

Article

# Sustainable Indigenous Reindeer Herding as a Human Right

Stefan Kirchner <sup>1,\*</sup> and Vanessa M. Frese <sup>2</sup>

<sup>1</sup> Faculty of Law, University of Lapland, Yliopistonkatu 8, 96300 Rovaniemi, Finland

<sup>2</sup> Faculty of Law, University of Fribourg, Av. de l'Europe 20, 1700 Fribourg, Switzerland; vanessamaria.frese@unifr.ch

\* Correspondence: stefan.kirchner@ulapland.fi; Tel.: +358-404-844-001

Academic Editor: Frank Pasquale

Received: 8 December 2015; Accepted: 10 May 2016; Published: 25 May 2016

**Abstract:** The specifically changing climate conditions in the arctic and subarctic tremendously affect the vegetation and the conditions of the snow. This, therefore, influences the possibilities for *rangifer tarandus* to feed. For many indigenous peoples across the global North, the herding of reindeer, however, is an extremely important source of income. When the increasing temperatures lead to snow melting a bit and then freezing over again, the reindeer lose access to their feed. This has led to the starvation of thousands of reindeer in Russia in 2013/2014. This paper will try to shed light on the background of the historic as well as the legal aspects of indigenous Sámi reindeer herders in the multi-state Sápmi area. While reindeer herding represents a significant livelihood for the indigenous population, the change in climate increasingly threatens the sustainability of this cornerstone of Sámi identity. This text aims to highlight existing rules of international human rights introduced to protect indigenous reindeer herders and the state's duty to refrain from actions endangering indigenous livelihoods and to take positive action aimed at their protection.

**Keywords:** *rangifer tarandus*; reindeer; climate change; indigenous peoples; Arctic; Sub-Arctic

## 1. Introduction

The widespread problem of climate change is most ubiquitous in the Arctic and Subarctic<sup>1</sup>. There, the weather is expected to change to extremes more often, due to climate change. In the context of reindeer, this change is already visible in the North (*rangifer tarandus*, a species which also includes e.g., caribou in North America [2]). In many regards, this paper will also take a more global view on the topic. However, the main focus of this research effort will lie on the traditional semi-domestic reindeer herding of indigenous Sámi groups. The geographical area in which this takes place, *Sápmi*, is not an independent state but parts of it are governed by Norway, Sweden, Finland and Russia.

In this article, we will look at the threats to reindeer herding in Sápmi through the perspective of indigenous<sup>2</sup> rights. The geographical scope will be limited to the Norwegian, Swedish and Finnish sides<sup>3</sup> of Sápmi. Climate change has been used before as a point of departure for research on indigenous issues ([3], p. 34). In this text, we will deal with specific effects of climate change from a legal perspective.

<sup>1</sup> The particular sensitivity of the Arctic to climate change has long been known, see e.g., [1].

<sup>2</sup> While Finland also allows non-indigenous persons to herd reindeer, this right is restricted to the Sámi people in Sweden and Norway.

<sup>3</sup> The term "side" rather than "part" reflects the language employed by the indigenous population and the notion of Sápmi as a cultural, if not political, whole, on which political borders have only been imposed from the outside.

It is the goal of this text to show that sustainable indigenous reindeer herding is a human right that is protected under international legal norms which are already binding to the four states which rule Sápmi: Norway, Sweden, Finland and Russia. In addition to highlighting the continued relevance of reindeer herding for the culture and economy of the indigenous Sámi people, it is the aim of this text to show that the *lex lata* already provides enforceable legal rights for protection of sustainable indigenous reindeer herding all over Sápmi.

## 2. Reindeer Herding in Sápmi

### 2.1. History and Organisation

Several tens of indigenous peoples are currently herding *Rangifer tarandus* in the global North ([4], p. 291). *Rangifer* are a species that have inhabited the Arctic since long before the last ice age and are very adaptive and are, thus, capable of living with changes, e.g., in climate [5].

