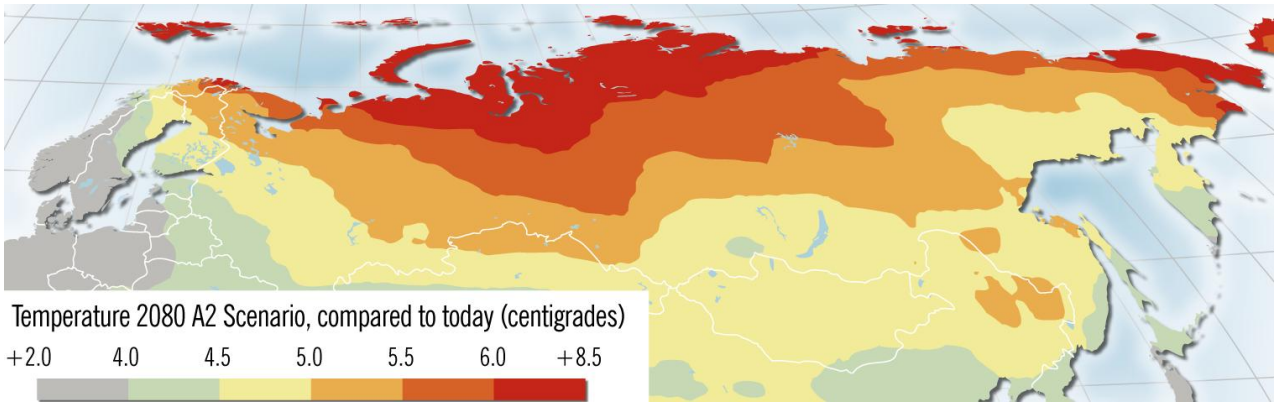


Landcover map over the area of Northern Eurasia. *Graphic: Hugo Ahlenius, Nordpil, 2010*

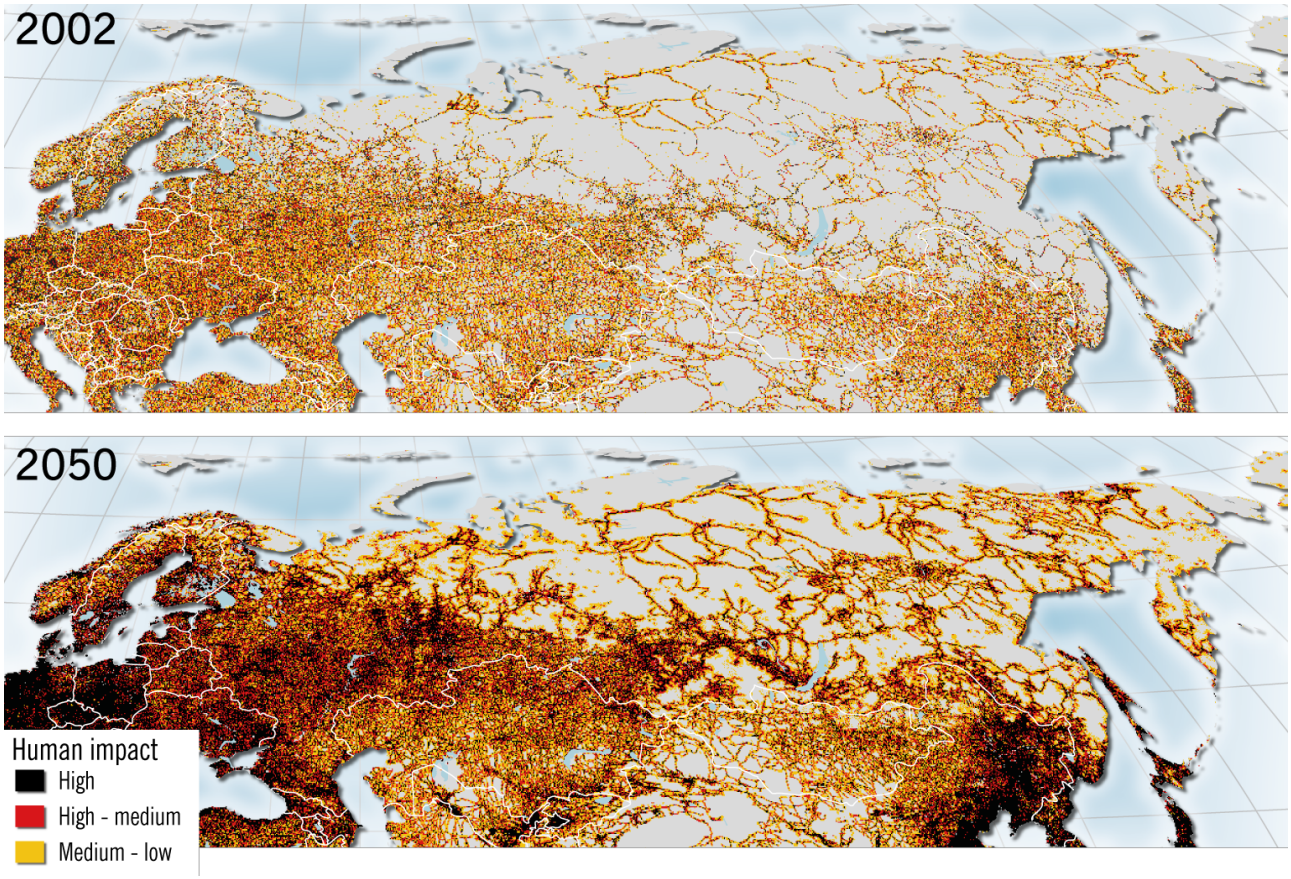
WWF priority ecoregions. *Graphic: Hugo Ahlenius, Nordpil, 2010*



