# International Centre for Reindeer Husbandry











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## Reindeer Husbandry – An Ancient Livelihood

Archaeological remains and cave paintings in France and Spain from the end of the Pleistocene, 11000-17000 years ago have led some to call that period the Age of the Reindeer. Today in the Arctic, the age of the reindeer (Rangifer tarandus) continues. There are as many as 3 million wild and 2 million domesticated reindeer around the North and for many indigenous peoples, reindeer are 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 connec-tion ancient in origin and practiced almost identically wherever it is found. Eurasia marks its birthplace, but it has spread around the globe and is practiced across 9 nation states by nearly 30 different peoples. Approximately 100,000 people are engaged in reindeer husbandry today and their traditional forms of reindeer husbandry represent the very essence of sustainability and a systematic means by which fragile northern and mountain ecosystems can be utilized – thanks to generations of experience accumulated, conserved, developed and adapted to the climatic and administrative systems of the North.

**Domestication** The domestication of wild reindeer is a process that defies easy explanation. Certainly, people followed migrating reindeer as the ice retreated Northwards and used decoys to hunt them. Current archaeological evidence (cave paintings) seems to suggest that domestication emerged from the Sayan mountains between Russia and Mongolia, perhaps 2-3000 years ago. Another theory holds that Tungus (the ancestors of today's Evenki and Eveny) domesticated reindeer independently East of Lake Baikal and that instead of a single site origin, reindeer husbandry originated in multiples sites simultaneously. New evidence is continually backdating this relationship. Reindeer peoples have their own stories and theories about domestication and the relationship between wild and domestic reindeer. Debate notwithstanding, this act of domestication sparked a reindeer revolution that spread North, East and West. Sledges were adapted later, by reindee peoples imitating the practice of harnessing dogs. Reindeer and sledges made vast areas of tundra and mountainous regions accessible that even today, are only reached by helicopter. Reindeer became the transport animal of choice throughout Eurasia.

### **Taiga and Tundra**

The 1600's are said to mark a transformation of indigenous reindeer economies as competing nation states began a process of colonising indigenous peoples, encroaching on their lands and utilising their resources. For some this represented an opportunity - and herds grew to feed growing markets. Russian expansion into the vastness of Siberia in search of fur was enabled by reindeer - for both food and transportation. The late 19th and early 20th century saw the expansion of reindeer husbandry into North America as attempts were made to graft Sámi reindeer husbandry onto the Inupiat and Yupik peoples of the Seward Peninsula, Alaska and later the McKenzie Delta in northern Canada. In

the 1950's a similar venture was attempted in Greenland. Although of mixed success, these experiments have persisted to this day. Today we can differentiate between tundra and taiga reindeer husbandry. 'Tundra' refers to long migrations 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. Herds tend to be large, up to several thousand and migration routes are long, often many hundreds of kilometres. With a focus on meat production, this type is practiced by Sámi, Nenets, Komi, Eveny, Chukchi and Koryak. Taiga reindeer husbandry is geographically widespread, is characterised by smaller herds, by the riding of animals, and much shorter migration routes in forested or mountainous areas. Animals are primarily used for transportation and milk production. In both tundra and taiga reindeer husbandry, reindeer provide food, clothing, shelter and transportation. The production of handicrafts is increasingly important for reindeer peoples and there is a large market for soft antlers (for pantocrine) in the Far East (mainly Korea).

## **Change, Loss, Resilience and Revival**

The 20th century was a period of intense social, cultural ecological and economic change for all reindeer peoples. The transformation was perhaps most dramatic in Russia after the 1920's and 1930's. During this time nearly all reindeer in Russia were confiscated and placed in large herds to be administered by the state in collective farms (kolkhozy). In the 1960's these were restructured into State farms (sovkhozy) where reindeer belonged to the state and herders became employees. In Scandinavia, the establishment of national borders transformed Sámi reindeer husbandry. Cross border migrations were ended in some areas and placed under strict legislative supervision in others. This period was followed by an intense period of infrastructural development and post war reconstruction. Although reindeer remained in private ownership, traditional Sámi structures of herding were completely transformed, modernised and mechanised. In all areas of reindeer husbandry the changes wrought during this period have completely reorientated the traditional social structures of reindeer husbandry. Laws and regulation have reduced or eradicated the role of women in reindeer husbandry in many regions. Economic insecurity and inadequate supports have meant that in many regions, younger people are reluctant to choose reindeer husbandry as a livelihood, threatening the intergenerational transfer of knowledge that is crucial to reindeer husbandry. In the turbulent 1990's, some areas in Russia completely lost reindeer husbandry. The cited birthplace of reindeer's domestication in the Sayan mountains is one of the areas currently most at risk, in common with other areas of taiga reindeer husbandry, suffering from fragmentation and loss of pastures, industrial development, small herd size, poor animal health and cultural encroachment.