In the different countries that comprise *Sápmi*, the livelihood of reindeer herding is conducted very differently. Where a family business forms part of a *paliskunta*, the local reindeer herders' organization in Finland, the reindeer herding family could understand itself as a collective, yet it is only the *paliskunta* which is a collective in the ontological sense; hence, it is independent from any of its many members ([6], p. 7). There is also the *sameby*, which defines itself as a reindeer-herding village, but which is not a political but a commercial membership-based entity. The *sameby* forms not a natural but an ontological collective. The way the Saami intended this organization to be in earlier times was a more natural form of collective in a more traditional, family-based sense—the *siida*, with which the state's relatively modern invention of the *sameby* is not to be confused. In Norway, this view is still held to some extent.

### 2.2. Feeding and the Role of Snow

The reindeer live in tundra and taiga areas [5]. During the winter months, they mostly subsist on lichen and evergreens [5]. The winter in *Sápmi* lasts as until the end of spring in southern European countries. Particularly, in early winter and then the late winter months, deep *névé* that transforms into hard, icy *firn*, as well as ice crusts which form over soft snow (referred to as "*ruokna*" in North Sámi) when temperatures have briefly been above freezing point and then fall again, pose a serious challenge for reindeer [7]. When such a layer of ice has formed on the otherwise soft blanket of snow over their food, the reindeer are not able to access the lichen<sup>4</sup> hidden<sup>5</sup> underneath.

## 3. Multiple Threats to Sustainable Indigenous Reindeer Herding in Sápmi

### 3.1. Effects of Climate Change

The above-mentioned change in climate, however, demonstrates a number of negative effects, when looking at the availability of nutritious feed for reindeer. If the climate in general becomes warmer, *ruokna*-occurrences will happen more frequently and deciduous trees, for instance, *betula*, are already becoming more common [11]. Whereas deciduous trees such as pine trees catch a significant amount of snow and store it up in the branches, those quickly spreading trees could drastically increase the amount of snow on the ground by not stopping any of the falling snow [12]. The reindeer therefore take longer to dig up their feed—and thus are wasting more energy in the process [13]. Furthermore, pregnant mother-reindeer with a lack of feed could result in lower birth weights [14]. This can lead to a lower number of births and smaller survival chances for newborn reindeer. This, in return, would decrease the overall number of the reindeer population. Taking this line of thinking even further,

<sup>4</sup> Lichen, rather than being a plant, is a cyanobacteria and/or algae living within the filaments of a fungus [8] which leads to a symbiosis between the two organisms.

<sup>5</sup> Reindeer are capable of seeing in the UV spectrum, which facilitates finding lichen under snow [9,10].

this already shows a direct impact on the economic situation of indigenous Saami who commercially herd reindeer.

In cases of even more severe ice crusts, this problem can become severe: in the winter 2013/2014, between 60,000 and 70,000 reindeer died of starvation in Russia due to ice crusts on snow, which made it impossible for the reindeer to feed on lichen [15]. With the increasing temperatures in mind, this kind of extreme weather event is likely to become more common in future winters. Although international law is currently developing rules on responsibility for the prevention or at least limitation of climate change, establishing state responsibility and, in particular, causality is significantly more difficult when it comes to a problem which is internationally viewed as abstract than it is in more traditional settings involving, e.g., pollution from one state which has negative environmental effects on another state. Indeed, the latter scenario was the starting point of international environmental law in a dispute over cross-border pollution at the US-Canadian border [16].

### 3.2. Dependency on Subsidies

In reference to the winter 2007/2008, the Swedish government mobilized around 5 million USD for emergency aid for reindeer herders to provide relief for the negative economic effects of ruokna ([4], p. 294). In that context, one is compelled to ask if Sweden was under any legal obligation arising from international human rights law to do so. Without this state-binding obligation, indigenous reindeer herders will have to combat severe economic challenges. Even in today's Finnish parts of *Sápmi*, seeing gas stations sell feed for reindeer is not a curious thing anymore. For the herders, having to buy additional feed has almost become a norm within their work day. Traditionally, reindeer herding is dependent on the reindeer being semi-domesticated and having access to food in the wild. Changed snow conditions and the loss of grazing lands to infrastructure and development projects and the resulting need to buy additional feed threaten the long-term viability of reindeer herding as a sustainable form of livelihood<sup>6</sup>.