Current permafrost temperature *Graphic: Hugo Ahlenius, Nordpil, 2010*



Temperature projection 2080. *Graphic: Hugo Ahlenius, Nordpil, 2010*



Infrastructure development scenarios. *Graphic: Hugo Ahlenius, Nordpil, 2010*

VI. Reindeer Herding: Case Analysis

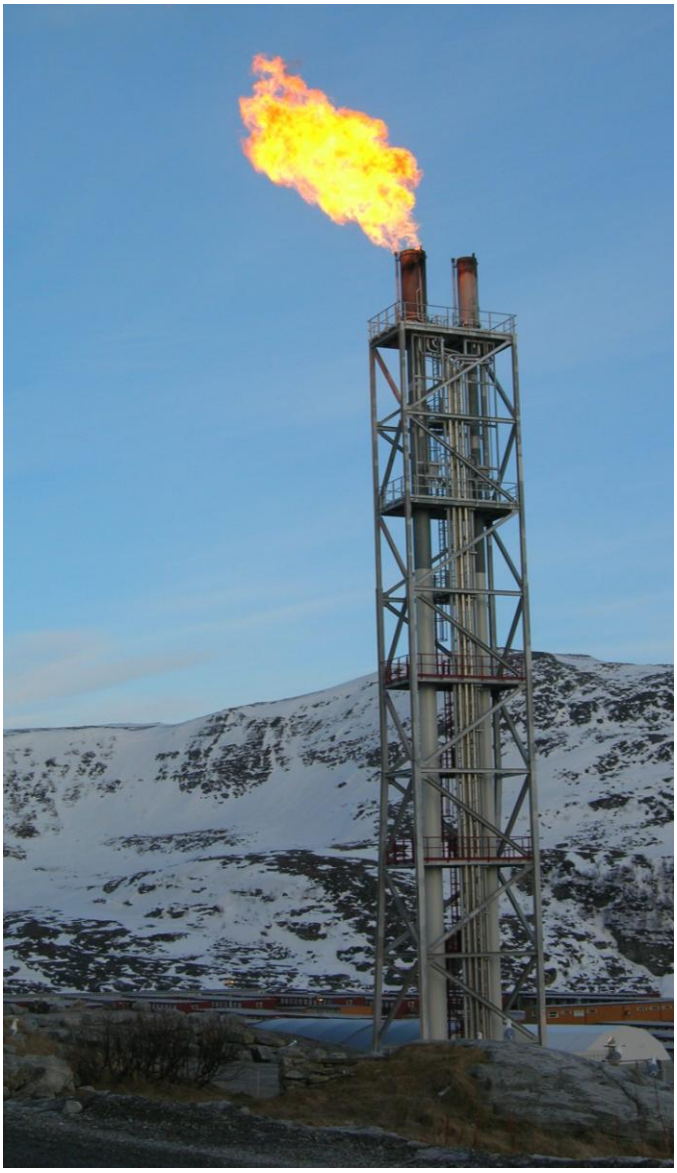
A. Sápmi (Norway, Finland and Sweden)

Sámi reindeer herders in Kautokeino, Norway. Photo: Monica Alterskjær Sundset

10. During the nineteenth and twentieth centuries, the traditional areas of Sámi reindeer husbandry were divided between the borders of four nation states: Finland, Norway, Sweden and Russia. Approximately 6,500 Sámi work as reindeer herders in Scandinavia. Reindeer husbandry in the Sámi region is characterized by larger herds in Norway and Sweden and a high degree of mechanization. Reindeer are primarily used for the meat production, though hides, bones and antlers are an important source of material for clothing and handicrafts. Recruitment to the industry has been limited in Norway and Sweden by legislation, and a lack of pastures and economic opportunities has limited the expansion of the livelihood.

11. Today the high north strategy of Norway includes the development of new industrial projects such as mining, offshore oil/gas extraction, green energy and tourism in the regions

traditionally used by the Sámi people. It is important to provide information and insights on how resource conflicts could be avoided by including local Arctic societies and right holders such as reindeer herders at the early planning stages in any industrial development. Facing the new industrial development of the Arctic, there is a real danger that the benefits from industrial development will only be awarded to mainstream society, while indigenous and local people will bear the costs. Further, these industrial projects were planned at the same time when it was officially decided to decrease the number of reindeer and reindeer herders in Finnmark County in Northern Norway. That decision was based on the need to maintain a sustainable reindeer husbandry. Furthermore, Norway has not yet developed climate change adaptation strategy plans for Sámi reindeer husbandry, which might result in decreasing the herders' vulnerability to future changes. It therefore raises questions as to whether the research and education methods about reindeer herding in Norway, which were applied over the past 30 years, are now adequate to deal with the new challenges in the Arctic. In view of this, there a need for a new multidisciplinary research and education in the North that also includes reindeer herders' traditional knowledge and world views.