However, in other areas such as the Yamal Peninsula in Russia, reindeer husbandry is continuing to expand. In Chukotka, herders are building up their herds again and Sámi herders in

Sámi (Norway, Sweden, Finland and Russia) Scandinavia continue to hold reindeer husbandry at the centre of their annual cycle. This speaks to characteristics that reindeer The traditional areas of Sámi reindeer husbandry have been divided between the peoples possess in abundance: resilience, rapid adaptability and

flexibility. Reindeer peoples have shown that not only have they survived the onslaught of the last century on their cultures, languages and livelihoods, they have managed to survive and in some areas even

when looking after the reindeer herd and divide communal lands and waters between kin groups or clans. National borders (1852 to Norway, and Sweden in 1889 by Russia, then rulers of Finland) permanently divided reindeer siida. Approximately 6500 Sámi people work as reindeer herders in Scandinavia. Reindeer husbandry in the Sámi region is characterised by larger herds in Norway and Sweden and a high degree of mechanisation in all regions. 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. All animals in the Sámi area, excluding Russia, are privately owned though many aspects of herding are practiced collectively in the siida system. In Norway there are six 'reindeer pasture areas' divided into 77 'reindeer pasture districts'. Only Sámi people may herd reindeer in these areas. Reindeer herding is also carried out in southern Norway in special 'concession areas', where Norwegians can also herd reindeer. Reindeer are herded over an area of approximately 146,000 km2 in the counties of Finnmark, Troms, Nordland and Trondelag, which is equivalent to 40% of the mainland area of Norway. Reindeer husbandry is administered by the Reindeer Husbandr Administration a body which is directly under the Norwegian Ministry of Agriculture. 2936 reindeer

borders of four nation states - Norway, Sweden, Finland and Russia in the 19th and

herding practices. The traditional unit of organization in Sámi reindeer husbandry is

the 'siida' which is basically a group of households who cooperate with each other

20th Centuries, the effect of which has meant a major disruption in traditional

herders herd ca. 240,000 reindeer, the majority of which are in the county of Finnmark.

In Sweden, reindeer herding is pursued throughout practically all of Norrbotten, Västerbotten and Jämtland counties and in parts of Dalarna, Västernorrland and Gävleborg counties. Reindeer pastures cover about one third of Sweden's area. Only Sámi people may herd reindeer in Sweden, except for a 'concession' area in the Torne valley, which marks the border between Sweden and Finland. The 'sameby' is the organisational unit of reindeer husbandry in Sweden and is both an economic association and a geographical area. Its members have the right to engage in reindeer husbandry in this area and in certain areas, they also have fishing and hunting rights. There are 51 Sámi villages for reindeer herding, and there are some 3 500 reindeer-owning Sámi, herding over 200,000 reindeer. There are about 1000 people of non-Sámi descent who primarily keep reindeer in the concession

In Finland, reindeer husbandry is not ethnically restricted to Sámi and the livelihood is open to any individual from the European Union. In total there are approximately 5600 reindeer owners, the vast majority of whom are Finns. The reindeer husbandry area in Finland lies in the most northerly parts of the country and covers almost the entire area of the Province of Lapland and part of the Province of Oulu. The reindeer husbandry area The northernmost part of the Finnish reindeer husbandry region is classified as the 'Sami reindeer herding area', where Sami reindeer husbandry is concentrated. Reindeer herding is administered through a reindeer cooperative system of which each reindeer owner is a member. These are economical units and geographical areas and there are 56 such cooperatives. The current maximum number of reindeer in Finland has been set at just over 200,000 with individual ownership restricted from between 3-500 reindeer depending on location. The entire reindeer husbandry cooperative areas in Finland are fenced, as are the borders to Finland, Sweden, Norway and Russia.

Kola Sámi in northwest Russia saw their reindeer husbandry transformed in the 19th Century with the arrival of 65 Komi herders and 600 reindeer to. Semi pastoral reindeer husbandry was transformed into a large scale livelihood with an emphasis on productivity. Collectivisation in the 1930's further transformed the livelihood as herd sizes increased. Reindeer herding has been in a state of flux since the collapse of the Soviet Union. The livelihood is administered by two sovkhozy (state farms) and reindeer herders are salaried employees of the state farms, just as in Soviet times. Approximately 200 people in total are engaged in reindeer husbandry, still practiced primarily by Komi. Sámi make up the rest with some Russian and Ukrainians also herding. Reindeer numbers have plummeted, with approximately 40 - 50,000 reindee being herded, less than half the figure of a few decades ago. Private ownership of reindeer has increased dramatically in the last decade.