### 3.3. Competing Land Uses as a Major Threat to Indigenous Livelihoods

There are a number of non-indigenous uses of the traditional homelands of the Sámi people, which threaten the long-term viability of (semi-) nomadic reindeer herding as a form of livelihood that is sustainable in the long run. Similar problems are experienced by other indigenous peoples that engage in reindeer herding. In *Sápmi*, reindeer are usually running free in the wild and are only collected for purposes such as marking and slaughtering. Ideally, they survive without receiving additional fodder, although this idyllic view has already been superseded by a new reality based on limited access to land and has led to feeding becoming more common in parts of *Sápmi*, especially on the Swedish side. Multiple, in particular non-indigenous, land uses, however, dramatically reduce the amount of land which is available for the movement and feeding of reindeer. Infrastructure projects, such as the construction of roads or railways, but also mining and energy projects, as well as housing and tourism, are just some of the developments that lead to ever-smaller areas being at the disposal of reindeer. In its traditional way, reindeer herding has been a sustainable source of food and income for the indigenous peoples of the global North for many generations. As a form of indigenous livelihood, it is subject to increasing practical pressure on a global scale. In Finland, the continued failure to fully recognize indigenous rights has even led to the permissibility of reindeer herding for non-indigenous persons.

---

<sup>6</sup> On indigenous resilience see also [17].

### 3.4. *The Continued Relevance of Reindeer Herding for the Indigenous Sámi People*

All of this puts a lot of pressure on indigenous reindeer herding and raises the question of how long it can remain a sustainable form of generating income and providing food for indigenous families in Sápmi:

Although other forms of income are increasingly important from an economic perspective, reindeer herding still plays an important cultural, economic and culinary role in Sápmi. In fact, reindeer herding is an important means of income for indigenous peoples not only in Sápmi but also all over the global North ([4], p. 290). While reindeer herding is not an exclusively indigenous activity<sup>7</sup>, it is an activity that plays a very important role in the livelihood for approximately thirty peoples in the Arctic and Subarctic ([4], p. 291). As will be shown, traditional forms of reindeer herding practiced by indigenous Sámi people in Sweden are more likely to be affected by climate change than the reindeer herding practiced by Sámi and non-Sámi in Finland. That reindeer herding is such a successful form of land use in the global North comes hardly as a surprise, given that it “presents a model for sustainable exploitation and management of vast barren circumpolar areas. It is a practice developed through multiple generations and is based on very close observations and accumulated practical knowledge of the animals’ behavior and needs.” ([4], p. 287). An important aspect of reindeer herding is the widespread practice of seasonal migration between summer and winter pastures. While the former can be found, e.g., in mountainous areas of Western Sweden, the latter include areas at lower altitudes [4]. “While reindeer herding in Finland and Russia is more regional, on the Swedish side of Sápmi, reindeer migrate from summer pastures in the mountains in the western part of the country to winter pastures in the east, at lower elevations closer to the coast. These migrations follow the natural environment, such as river valleys that connect the mountains to the coastal areas. As climate change continues, the impression is created that the Arctic and Sub-Arctic lands of Sápmi become more accessible to outsiders, leading to increases in economic migration to Sápmi, in particular in the contexts of tourism and extractive industries. These forms of non-indigenous land use require the construction of roads, railroads and other forms of infrastructure. This in turn reduces the total space available for reindeer herding. In particular, roads, and even more so railroads, provide significant barriers to reindeer migrations. By ignoring the needs of indigenous livelihoods, traditional forms of land use which have long been sustainable, new forms of land use and the construction of infrastructure threaten the right of indigenous peoples to engage in traditional livelihoods.” [18].

### 3.5. *Looking into the Future*

In the future, the situation will only get worse because, in addition to the reduction of available land area for the feeding of reindeer,

“Reindeer herds will face a variety of climate-related changes in their migrating routes, calving grounds and forage availability as snow and ice river conditions change, thus affecting the people who depend on hunting and herding them. The anticipated higher temperatures in the summer can cause problems for the reindeer [such as] much worse insect plagues and the spread of new parasites and diseases. Reindeer migration routes often cross ice-covered watercourses, and milder winters with thinner ice and shorter periods when the watercourses are ice-covered can impair reindeer migration.” ([12], p. 1)

For all practical purposes, this means that reindeer herding is running out of the natural space required in order to conduct it in a manner which will be sustainable in the long run.