Snøhvit in Hammerfest, Norway. Photo: ICR

12. Sámi reindeer herders in Norway need to develop their ability to meet the global challenges - at a time when various national and global actors are able to coordinate their goals and strategies in the herders' pasture areas. Reindeer pastoralism must be empowered to face the effect of global changes in the Arctic. New educational programmes that take into account Arctic culture, resilience, sustainable development, climate change and insights into indigenous peoples' society and languages should be developed. Future training of Arctic leaders might be one way to avoid conflict between

herders and developers and to ensure the developer's respect of reindeer societies basic needs for survival.

13. In Finland, reindeer husbandry is not ethnically restricted to Sámi and the livelihood is open to any individual from the European Economic Area (EEA). In total there are approximately 4,600 reindeer owners, the vast majority of whom are Finns. The reindeer husbandry area in Finland lies in the most northerly parts of the country, covering almost the entire area of the Province of Lapland and part of the Province of Oulu. The reindeer husbandry area covers 114,000 km², which is 36% of the entire surface area of Finland. The northernmost part of the Finnish reindeer husbandry region is classified as the *Sámi reindeer herding area*, where Sámi reindeer husbandry is concentrated. Reindeer herding is administered through a reindeer cooperative system of which each reindeer owner is a member. The current maximum number of reindeer in Finland has been set at just over 203,700 with individual ownership restricted from between three and five hundred reindeer, depending on location.

14. Two contradictory trends can be traced in global resource politics, which is also reflected in Sweden. On the one hand, there is a growing global acknowledgement of indigenous territorial and resource rights and the recognition of the importance of those rights for ensuring the survival of traditional land-uses, such as reindeer herding. On the other hand, there is a dramatic increase in extractive activities and infrastructure projects on traditional indigenous lands, owing to and including rising global commodity prices, energy demands, changing climate policies, and population increases. As the situation currently stands, the last remaining Sámi reindeer herding lands are being fragmented, piece by piece, by forestry, wind-power parks, mining projects and hydropower developments.

Hydro development in Porjus, Sweden's first large scale dam built in 1914. Photo: Philip Burgess, ICR.

15. While Sweden is generally highly regarded for its respect for and advocacy of human rights and indigenous rights abroad, Sweden has received ongoing criticism from the United Nations for not acknowledging Sámi resource rights at home (Bankes 2006 p. 112-113; Anaya 2011 p. 46-47). Given this governance gap, and the lack of protection of Sámi rights by the Swedish State, increasing attention is being paid to the responsibilities that corporations must bear for their activities. This is often mediated through discourses of corporate social responsibility. Implicit in the concept of corporate social responsibility is the idea that corporations should go beyond what is required by national laws. There are few companies in Sweden going beyond the law in terms of recognizing Sámi rights. In short, corporate social responsibility practices in Sweden remain fairly undeveloped. Moreover, while there are some (limited) positive examples of companies going beyond the law, these same companies have reported that other companies have pressured them not to go beyond the law; for fear that it would *raise the bar* for the industry as a whole. Undoubtedly, there is much room for development in Sweden for better corporate social responsibility practices, yet corporate social responsibility can never be the single solution to the question of indigenous rights. Corporate social responsibility is a double-edged sword: it encourages companies to go be-

yond the law, but this is only ever voluntary. Better corporate social responsibility practices also need to be matched with a stronger national legislation and regulation concerning Sámi rights.

16. The fact remains that national legislation and regulation in Sweden is lacking, and many Sámi communities, alongside non-governmental organizations such as the Sámi Council and the National Swedish Sámi Association, have sought to make corporations accountable for respecting Sámi rights, even if the state will not. First, Swedish corporations operating in Sweden generally perceive corporate social responsibility issues, including human rights and indigenous rights, to be primarily the concerns of the developing world, such as Africa or South America. Rarely do Swedish companies accept that indigenous rights should be a relevant concern for their Swedish operations. What might be described as a Swedish sense of *self-righteousness* (*självgodhet*) blinds Swedish companies to the fact that Sweden does not currently live up to international standards and norms on indigenous rights. A similar *blind faith* can also be witnessed with foreign companies operating in Sweden, particularly in the exploration and mining industry. For example, Australian and Canadian companies commonly place an enormous amount of trust in the Swedish government and Swedish authorities to *deal with Sámi issues*. Secondly, many Swedish companies, particularly in the mining, forestry and hydro-power industries, have played an active role in the colonization of Sámi lands and the dispossession of Sámi from their traditional territories. This is not something that is generally recognized or spoken of within these industries. In other words, no acknowledgement is given to the historical and ongoing industrial colonization of Swedish Sápmi by the resource industries. Thus companies commonly perceive their activities as justified because they have a state permit. But they fail to recognize that the planning processes by which they have acquired a state permit marginalize Sámi interests and do not guarantee a protection of Sámi rights. Thirdly, structural discrimination and racial prejudice against Sámi people continue to persist in both the private and public sectors in Sweden (Pikkarainen and Brodin 2008). This constrains the opportunities of the Sámi people to influence the planning processes and resource projects affecting their traditional lands and resource rights.