Komi are relative newcomers to reindeer husbandry adopting and adapting it from their neighbours, the Nenets. Komi are a Finno Ugric peoples the majority of whom live in the Komi Republic, with reindeer husbandry primarily focused in the North and practiced by the Izhma Komi. There are also Komi practicing reindeer husbandry in the Kola Peninsula, the Nenets Autonomous Okrug and the Yamal Nenets Autonomous Okrug. It was not until the 18th Century that Komi started migrating with reindeer herds. Large scale herding emerged and from its conception was a market oriented activity and Komi proved to be very successful. Over time, their herding routes mingled with Nenets routes to the North. Winter pastures are located in the forested regions and forest tundra in the Southwest, with summer pastures located in the tundra region to the North and Northeast in the herding area of the Nenets in the Nenets Autonomous Okrug. Komi reindeer herding is organized in teams, of which there are 52, composed of six to eight herders and one or two tent workers which herd a total of approximately 115,000 reindeer. Migration routes are long, every spring and early summer, reindeer herding teams travel up to 400 km each way to reach their pastures, with the same routes being used annually. Reindeer are used for meat production, transportation, clothing and handicrafts. The production of reindeer antlers has been important. The majority are owned by the agricultural collectives, but some 20% are in private ownership and a small number are in private reindeer farms.

**World Reindeer Husbandry People, Distribution and Challenges** 



The Nenets live mainly in the tundra, forest tundra and Northern taiga belt of the European and Western Siberian part of the Russian Federation, from the Kanin Peninsula in the west, along the banks of the White Sea 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 great reindeer herding peoples who have come to personify large scale tundra reindeer husbandry. Administratively, their territory is divided between the Nenets Autonomous Okrug of the Arkhangelsk Oblast and the Yamal-Nenets Autonomous Okrug. Combined, this covers a vast territory of about 1 million square kilometres.

The bulk of Nenets reindeer husbandry is situated on the Yamal Peninsula which is the world's largest area of reindeer husbandry. Nenets herders and their families practice nomadic herding, migrating over long distances (up to 1000km annually) between summer and winter pastures, with several migratory routes crossing the Ob River. The Nenets number around 41,000 of which about 13500 are involved with reindeer husbandry. The number of reindeer has long been the highest in Russia, currently standing between 600 - 800,000. Herders in this region maintain close connections to their reindeer on a year round basis. Reindeer are used for meat production, traditional handicraft production and transportation. Reindeer are central to the social, cultural, spiritual and economic life of the Nenets people. Their large herds comprise of both collectively and privately owned animals but are administered by enterprises that date back to Soviet times, though family based units are central to the internal organization of the livelihood. Unlike most other regions of reindeer husbandry in Russia, the number of people choosing reindeer husbandry as a livelihood is actually increasing, speaking to the vibrancy of the livelihood in the region. Private reindeer ownership within the collective herds has been increasing over the last decade.





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#### **Mansi**

Mansi live mainly in the Khanty Mansisky Autonomous Okrug and in the south west of the Sverdloyskaya Oblast, along the rivers Sosva, Konda, Lozva, Pelym, Sosva, Tavda, between the Urals and the Ob and Irtysh rivers. Mansi number approximately 11500. For the Mansi, reindeer husbandry has been an important secondary occupation to fishing and hunting. Seasonal shifts from summer to winter locations have long been the norm. They have managed to maintain their traditional livelihoods most particularly in the northerly parts of their region. They are closely related to Khanty whom they live alongside.

#### **Khanty**

The traditional areas of the Khant are in the river valleys of the middle and lower Ob and the Irtysh rivers. Administratively, their homeland is in the Khanty-Mansiyskiy Autonomous Okrug (where more than half live); Yamalo-Nenetskiy Autonomous Okrug and the Tomskaya Oblast. In 2002 they numbered 28773. Although they are one of the most populous indigenous peoples in Russia, there has been extensive oil, gas and infrastructure development in their region along with in migration of Russians and Tarters in their traditional southerly areas. As a result, the Khanty have come under pressure. Traditionally, many Khanty were nomadic and semi nomadic reindeer herders in the forest tundra and taiga regions. In the forest tundra, herds were smaller and camps were seasonal. In the taiga regions, Khanty herders were more sedentary, migrating only in the summer.

### Selkup

The Selkup live today in two separate areas as a result of relocation programs between 1930-50. Numbering just under 4500, most live along the Ob, Tym, Vasyugan, Ket and Parabel rivers. Traditionally, reindeer have played an important part in their culture, as Selkup were well known for their breeding of draught animals. They were more sedentary than nearby Nenets and Enets and their territory has been settled by Russians since the 19th century, whose hunting of their domesticated animals has been mentioned as a reason for their decline.