The answer to this seems to be to call for adaption to the changing circumstances [12]. While indigenous cultures are not static (just like any other culture), adapting to fundamentally changed circumstances can lead to an effective end of the traditional livelihoods of indigenous peoples.

---

<sup>7</sup> In Finland, also non-indigenous persons are allowed to engage in reindeer herding.

## 4. International Human Rights Law

### 4.1. Indigenous Rights as Part of International Human Rights Law

This has led to the question of whether such forced adaptation is actually compatible with international human rights law, in particular with Article 27 of the International Covenant on Civil and Political Rights [19] (ICCPR), which reads as follows:

“In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practice their own religion, or to use their own language.”

Indigenous rights are not only closely related to general human rights law. Article 27 ICCPR highlights that indigenous rights are a full and vital part of international human rights law. The legal nature of indigenous rights is particularly important in this context as the aforementioned challenges posed to indigenous livelihoods need to be considered under more general aspects of international human rights law as well, as will be shown in the following.

### 4.2. Sustainable Indigenous Reindeer Herding as a Human Right

Article 27 ICCPR does not contain an explicit clause which would clarify under which circumstances the state is allowed to restrict this right but the state can only go until a certain point when limiting the right protected by Article 27 ICCPR. It must not destroy the core elements of the right. The Human Rights Committee (HRC), which is tasked with supervising the compliance of states with the ICCPR under Article 1 of the Optional Protocol to the ICCPR [20], has had the opportunity to deal with land use conflicts concerning reindeer herding before and found that there are limits to the permits issued by the state for invasive non-indigenous activities. For example, the HRC found in *Jouni E. Lämsman et al. v. Finland* that the rights of indigenous peoples under Article 27 ICCPR can be limited *de facto* through state-authorized projects (in that case, a stone quarry at a mountain traditionally used for reindeer herding) but not to the extent that it would make indigenous livelihoods impossible:

“The Committee considers that if logging plans were to be approved on a scale larger than that already agreed to for future years in the area in question or if it could be shown that the effects of logging already planned were more serious than can be foreseen at present, then it may have to be considered whether it would constitute a violation of the authors’ right to enjoy their own culture within the meaning of article 27. The Committee is aware, on the basis of earlier communications, that other large-scale exploitations touching upon the natural environment, such as quarrying, are being planned and implemented in the area where the Sami people live. Even though in the present communication the Committee has reached the conclusion that the facts of the case do not reveal a violation of the rights of the authors, the Committee deems it important to point out that the State party must bear in mind when taking steps affecting the rights under article 27, that though different activities in themselves may not constitute a violation of this article, such activities, taken together, may erode the rights of Sami people to enjoy their own culture.” ([21], para. 10.7)

“Impossible” in the sense of the term employed here has to include the sustainability of the livelihood, as an unsustainable activity might still be protected as a cultural activity under Article 27 ICCPR but it would lose its economic value. In *Kitok v. Sweden*, though, the HRC had already implicitly accepted that Article 27 ICCPR also protects cultural activities, which are undertaken for economic purposes, such as reindeer herding [22].

Outside activities as well as climate change lead to a reduction of the land area available for reindeer herding and thereby contribute to making reindeer herding unsustainable.

The situation is worsened by the still incomplete participation of the indigenous Sámi people in decision-making on the national level.

### 4.3. Free, Prior and Informed Consent (FPIC)

Land use issues provide an important hinge, which connects national and international law. Of particular importance in this context is the question of how far the state has to go in order to take indigenous rights and interests sufficiently into account, a question that is phrased in terms of indigenous peoples' free, prior and informed consent (FPIC)<sup>8</sup> to measures that affect them. In the Nordic countries, this process is very much institutionalized in the form of the national Sámi parliaments, but institutional structures do not guarantee full compliance with international law—but that said, the status of FPIC in international law remains controversial.