Yamal, Russia. Photo: Anna Degteva, ICR

B. Yamal Nenets Automous Okrug

17. The Nenets live mainly in the tundra, forest tundra and northern taiga belt of Europe and western Siberia from the Kanin Peninsula in the west, to the Gydansk Peninsula of the Yenisey delta. They form the largest indigenous group of the Russian north and are one of the world's biggest reindeer herding peoples. The bulk of Nenets reindeer husbandry is situated on the Yamal Peninsula, which is the world's largest area of reindeer husbandry. Herders in this region maintain close connections to their reindeer on a year round basis. Reindeer are used for meat production, clothing, traditional handicraft production and transportation. Reindeer are central to the social, cultural, spiritual and economic life of the Nenets.

18. Land, including pasture quality and availability, is the main concern for Yamal reindeer herders, who still exercise their traditional nomadic livelihood, migrating with reindeer up to 1000 km a year. The problem of land use change in Yamal might be divided into several dimensions, namely:

i) Land use change owing to industrial development of natural resources;

ii) Different legal status of lands used by herders in one-year cycle of their migration; and

iii) The discrepancies in the rights to land attached to the organizational status of reindeer herders.

19. Industrial development of hydrocarbon resources of the Yamal Nenets Automous Okrug has played a key role in energy well-being of the Russian Federation. The region provides 90% of Russian Federation gas production and there is no alternative to opening the Yamal Peninsula reserves to support the current level of gas production. The project development of Yamal hydrocarbon reserves includes the development of railways and pipelines, drilling facilities, housing for newcomers in the industrial areas and other infrastructures connecting the Tambey, Bovanenkovo and South groups of oil and gas fields. Until recently, the peninsula had no transport or other infrastructure, but will now have facilities for the drilling, extraction and transportation of oil and gas. For reindeer herders, such activities cause direct pasture loss and decrease in pasture quality in the areas around the industrial sites. Although the physical footprint of oil and gas production and transportation infrastructure might take less than 1 % of the territory, the industrial development has a strong impact on the system of traditional migration patterns. Some families have had to move to new pastures and feel they have lost their homeland.

20. The different legal status of lands used by herders in the annual cycle of their migration complicates obtaining official permission for land use. Traditionally, the winter pastures of many reindeer herders from the Yamal peninsula are located in the forest zone across the Ob bay in the Nadym municipality. According to Russian law, the forests which are in the winter pastures are under federal jurisdiction and can be licensed out for the maximum period of five years. While the tundra zone, which is the spring, summer and autumn pastures, is under regional jurisdictions. It is the authorities of the Yamal Nenets Automous Okrug who manage the land use and have the right to license these territories out for a maximum period of 25 years. These disproportionate rental times and the application of different legal regimes make it difficult for reindeer herders to establish the full and official permissions to use the land that is needed in the one-year cycle of nomadic migration.

21. The discrepancies in the rights to land attached to the organizational status of reindeer herders are the biggest potential threats for traditional reindeer herding land use. Currently reindeer husbandry is organized in three structures:

i) Large reindeer herding enterprises (the former Soviet state agricultural organization), which are the official pasture land users;

ii) Private herders, who are organized as legal entities called communities or *obshchiny* and which inform the State about the pastures they are using; and

iii) Private herders (so-called individual households), who are not part of any legal entity.

Currently, private herders do not have a legal right to use the pasture lands for their traditional livelihood, since pastures in the Yamal municipality are officially rented by large reindeer-herder enterprises. In the Yamal Nenets Automous Okrug, there is a political understanding of the customary right to land as there is no legal prohibition or restrictions for any reindeer herder to use the pastures. The immediate legal implication for private herders

is their lack of involvement in and informing about industrial activities on their traditional pastures. In the longer perspective it is the private herders, and particularly the individual households, who have fewer opportunities to represent their interests when it comes to land issues or political and economic welfare. In Yamal, the private herders are more vulnerable to both the loss of grazing land to the rapid industrial development and the change in political will towards controlling and restricting reindeer husbandry with respect to pasture use and the number of reindeer.

Road and pipeline on the Yamal Peninsula, bisecting migration routes, Russia.
Photo: Anna Degteva, ICR

C. The Republic of Sakha (Yakutia)

Topolinoe, Republic of Sakha (Yakutia), Russia. Photo: Kari Makreda Utsi, ICR.

22. The Republic of Sakha (Yakutia) is the largest region of the Russian Federation, with territory covering one fifth of the Federation. With such a vast size, reindeer herding is as diverse as the region itself. The Republic of Sakha (Yakutia) includes high Arctic, sub-arctic, mountain-taiga and taiga ecosystems. Five distinct indigenous peoples herd reindeer in Sakha: Eveny, Evenki, Dolgan, Yukagir and Chukchi. Some 25% of the entire Republic is considered as reindeer pastures, although it has been estimated that there are more lands in the Republic that could potentially be used as grazing lands for reindeer (National Report 2009), signifying its potential for growth.

23. Currently there are over 200,000 reindeer are herded by over 2,200 people who work and migrate with reindeer on a full-time basis. Reindeer are owned primarily by various State and public bodies, although nearly 10% are held privately (Ministry of Agriculture of

the Republic of Sakha (Yakutia) 2010). There are a wide variety of subsidies that are provided to herders by the regions in areas that include increased livestock, transportation and education. Every year the Government of the Republic of Sakha (Yakutia) supports community-based workshop in the region as a follow up of the EALÁT project.