### Enets

Enets live in the tundra and forest tundra of the lower Yenisey valley and Dudinka regions of the Taymyrskiy Autonomous Okrug and number no more than 350. They live alongside Nenets and Dolgans. Traditionally a hunting culture (mainly for wild reindeer), collectivisation sedentarised them. Most are engaged in reindeer husbandry which they adopted from Nenets and Nganasan with whom they work. The production of transport animals is of great importance in the region.

The traditional territory of the Kets is the Yenisey River and its tributaries in the Turukhansk and Baykit districts and they number 1891 (2002). Kets traditional livelihoods were fishing and hunting. Kets bred reindeer for draught animals. By the 1980's, Kets were no longer engaged in reindeer husbandry.

Nganasan
Nganasan, of whom there are approximately 900, mainly live in the tundra of the

Taymyrskiy Autonomous Okrug along the Kheta and Khatanga rivers and northwards. Nganasans adopted a semi nomadic lifestyle after collectivisation in 1940. Subsistence activities such as hunting and fishing have long been important activities with reindeer husbandry adopted in the late 19th century. After collectivisation, reindeer husbandry became their main occupation. The winter pastures were in the northern parts of the Khatanga and Kheta River basins and the Pyasina River, while the summer pastures were situated in the north, on the Byrranga Plateau and north of Lake Taymyr, occasionally as far north as 770 N. A rapid increase in the herd size of wild reindeer has been a challenge to the regions reindeer herders.

#### Dolgans

Dolgans live in the Taymyrskiy Autonomous Okrug and in the northwestern part of the Republic of Sakha (Yakutia), numbering 7330 people. Traditionally nomadic hunters and reindeer herders, today they live on the tundra of the Taymyr Peninsula, along the rivers Kheta and Khatanga and south of them, within the Taymyrskiy (Dolgano-Nenetskiy) Autonomous Okrug. Many still live semi nomadically and practice small-scale reindeer husbandry influenced by other adjacent peoples – for example in the use of dogs, unlike other Turkic peoples that practice reindeer husbandry. Winter pastures are in the tundra areas, while the summer pastures are situated in the forest tundra of the main river basins. Migration routes are considerably shorter than those of the Nenets and Komi and are little changed

since the advent of collectivisation. The main Dolgan area of reindeer husbandry is in the Khatanga district where the collective farms have several thousand animals. Wild reindeer has been a challenge for Dolgan reindeer husbandry.



### **Evenki (Russia)**

Evenki are the most widespread of the Tungus speaking peoples and can be found through the Lower Yenisey valley through Evenkiyskiy Avtonomnyy Okrug, Irkutskaya and Amurskaya Obl. to Khabarovskiy Kray, Buryatiya, North West and South Sakha (Yakutia); also in China (see below) and a small group in Mongolia. In other words, from the coast of the Sea of Okhotsk in Russia's Far East, throughout southeastern Siberia, and up the entire length of the Yenisei River to the tundra regions of the Taimyr Peninsula.

In total they probably number 50,000, with most residing in Sakha (Yakutia). Traditionally nomadic, they have practiced traditional subsistence activities, including reindeer breeding and hunting. Summer pastures are in the watershed areas, winter pastures in the river basins. Reindeer herders traditionally hunted wild reindeer as a secondary occupation, mostly in small groups, seasonally, at river crossings. Nomadism is crucial for Evenki herding culture. Due to Soviet collectivisation nomads were forced to settle and experienced a subsequent dissolution of their social structures and cultural identity. Reindeer are used for travel (riding animals) and transportation and herded without dogs. Modern transportation has only partly substituted the reindeer. Evenki reindeer husbandry is the model of small scale taiga reindeer husbandry in its use of reindeer for transportation and milk production. Traditionally, the number of reindeer ranged from a few animals per family up to two or three dozens. Relationships with reindeer are close and animals are used to being saddled and milked and continue to be domesticated through millennia old techniques such as the use of salt, smudge pots against insects and protection against predators. Evenki reindeer husbandry is closely related to Sayan (Tozhu, Tofalar, Tsataan) reindeer husbandry from whom they probably adapted it. Evenki used reindeer to spread the length and breadth of Eastern Siberia, over an area of 7 million square kms according to one estimate. As a result there are some 20 distinct Evenki subgroups and the reindeer ha become a strong marker of Evenki identity. The development that has occurred in parts of Siberia has been disastrous for some Evenki and this process is intensifying ir recent times with accelerated mineral extraction, pipeline construction and industrial forestry. The fate of the Evenki reindeer herders of the Higher Bureya Region of the Khabarovsk Krai serves as a reminder that reindeer husbandry can disappear from