In this context, litigation can move the debate on the legal status of FPIC forward significantly. On a domestic level, Canada, despite existing problems when it comes to the full realization of indigenous rights and, e.g., the protection of indigenous women against violent crime, is playing a leading role from a legal perspective [25]. While litigation before courts (which have been imposed by the dominant society and which might have been tools of oppression in the past) might come more easily to some indigenous cultures than to others and might indeed be shunned by some, it cannot be ignored that domestic courts remain the key legal locus for the realization of human rights in general and indigenous rights in particular. By engaging with the dominant society in domestic litigation, indigenous plaintiffs have the opportunity to raise the profile of FPIC and to contribute to the development of a relevant norm of customary international law, which would include the FPIC principles.

FPIC is not a goal in itself but it serves to protect indigenous interests and rights. Chief among these rights is the right to continued existence of the indigenous group and its culture. In the context of Article 27 ICCPR, it has to be noted that traditional ways in which members of an indigenous group make a living are parts of the culture and thus protected by that norm.

## 5. Conclusions

Without international norms putting an obligation on the states connected to *Sápmi*, the combination of a warming climate and an economic crisis might put an end to traditional reindeer herding—the livelihood of many indigenous Saami people—within a short timeframe. The mass starvation of reindeer in Russia mentioned earlier indicates that a combination of several extreme factors could end reindeer herding as a profitable business, at least regionally, within a single winter.

While litigation seems unlikely at this time, it is a distinct possibility and would not be completely without precedent. Like other legal fora that were not designed to deal with climate change issues per se, the HRC could play a role in protecting human rights of indigenous peoples against multiple threats, including climate change and outside land uses. The Sámi people were trailblazers when it came to using international human rights litigation for the defense of human rights in the 1980s and 1990s. Today, the situation in *Sápmi* makes it appear possible that a similar role could await potential Sámi litigations when it comes to human rights effects of climate change.

**Acknowledgments:** The contribution by *Kirchner* is part of the Research Project Human Security in the Arctic (HuS-Arctic), led by the Arctic Centre of the University of Lapland. This text only reflects the authors' private opinions.

**Author Contributions:** S.K. conceived the article and designed its structure, V.M.F. researched parts 1 and 2, S.K. researched parts 3 and 4, S.K. wrote the article, V.M.F. cross-checked the sources.

**Conflicts of Interest:** The authors declare no conflict of interest.

---

<sup>8</sup> For a recent in depth analysis see [23]. For a quick introduction to FPIC, see [24].