24. In the Republic of Sakha (Yakutia), 80,437.2 thousand hectares, or 25.8% of the total area, are accounted by the land cadastre authorities as reindeer pastures. However, the same authorities recently recognized that there are more lands in the Republic that potentially could be used as grazing lands for reindeer (National Report 2009). The category *reindeer herding land* does not exist as such in the official land classification, but there are *forestry fund land* and *land of agricultural designation*.

25. In Yakutia, the most significant areas (75%) of reindeer pastures are located in the forests, 15% of the pastures are located in agricultural lands, and 9% in protected areas (State National Report 2009). According to Russian legislation, the forestry lands are under the federal management, while lands of agricultural designation are under the management of local authorities. This gives additional challenges for reindeer herders to register their pastures. Reindeer herders living in the taiga area where land is defined as a Forestry Fund have to register their pastures as a hunting area and pay rental to use this land. In some regions rental cost is very high which put a great economic burden on the reindeer herders.

26. Today, there are plans do develop a large mining industry in the Sakha Republic. For example, the largest district Oleneksky is now becoming important in the development of the diamond industry. The Prime Minister of the Russian Federation recently signed a decree on license rights to the new diamond deposits in Verkhne-Munskoe, in the middle of the Olenek region. These deposits are estimated a value of 3.5 billion US dollars (RIA Novosti Information Agency). For both Anabar and Olenek districts, the problem of wild reindeer grazing and migration are the most challenging. During the 1990s and early 2000s, many domestic reindeers were lost and lured away by the Bulun, Leno-Olenek and Taimyr wild reindeer populations. This also represented a loss of reindeer herding pastures owing to climate change as well as changes in the wild populations, which had been controlled during the Soviet times. The routes of wild reindeer migrations have also changed and become unpredictable. At EALÁT workshops in Anabar and Olenek, the participants drew attention to an urgent need to develop monitoring systems on the migrations of wild reindeer and to use traditional knowledge in both the monitoring and analysis.

27. An EALÁT workshop was also held in the settlement of Topolinoe in the Tompo region, in the eastern economic district of Yakutia. In the Tompo municipal district there are also plans for industrial development related to the implementation of the so-called *Tompo*

mining district investment project designated in the *Scheme 2020*. This project includes the extraction of gold, wolfram, copper and steam coal. The effects on indigenous peoples in the area and their traditional land use were completely ignored in the project. No assessment of potential environmental damage and withdrawal of reindeer pastures was made, nor was compensation for possible losses considered.

28. Among the three projected industrial areas, the most intensive industrial development is already happening in the southern economic district of Yakutia. This region is a home to more than 4,000 Evenki, Even and other indigenous reindeer herders involved in taiga reindeer husbandry, more than 60 nomadic *obshiny* and a few State, collective and municipal reindeer herding enterprises. In this area there are reindeer pastures, hunting and fishing grounds used by reindeer herding units and the communities of Aldan, Olekma and Neryungri *ulus*.

Integrated development of Southern Yakutia

29. The Government of the Republic of Sakha (Yakutia) has identified South Yakutia, the homeland of Evenki reindeer herders, as the main area for economic and industrial development in the region. There are plans for large scale exploitation of gold and other metals, coal, uranium, oil and gas. The exploitation plans, and the infrastructure development that comes with it, will cause a reduction in reindeer pastures as well as their fragmentation and degradation. The participants of the workshops held in Southern Yakutia were concerned with the industrial development of the territory, in particular with the reduction of reindeer pastures, environmental degradation and lack of dialogue between herders and industrial companies. The herders reported that their interests were not taken into consideration when making decisions regarding the development of the area. For example, the reindeer herding community *Idzhek* has repeatedly appealed to the *RusHydro* company to take the herders' interests into account when designing and constructing the Cancun hydropower plant. The winter pastures of the community are in the area of the proposed hydroelectric dam and it is expected they will be flooded by the dam. However, no formal response was received either from the company or from representatives of the Government (results from the EALÁT workshop in Khatystyr 2009). Further, the Russian gas giant *Gazprom* has planned to build a gas pipeline from the eastern Siberia gasfields to China through the Olekminsky district, a region with important Evenki reindeer pastures and the nature reserve *Choruoda* created with the assistance of the WWF. The reindeer herders are concerned that Gazprom is not considering the herders' needs and interests when planning the route of the pipeline.

Mining in Aldan, Republic of Sakha (Yakutia), Russia. Photo: Mikhail Pogodaev, WRH.

30. Owing to industrial development moving into the reindeer pastures, there are challenges for reindeer herders, such as disturbance for animals, loss of pastures, degradation of land, loss of biodiversity and poaching for reindeer, which limits their coping and adaptation strategies. Climate change and globalization are also important drivers that affect reindeer herding. Another central problem in the Sakha Republic is the ownership of reindeer. After the collectivization in the 1930s, most of the reindeer became state property and were taken from reindeer herders. Since the collapse of the Soviet Union, most reindeer herds have remained within state ownership. Reindeer herders are primarily employees of public reindeer enterprises. Herders' salaries are low and the recruitment of young reindeer herders is challenging. At the same time economic development of the region brings some perspectives and opportunities for reindeer herders, such as the development of reindeer meat markets, access to transportation and communication infrastructure and social services. The challenge is to balance impacts and prospects that development brings to reindeer herders.