#### **Tozha Tuvans**

Like many indigenous peoples, the Tozha Tuvans have fallen under the borders of differing states, under Mongolia, China and currently Russia, as a Republic since 1993. There are approximately 5200 Tozha Tuvans. Tozha Tuvans, along with the Soyot, Tofalars, and Tsataan practice reindeer husbandry and have a millennia old link to reindeer, and mark the southerly limit of reindeer husbandry. As with those peoples, reindeer were used for transport, and used their products for clothing and milked reindeer for food. Collectivisation dramatically altered traditional structures and the end of the Soviet Union saw severe economic and cultural disruption – in 1990 the Tozha-Tuvans herded 8100 reindeer yet currently, there are less than a 1000 reindeer left. There are approximately 250 Tozha Tuvans engaged in reindeer husbandry.

#### Tofala

There are just over 1000 Tofalar, who live primarily in the mountain taiga zone of the Irkutskaya Oblast, in the river valleys of the Uda, Biryusa, Kan, Gutara and Iya among

others. Traditionally they were a nomadic hunting people that used reindeer for their migrations and practiced small scale reindeer herding. Organised in clans. they kept 20–30 reindeer in one household. Tofalar use reindeer for clothing, use reindeer milk for drinking and make cheese and curdled milk. This region represents the southern boundary of reindeer husbandry along with the other peoples of Inner Asia, such as Soyot, Tsataan and the Tozhu Tuvans. Tofalar practice taiga reindeer husbandry, using animals for transport and hunting. Currently there are less than 50 reindeer in Tofalar reindeer husbandry, down from several thousand in the 1990's. There are perhaps 30 Tofalars remaining that practice reindeer husbandry.

#### Dukha

The Dukha/Tsataan are a nomadic peoples whose traditional migration patterns have been disrupted by border closures in the 1920's and are present day Mongolia's only reindeer herders. Currently just over 200 Tsataan live in the Mongolian taiga and their family based herding system comprises of herds of between 7 and 160 reindeer. The number of reindeer has been in flux over the last two decades and has fallen from over 2000 in the late 1970's to approximately 700 in 2006. Reindeer are used for milk production, transportation and more recently, antlers for handicrafts. Meat production is not a significant part of Tsataan reindeer husbandry. The Tsataan move with their reindeer in the Eastern Sayan mountains that mark the border between Mongolia and Siberia over an area of ca. 20,000 km2 at elevations of between 1850 and 2100 metres. The Tsataan people mark the southerly boundary of indigenous reindeer husbandry and animals are adapted to high (40oC) summer temperatures.

#### Sovot

As other peoples in the Taiga zone, Soyot of the Buryat Republic used reindeer for riding, transportation and for hunting. With the arrival of Sakha, Russians, and Buryats (who also used reindeer for riding, but did not herd them) a cattle breeding culture and language came to predominate over Soyot reindeer herding. Reindeer still provided Soyot with transport, milk, dwellings and clothing. The 1930's however were a very challenging time for the Soyot. They were lumped together as a people with Buryat, and their reindeer were collectivised. In the 1960's reindeer husbandry was claimed to be unprofitable and disbanded and they lost all their reindeer. The last decade has seen a revival of Soyot identity coupled with an attempt to reintroduce and revitalise reindeer husbandry, which has proved to be challenging due to predation, a lack of resources, disease and the loss of traditional knowledge. Currently, there would appear to be approximately 20 people practicing reindeer husbandry with perhaps 30 – 50 reindeer. As with the Tofalar, it seems likely that the Soyot will completely lose their connection with reindeer without a sustained program of support.

#### **Evenki (China)**

Reindeer husbandry in China is limited to a small region in the North East of the country, between 50o and 53o North. There are currently 234 Evenki engaged in reindeer husbandry across 20 families herding approximately 1000 reindeer. These reindeer-herding Evenki are the surviving members of what had been a larger Evenki population of hunters that moved freely across the Russian-Chinese border. When Russian-Chinese border hostilities erupted in the 1960s, they happened to be in Chinese territory. Intent on curtailing their free roaming across the border, the Chinese authorities relocated them farther inland, first in Alonson, then Manqui and finally building the settlement of Alougoya. Reindeer were collectivized in 1967 – the state purchased all reindeer from the herders and provided a salary to them for their labour, though reindeer, remained under the care of their previous owners and herders. Their herding is consistent with other south-Siberian reindeer-herding peoples: small



numbers of clan-owned reindeer were milked and used for transport. The deer were highly prized and not slaughtered for meat.

Improving herd health and herd diversity and the economic situation of herders are the main priorities for the livelihood in this region. Soft antler production for the Asian pharmaceuticals market is the main cash crop and there are efforts underway to develop small scale tourist activities in the clans closest to the largest city of the region, Genhe.