## References and Notes

1. Lassi Heininen. "Environmental Threats and Possibilities for Protection in the Arctic." In *Legal Problems in the Arctic Regions*. Edited by Leena Roiko. Rovaniemi: Institute for Nordic Law at the University of Lapland, 1990, pp. 86–100.
2. Fairbanks Online. "Reindeer...Caribou...What's the Difference?" Available online: <http://uacornerstone.net/news/featured/04/reindeer/difference.html> (accessed on 13 May 2016).
3. Marjo Lindroth. *Governing Indigeneity Globally: Indigenous Peoples in the United Nations*, 1st ed. Rovaniemi: Lapland University Press, 2015.
4. Irina L. Stoyanova. "The Saami facing the impacts of global climate change." In *Climate Change and Indigenous Peoples—The Search for Local Remedies*, 1st ed. Edited by Randall S. Abate and Elizabeth Ann Kronk. Cheltenham and Northampton: Edward Edgar, 2013, pp. 287–312.
5. WWF-Norway, and WWF International Arctic Programme. "Factsheet: Effects of Climate Change on Reindeer." Available online: [http://d2ouvy59p0dg6k.cloudfront.net/downloads/reindeer\\_factsheet\\_1.pdf](http://d2ouvy59p0dg6k.cloudfront.net/downloads/reindeer_factsheet_1.pdf) (accessed on 13 May 2016).
6. Aulis Aarnio. "On Collective Actions. Some Remarks on the Theory of Legal Actions." *Ratio Juris* 11 (1998): 1–11. [CrossRef]
7. Henrik Lundqvist, Öje Danell, and Lennart Norell. "Range Sustainability Criteria for Reindeer Herding." Available online: [http://www.slu.se/PageFiles/8472/HL-Range\\_poster.pdf](http://www.slu.se/PageFiles/8472/HL-Range_poster.pdf) (accessed on 1 November 2013).
8. Brian R. Speer. "Introduction to Lichens—An Alliance between Kingdoms." Available online: <http://www.ucmp.berkeley.edu/fungi/lichens/lichens.html> (accessed on 5 January 2015).
9. Mike De Haan. "The Reindeer Superpower: Ultraviolet Vision." Available online: <http://www.environmentalgraffiti.com/environment/the-reindeer-superpower-ultraviolet-vision> (accessed on 13 May 2016).
10. Phys.org. "Reindeer See a Weird and Wonderful World of Ultraviolet Light." Available online: <http://phys.org/news/2011-05-reindeer-weird-world-ultraviolet.html> (accessed on 26 May 2011).
11. Camille Truong, Anna E. Palmé, and François Felber. "Recent invasion of the mountain birch *Betula pubescens* ssp. *tortuosa* above the treeline due to climate change: Genetic and ecological study in northern Sweden." *Journal of Evolutionary Biology* 20 (2007): 369–80. [CrossRef] [PubMed]
12. Tim Horstkotte. *Contested Landscapes: Social-Ecological Interactions between Forestry and Reindeer Husbandry*, 1st ed. Umeå: Department of Ecology and Environmental Science, Umeå University, 2013. Available online: <http://www.diva-portal.org/smash/get/diva2:606665/FULLTEXT03> (accessed on 13 May 2016).
13. Steve G. Fancy, and Robert G. White. "Energy expenditures by Caribou while cratering in Snow." *Journal of Wildlife Management* 49 (1985): 987–93. [CrossRef]
14. Terje Skogland. "The Effects of Food and Maternal Conditions on Fetal Growth and Size in Wild Reindeer (Effekter av ernæring og simlas kondisjon på vekst og størrelse av foster hos villrein)." *Rangifer* 4 (1984): 39–46. [CrossRef]
15. Robert Lindsay. "70,000 Reindeer Die of Starvation in Russia's North." Available online: <http://robertlindsay.wordpress.com/2014/05/13/70000-reindeer-die-of-starvation-in-russias-north/> (accessed on 13 May 2014).
16. Arbitral Tribunal. "Trail Smelter Arbitration (United States and Canada), III UNRIAA 1905–1982." Available online: [http://legal.un.org/riaa/cases/vol\\_III/1905-1982.pdf](http://legal.un.org/riaa/cases/vol_III/1905-1982.pdf) (accessed on 13 May 2016).
17. Hugo Reinert, and Tor A. Benjaminsen. "Conceptualising resilience in Norwegian Sámi reindeer pastoralism, Resilience: International Policies, Practices and Discourses." *Resilience*, 2015. [CrossRef]
18. Stefan Kirchner. "Climate Change Effects on Snow Conditions and the Human Rights of Reindeer Herders, forthcoming." *Pace Environmental Law Review* 33 (2015): 1.
19. United Nations. "International Covenant on Civil and Political Rights." 19 December 1996. Available online: <https://treaties.un.org/doc/Publication/UNTS/Volume%20999/volume-999-I-14668-English.pdf> (accessed on 13 May 2016).
20. United Nations. "Optional Protocol to the International Covenant on Civil and Political Rights." 16 December 1966. Available online: <http://www.ohchr.org/EN/ProfessionalInterest/Pages/OPCCPR1.aspx> (accessed on 13 May 2016).
21. Human Rights Committee. *Jouni E. Länsman et al. v. Finland*. Communication No. 671/1995, U.N. Doc. CCPR/C/58/D/671/1995 (1996), para. 10.7.

22. Human Rights Committee. *Ivan Kitok v. Sweden*. Communication No. 197/1985, CCPR/C/33/D/197/1985 (1988), para. 9.2.
23. Sebastiaan Johannes Rombouts. *Having a Say—Indigenous Peoples, International Law and Free, Prior and Informed Consent*, 1st ed. Oisterwijk: Wolf Legal Publishers, 2014.
24. Antje Neumann. *The Recognition of Indigenous Peoples' Rights in the Context of Area Protection and Management in the ARCTIC*, 1st ed. Munich: Grin Verlag, 2010.
25. Dwight G. Newman. *Revisiting the Duty of Consult Aboriginal Peoples*, 1st ed. Saskatoon: Purich Publishing Limited, 2014.



© 2016 by the authors; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).