D. The Baikal Region

31. The Baikal Region covers the territory of the drainage basin of Baikal and includes three regions of the Russian Federation: the Republic of Buryatia, the Zabaykalsky Krai, and the Irkutsk Oblast. The use of the term *Baikal region* is relatively recent. Previously, the standard terms used in regional economics were *Pribaikalye* (an area adjacent to Baikal of the Irkutsk Oblast) and *Zabaikalye* (a part of the Republic of Buryatia and Zabaykalsky Krai). The total area size of the Baikal region is 315,000 km2. From ancient times this area was home to indigenous peoples, including Evenki, Tofalar, and Soyot, practicing the taiga reindeer husbandry.

32. Owing to the national policy of the Government, the Soyot in the Okinsky District of the Republic of Buryatia completely lost the practice of reindeer herding. In 1963, reindeer herding in Okinsky District was declared unproductive and eradicated, which led to an irrevocable loss of the valuable gene pool of domesticated reindeer. Towards the end of 1980s, the community, with the support of the district administration, initiated restoration of reindeer herding in 1992. Reindeer were brought in the Nizhneudinsk region of the Irkutsk Oblast; however, during the intervening years the Soyot had lost all knowledge of reindeer herding. As at 1 January 2011, only the closed joint stock company *Erbyek* is engaged in reindeer herding and maintains 22 reindeers.

33. The Government has been inattentive to reindeer herding as a sector of traditional economic activity, and the organizational such as economic and livestock-veterinary problems were poorly solved. Thus, in the Soviet years the reindeer were kept by the *kolkhoz* (collective farms) and *sovkhoz* (State-farms), there was a loss of interest in reindeer herding owing to the decrease in cargo transportation and geological expeditions for industrial needs were no longer hired. Reindeer herding became subject to the effects of the Soviet crisis period, which led to a very difficult situation. The fall in the northern domesticated reindeer stocks ensued as a result of a decrease in governmental support of northern *kolkhoz* and *sovkhoz*, the low subsistence levels, the weak adaptability of the indigenous peoples of the North to the quickly changing market circumstances of the economy and the low level of commodity production in reindeer herding and marketability.

34. At the beginning of 2004, there was a rise in the domestic reindeer population of the Baikal region. This was largely promoted by the State as an approach to the problems of reindeer herding adopted by the State powers, and also because of measures taken in the

sphere of agriculture and agriculture product market regulation. In order to provide governmental supports to northern reindeer herding from the budget funds, certain measures were taken, such as adjusting the accountability of the reindeer economies and organizing subsidies.

35. In spite of the measures taken in resolving the issues of reindeer herders some problems of taiga reindeer herding in the region still remain. Over the years no improvements were made in the breeding and productive qualities of the reindeer. Secondly, indigenous peoples' communities have no fixed territories and reindeer pastures. All reindeer pastures are located within forested areas that are in federal possession, and the area unit usage rent is very high. Thirdly, reindeer herding as a sector of the agricultural economy does not exist in the agricultural register of the Irkutsk Oblast. Fourthly, there is a lack of regional laws and economic programmes that support and help develop reindeer herding. Fifthly, reindeer herding is greatly damaged by predators like wolves. For instance, within the past two years the reindeer population in the Irkutsk Oblast decreased by 40% owing to predators. Sixthly, there is the issue of the development of the traditional territories of the indigenous peoples by the mining, oil and gas industries, and the building of the Baikal/Amur railway and road, resulting in deforestation. The threat to the future of the taiga reindeer herding in the Baikal region is evident. Furthermore, the territories of the traditional land of the indigenous peoples may be subject to the development of new minefields and other industrial activities. The reindeer pastures and the camping areas of the reindeer herders will be negatively affected by industry. The *Strategy for the Social-Economic Development of the Far East and the Baikal Region* for the period up to 2025, adopted by the Government of the Russian Federation, is aimed at speeding up the growth of the economic potential of that part of the country in order to realize the interest of the Russian Federation in the Asian-Pacific region. The Strategy assumes a total use of natural resources of the region.

E. Sakhalin

36. Reindeer herding in Sakhalin has twice been subjected to forced and acute changes coming from the Government; however, the most drastic change is happening on the current stage. According to research, reindeer herding came to Sakhalin at the end of the sixteenth century and beginning of the seventeenth century along with reindeer herders, the Evenki, who migrated from the mainland. The reindeer population was at its highest in the 1960s and 1970s, the peak period in the development of the collective economy of the Ul'ta and the Evenki. Until 1985, the herd of the domestic reindeer consisted of 15,000 to 18,000 heads; however, that number had greatly decreased, eightfold to tenfold, by the 1990s. In 1991, northern domestic reindeer counted 4,000 in total. That included both collective and private herds in the region. In 1999, there were 1,788 domesticated reindeer. In the last ten years, only one enterprise has engaged in domestic reindeer herding in the Sakhalin Oblast, and that is the national cooperative called *Valleta*. According to the data of the president of the corporation, there are now 164 reindeer under his management. The industrial oil and gas production, that became widespread in in the Noglisky District in the end of the 1950s, has in part affected the regress of the Ul'ta reindeer herding. In the 1970s and 1980s, some areas of land were used for developing oilfields and pipelines, as well as for building railway, without any consent or compensation to the communities. All reindeer pastures from the village of Nogliki to the settlement of Val were taken from the reindeer herders for oilfield development by the company *Sakhalinmorneftegaz*. Currently, the reindeer herding situation remains very problematic. The development of oil and gas on the Sea of Okhotsk shelf by foreign and domestic companies, as well as the activities of coal mining, construction of land terminals and pipelines, have affected reindeer herding. Poaching, the feralization of the domestic reindeer, the increasing number of predators, massive deforestation, a decrease in reindeer lichen, high rent for reindeer herding (at 5.35 rubles per hectare on forest area units), and many other reasons have also led to the catastrophic situation of reindeer herding in Sakhalin.