#### **Eveny**

Eveny are a very widely distributed people, as are their close cousins, Evenki (with whom they used to be known as Tungus). They are to be found in in Khabarovskiy Kray, the Chukotka Autonomous Oblast, Kamchatskaya Oblast and Magadanskay Oblast, and North and East Sakha (Yakutia). There are approximately 20000 Eveny, with about half living in the North East of the Republic of Sakha (Yakutia). Eveny have traditionally practiced semi nomadism with small scale reindeer husbandry and hunting, including of reindeer. The Eveny are an old reindeer husbandry people, though Eveny reindeer husbandry in inland areas is strongly dominated by Evenki traditions. Eveny speak their own language, one of the Tungusic languages. What make them distinguished from the other reindeer herding peoples in Russia's far east is that they ride reindeer and used dogs as sledge animals.

Collectivisation in the 1930's undermined nomadism and traditional structures, though it has continued until today, though still remaining within the collective system. Eveny reindeer are known to be large, strong and hardy. They are still used for both riding and the transportation of cargo. Modern transportation has only partly substituted the reindeer in many areas, especially as their region does not have a well developed infrastructure. In Eastern areas, Eveny herders had a lot of contact with Koryak and Chukchi reindeer herders. In the last two decades, reindeer husbandry has been challenged with the collapse of support to the collective farm system, though it has endured. Private reindeer ownership has not seen the same expansion of practice as in, for example, Nenets reindeer husbandry.

#### Yukagir

Yukagir are a small people spread across three regions of Eastern Siberia – The Republic of Sakha (Yakutia), Magadan and Chukotka, along the Kolyma and Indigirka rivers. They have become known as Tundra and Taiga Yukagirs. Together they number just over 1500 people. The Yukagir have traditionally been nomadic and semi-nomadic hunters, with wild reindeer being one of the preferred game. Yukagir in the tundra regions also practiced small-scale reindeer herding primarily for transportation purposes. Yukagirs are today settled, but some lead a semi-nomadic life during reindeer herding and hunting seasons. Since collectivisation, both tundra and taiga Yukagir have practiced reindeer husbandry within the collective system.

#### Negida

There are under 900 Negidals, an Evenki people, whose traditional territory is on the banks of the Amgun River, a tributary of the Amur in the Khabarovskiy Kray.

Predominantly a hunting and fishing people, though The Negidal of the upper Amgun developed small-scale reindeer herding in the taiga manner. During Soviet times, Negidal culture underwent major transformation and now most Negidals live in Russian settlements with little if any connection to reindeer husbandry.

#### Uil'ta, Sakhalin

Before the Soviet period, the Uil'ta (previously known as the Orok) followed a mixed subsistence livelihood. In the early 1900's, authorities selected reindeer husbandry as their primary activity. The Uil'ta people are one of the smallest groups in the Russian Federation numbering 387. There 5 to 7 main families comprising of around 20-25 herders that are actively involved in reindeer husbandry, herding between 110-120 reindeer. Herders migrate with their domestic reindeer from the taiga valleys West of the village of Val, to the tundra and birch regions on the coast, particularly south of Pil'tun Bay. Small herd size, an underdeveloped market and limited pastures have restricted the livelihood. There has also been extensive development on the island, related to offshore gas fields and pipelines.

#### Chuvan

The majority of Chuvans live along the Anadyr River and its tributaries, in the villages of Markovo, Tavaivaam, Chuvanskoe, and Lamutskoe in the Chukchi Autonomous Okrug, totalling 1300 people. Some live in the Magadanskaya Oblast and Koryaksi Autonomous Okrug. Traditionally they were nomadic hunters and reindeer herders. They also had small herds of domesticated reindeer for transportation. By the 19th century remaining nomadic Chuvans developed large-scale reindeer husbandry like reindeer herding Chukchi, adopting the Chukchi Yaranga dwelling. Chukotka went

through enormous upheavals in the 1990's and the impact on reindeer husbandry was dire. The livelihood is only beginning to recover after years of decline.

#### Koryak

Koryaks are a widely spread people numbering just over 9000. They are to be found in Kamchatka, Magadan, and Chukotka. Linguistically they are related to the Chukchi and they are also a reindeer herding peoples. Like the Chukchi, those on the coast traditionally hunted sea mammals, while those inland practiced nomadic reindeer husbandry and hunting, moving from place to place using Yaranga's for shelter. Koryaks practiced intensive reindeer husbandry with large herds of several thousands animals. In 1993, the Koryakskiy Autonomous. Okrug had ca. 200,000 reindeer, distributed within 11 collectives and some private herds. As in Chukotka, the number has since been drastically reduced and is still undergoing dramatic restructuring.