F. Mongolia

37. Domesticated reindeer herding in Mongolia takes place along the borders of the Russian autonomous republics of Tuva and Buryatia, on the south slopes of the Sayan Mountains. The Dukha system of reindeer husbandry is unique in that it operates on the edge of the transition between taiga and the steppe biomes, on the edge of a reindeer's natural habitat (Jernsletten and Klokov 2002). The herders are Dukha people, the smallest ethnic minority in Mongolia. Their herding traditions are believed to be ancient. Some scientists believes that it was in the Sayan Mountains that the domestication and herding of reindeer first started several thousand years ago (Jernsletten and Klokov 2002; Donahoe 2003; Nentwig 2003; Inamura 2005; Vitebsky 2005). The Dukha population presently includes about 200 nomadic reindeer herders and some 300 people that have adopted a more settled lifestyle in the district centre. Dukha reindeer husbandry is characterized by small-sized herds and highly nomadic management, though the current herds are below a sustainable level. About 40 families herd a total of approximately 1,500 reindeer. Today, herding families typically own between 20 and 150 reindeer, although some own as few as five, while a sustainable number would be 50 to 70 reindeer per family (Johnsen *et al*. 2012).

38. Traditionally, the Mongolian taiga reindeer herders had small reindeer herds, and the animals were primarily used for transportation and milk production, and occasionally slaughtered for consumption. Hunting is an important part of the Dukha herders' livelihood. Wild game is the primary source of meat and protein to the Dukha, and the fur and skins were exchanged for other goods. A field study conducted in June 2011 provided information on the current challenges for securing Mongolian reindeer husbandry for the future (Johnsen *et al*. 2012). Many of the challenges were related to the precarious socio-economic situation of reindeer herders within a market economy. Since the early 1990s, governmental subsidies for salaries and other services have disappeared after 70 years of a communist regime, and the need for cash income to buy essential services and goods has increased in this formerly subsistence community. The market economy, combined with increasing competition for the land, has impacted the reindeer herders' land use. Further, the Dukha people have no community members in elected positions at any level of government (Minority Rights Group International 6th July 2011). They have limited access to legal council and information regarding civil and human rights, and have no formal ownership or possession of the taiga; all these factors make them vulnerable to exclusion and exploitation (Keay 2008).

Summer pastures in northern Mongolia, 2050 metres above sea level. Many of the Dukha reindeer herders' pastures are only available by horseback or on reindeer. Photo: Lawrence Hislop, UNEP/GRID-Arendal

39. In 2011, the Office of the United Nations High Commissioner for Refugees reported that the Dukha people face widespread societal and institutional discrimination and human right violations within Mongolian society (Minority Rights Group International 6th July 2011). The United Nations Educational, Scientific and Cultural Organization *Red Book on Endangered Languages* lists the Mongolian reindeer herders' Tuvan language as seriously threatened (UNESCO 1999). Dukha children are currently not offered training in their native language. The reindeer herders interviewed argued that only teaching the children the Tuvan language would secure the indigenous knowledge of the reindeer herding culture and secure the recruitment of a next generation of herders (Johnsen *et al*. 2012). In addition to being the home of the Dukha reindeer herders, the Mongolian taiga is also a globally significant region. As the taiga is also rich in natural resources and a highly rated tourism destination, advertised as the most virgin and wildest land in Mongolia, the herders and biodiversity are increasingly affected by artisan gold miners, forest loggers and taiga tourists. The sit-

uation requires urgent national and international attention and action for strengthening the traditional livelihood of reindeer herders, restoring the ecosystems and the protection of a number of endangered species. The Dukha reindeer herders have shown resilience over many years by adapting to changing governance regimes, such as the establishment of national borders cutting through migration routes, the collectivization of reindeer herds and the transition to market economy. Their herd size has fluctuated, but herders have until now always been able to increase the number of reindeer after a crisis. However, there are limits to the herders' adaptation capacity. There is an urgent need to secure reindeer husbandry as a resilient and sustainable livelihood and further, to ensure that the Dukha reindeer herders are able to maintain their cultural identity and rely on nature for their livelihood and well-being, and control over their own destiny.

Dukha reindeer herders in northern Mongolia: During summer women milk the female reindeer twice
a day. Photo: Lawrence Hislop, UNEP/GRID-Arendal

VII. Conclusion

40. Rapid industrial development, combined with social, economic and climate changes and variability, are creating major challenges for the indigenous reindeer herder communities in the Arctic. Indigenous adaptation is strengthened by active practice of traditional knowledge accumulated through generations of reindeer herders. Indigenous peoples' interest and their knowledge should be considered at the early stage of industrial development. There is also an urgent need to implement international laws on the rights of indigenous peoples and ensure their rights to lands, territories and resources. This includes recognizing herders' use and management of grazing land by identifying cultural practices for indigenous land use, as well as recognizing culturally adjusted criteria for identifying indigenous land uses. There is a need to increase the transparency in decision-making concerning land use and resource exploration and exploitation in the Arctic, access to free legal advice regarding development issues. There is increased marginalization of herders when they do not benefit from industrial development, or when cultural values are not recognized and local codes of conduct are ignored. There is also a need for new mechanisms replacing impact assessments related to the extraction of energy resources in the Arctic so that the small Arctic societies are respected and included in any development process. Reindeer herders' rights have to be considered in view of any Arctic governance opportunities and international cooperation that facilitate stronger corporate social responsibility by the companies involved. Reindeer herders' sustainable small business must be included in the discussions during the process of development in the Arctic.

Sunset on the Yamal Peninsula, Photo: Svein D. Mathiesen, ICR

VIII. Recommendations

41. It is recommended that States of the Arctic support private reindeer herding as a key foundation for development and maintenance of sustainable reindeer husbandry.

42. It is recommended that the Arctic Council establish a *Reindeer Herders' Watch*, which would be a tool for monitoring changes in reindeer pastures that includes a yearly report on changes in reindeer herding.

43. It is recommended that the Arctic States recognize nomadic reindeer herding as a unique and incomparable indigenous livelihood and that nomadic indigenous livelihood and economy requires special attention and protection in the future owing to rapid changes in the Arctic.

44. Arctic States and private industry must support the establishment of new institutional mechanisms based on reindeer herders knowledge, rights and world view that secures reindeer herders' ability to negotiate with industrial developers on an equal footing, give legal advice and produce information about effects of industrial development. It is important to develop new juridical tools to support these institutions to avoid future conflicts.

45. Arctic States and industrial developers must recognize the integrity and holistic view and use of reindeer pastures that is based on herders' traditional knowledge.

46. Fishing is an important part of the economy of indigenous reindeer herding people living a traditional nomadic life, and therefore, industrial development should be restricted in the waterways.

47. The Russian Federation should integrate special amendments to the Federal legislation of the forest and land codes to provide the land for traditional economies, including reindeer husbandry.

48. It is recommended the Government of the Russian Federation, the State Duma and the Council of the Federation make it easier and practicably possible to register traditional grazing lands, based on the principle that reindeer herders can use pastures free of charge.

49. It is recommended that the the Global Environment Facility be urged to fully endorse the United Nations Environment Programme project entitled *Nomadic Herders: Enhancing The Resilience Of Pastoral Ecosystems And Livelihoods Of Nomadic Herders* (the *Nomadic Herders* initiative) coordinated by GRID-Arendal and the International Centre for Reindeer Husbandry.

50. It is recommended that Arctic States fully implement the Arctic Council project *Eallin: Reindeer Herders Youth* led by the Association of World Reindeer Herders and the Russian Federation.

51. It is recommended the industrial developers in the Arctic respect the results from public hearings related to industrial development in reindeer herders pastures and the results be mandatory for those authorities who consider commercial development in the territories where traditional nature use occurs.

52. It is recommended that Arctic States and industrial developers be urged to improve the standards used in impact assessments and agreements with reindeer herders so that they take into account the structure and knowledge of nomadic societies and the cultural base for pasture use and to include herders in the process as early as possible to avoid conflicts.

53. It is recommended that Finland acknowledge the status of Sámi reindeer herding as a vital element of indigenous culture and therefore to implement necessary protective legislation amendments without further delay.

54. It is recommended that the Arctic Council be urged to investigate if the loss of grazing land does affect reindeer herders' indigenous cultures.

55. It is recommended that Arctic States take the steps necessary to identify the lands that reindeer herding peoples traditionally occupy, and to guarantee effective protection of their rights of ownership and possession and to continually monitor land use changes on such areas.

56. It is recommended that the Arctic Council:

i) Initiate a project to identify reindeer pastures, and monitor land use changes and report annually on land use change as well as secure the status of reindeer pastures, taking into account the customary rights of indigenous peoples;

ii) Implement tools that monitor the migration of wild reindeer and regulate their numbers; and

iii) Create an education system in the traditional economic activities of indigenous peoples, and develop conservation projects that document traditional knowledge, language and culture.

57. It is recommended there be secure education opportunities for reindeer herding youth, both in terms of locally based education programmes and in terms of funding options. As the system of education of reindeer herders cannot exist outside of a nomadic way of life, it is very important to develop educational institutions and adaptive models of education that are suited to the specific needs of reindeer herders and their families in particular, such as nomadic schools and distance learning systems.

58. It is recommended that relevant United Nations agencies be urged to support the *Arctic Lavvu Dialogue* between industrial developers in the Arctic and circumpolar reindeer herders.

Windmills in reindeer herding area on Bjørnefjell, Norway. Photo: Elna Sara, ICR.

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