#### Chukchi

The Chukchi based their economies on reindeer husbandry in the interior of the region and marine mammal hunting on the coast. There are nearly 16000 Chukchi, with the majority living in small rural villages. Their large herds, often several thousand animals, graze in the open tundra in the summer, and migrate between protected and more sheltered areas in the winter. Traditionally marine mammal hunters and reindeer herders had close trading relationships – whale fat and seal skins for reindeer skins and meat. The origin of the Chukchi reindeer husbandry is unclear, but it has been suggested that they adopted it from Eveny. Reindeer have come to provide many of their necessities: meat for food, and skins for clothing and tents called Yarangas which are covered by reindeer skin and built on props.

Chukchi practice both taiga and tundra reindeer husbandry. They differ in clothing, some practices and transportation usage. The tundra form continues the tradition of long migration routes and large herds. At one time, Chukotka was one of the world's largest regions of reindeer husbandry, in terms of numbers. In the 1980's there were over 500,000 reindeer. The collapse of the Soviet Union saw a more precipitous decline in herd size than anywhere else in Russia. The number of reindeer fell to around 90 000 in 2001. The number of people employed in reindeer husbandry fell from 2,272 in 1976 to 837 in 2001. Many collective farms were closed which had a severe effect on the rural villages. Many reindeer herders were forced to abandon reindeer husbandry. Since then, substantial progress has been made in regenerating Chukchi reindeer husbandry, thanks to a benevolent Governor. Herd sizes are increasing, there has been investment in modern slaughter houses and housing stock and there are now approximately 3000 people engaged in reindeer husbandry including family members. The development of private ownership has been slow - in 2008, 92 per cent of reindeer husbandry in Chukotka is under either public ownership or sovkhozy ownership.

### Inupiaq Eskimo, Yupik, Inuvialuit, Sámi (Alaska, US and Northwest Territories, Canada)

Reindeer Husbandry in Alaska has its roots in the purchase of 1280 reindeer from the Chukchi in Russia as part of a US government plan to provide a source of economic development and meat for the indigenous inhabitants, the Inupiaq. In 1894, Sámi herders were brought to the Seward Peninsula in 1894, which brought increased commercialization and a large increase in numbers (over 600,000 by 1932). The depression, protectionism in the lower 48 states, confusion over ownership, predation and loss of reindeer to caribou saw a sharp decline in the ensuing decades. Sámi involvement ended in this period. Currently there are approximately 10000 reindeer managed by 21 herders who are members of the Kawerak Reindeer Herders



## **Challenges to Reindeer Husbandry**

Loss of pastures is a significant challenge to reindeer husbandry in all places where it is practiced. Pastures are lost to due to the development of roads, infrastructure, military activities, power lines, pipe lines, dams, leisure homes and related activities have all contributed to a decline in 'wilderness' areas, which are prime reindeer pastures. This process has been particularly pronounced in the Nordic countries, but many regions in Russia are experiencing a dramatic increase in oil and gas activities and to a lesser extent, mining. These resources are invariably beneath reindeer pastures. Development is expected to increase in the Arctic and with it a concomitant loss of pastures.

Climate change is not currently a threat to reindeer husbandry. However, trends that are already being experienced (increased climate variability) may lead to further insecurity for herders as pastures are iced over, preventing reindeer from feeding. Tundra fires, which are expected to intensify in Siberia are already challenge for reindeer herders there as fire suppression in remote areas has been halted. As pastures are encroached, reindeer herders flexibility is reduced which limits their responses to future climate variability.

**Predation** is a major challenge for reindeer herders in all regions. Predation by Wolf, Lynx, Eagle and Wolverine has a dramatic impact on reindeer herds, directly impacting herders in all areas. In much of Russia, there is no compensation for losses. In developed areas, traffic is an additional cause of death for reindeer.

**Poaching** is a major challenge in parts of Russia, especially in areas close to roads, urban areas, or fly in worker camps. There are few avenues for compensation.

Wild reindeer herds constitute a major threat to the maintenance of a domestic reindeer husbandry in many regions, including Alaska, Sakha (Yakutia), Chukotka, Taimyr, Canada and Greenland. When wild and domestic herds mix, it is almost impossible to recover the domesticated animals.

Economy Reindeer herders with good access to markets such as in Scandinavia have created a meat based economy for reindeer, and this has also been a positive outcome of the recent oil and gas related boom in parts of the Yamal Peninsula and the Nenets Autonomous Okrug. However, in the majority of reindeer herding areas, especially in Russia, the poor state of the local economy and the lack of access to markets has meant a very low standard of living for reindeer herders. In such areas, recruitment into the livelihood has been a challenge and this has threatened the long term future of reindeer husbandry.

Taiga Reindeer Husbandry In the small herds of the taiga region, fragmentation of pastures and peoples has been a particular challenge. Herds are small, with a low genetic diversity; making them susceptible to disease and availability of veterinary care is limited.

Association who practice an extensive management style of herding. Reindeer in this region are relatively sedentary and do not make long migrations. Currently the entire Seward and Baldwin Peninsulas are designated as reindeer pastures along with St Lawrence Island and areas near Shaktoolik and Stebbins. The Canadian government initiated their Reindeer Project in the 1920's, and by mid 1930, reindeer had been brought from Alaska to the Mackenzie Delta. Sámi families from Norway were brought to train herding practices and to this day, Inuvialuit and Sámi descendents of the Reindeer Project, herd approximately 3-4000 reindeer near Inuvik locally owned and managed by the Kunnek Resource Development Corporation.

#### Greenland

Reindeer husbandry in Greenland has a short history. In 1952, 300 reindeer were brought to West Greenland (near Nuuk) from Karasjok, Norway with some Sámi herders who were brought to train local Inuit. Reindeer husbandry was modeled on Sámi methods and two herds were established East of Nuuk, with combined pastures of 2260 km2. By the late 1960's, the herd had grown to 4500 animals, but dropped precipitously in the 1970's, as seasonal movements were stopped and supervision reduced. Sámi involvement ended by 1978. Mixing with wild reindeer occurred and by 1998, reindeer husbandry in West Greenland was declared to be finished. Reindeer herding in southern Greenland fared somewhat better. Established in 1973 and by the mid 1990's had grown to between 1500-2000 animals over 1477 km². By 2008 however, there was only one herder and family actively engaged with reindeer husbandry remaining, so the future of reindeer husbandry seems uncertain.

#### Scotland

Reindeer were re-introduced into Scotland in 1952 by a Swedish Sámi Reindeer Herder, Mikel Utsi. Between 130 and 150 reindeer continue to be herded on the Cairngorm Mountains and the Cromdale Hills.

#### Reindeer Numbers 1990-2007 in 000's

1330	1333	2000	2007	2001
124	122	110,1	85,4	83,7
191	184	125	162	168,5
186	180	122,1	159	166,3
77	78	61,3	59,9	61,3
47,1	38	26,5	28,8	27,5
490,5	508	504,7	574,5	631,4
2	1	0,5	0,7	0,9
7	4	1,2	1,8	1,7
77,1	49	40,6	43,4	57,2
30	9	5	4,5	4,6
1,7	1,4	0,7	0,9	0,7
9,2	3	0,7	0,8	1,1
361	247	156,2	138,9	169,3
43	24	7,7	7,6	6
13	11	6,2	6,3	6,5
167,3	109	35,9	38	3,8
150,3	97	31,4	31,8	28,6
121,5	67	17,7	15,5	19,1
4	3	3,3	0,3	0,2
491	236	92,5	113,1	167,9
2260	1694	1196	1283,1	1445,6
242	212	172	232	241
259	212	185	201	200
	253	221		220
25				10
				3
				3
	124 191 186 77 47,1 490,5 2 7 77,1 30 1,7 9,2 361 43 13 167,3 150,3 121,5 4 491 2260 242 259	124     122       191     184       186     180       77     78       47,1     38       490,5     508       2     1       7     4       77,1     49       30     9       1,7     1,4       9,2     3       361     247       43     24       13     11       167,3     109       150,3     97       121,5     67       4     3       491     236       2260     1694       242     212       259     212       253	124       122       110,1         191       184       125         186       180       122,1         77       78       61,3         47,1       38       26,5         490,5       508       504,7         2       1       0,5         7       4       1,2         77,1       49       40,6         30       9       5         1,7       1,4       0,7         9,2       3       0,7         361       247       156,2         43       24       7,7         13       11       6,2         167,3       109       35,9         150,3       97       31,4         121,5       67       17,7         4       3       3,3         491       236       92,5         2260       1694       1196         242       212       172         259       212       185         253       221	124         122         110,1         85,4           191         184         125         162           186         180         122,1         159           77         78         61,3         59,9           47,1         38         26,5         28,8           490,5         508         504,7         574,5           2         1         0,5         0,7           7         4         1,2         1,8           77,1         49         40,6         43,4           30         9         5         4,5           1,7         1,4         0,7         0,9           9,2         3         0,7         0,8           361         247         156,2         138,9           43         24         7,7         7,6           13         11         6,2         6,3           167,3         109         35,9         38           150,3         97         31,4         31,8           121,5         67         17,7         15,5           4         3         3,3         0,3           491         236         92,5 <t< td=""></t<>

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