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ESSAY

Climate Change Effects on Snow Conditions and the Human Rights of Reindeer Herders

STEFAN KIRCHNER*

I. INTRODUCTION

In November 2014, the latest report by the United Nation's Intergovernmental Panel on Climate Change (IPCC)¹ showed that anthropogenic climate change is not only already happening,² and is bound to continue for some time beyond the year 2100,³ but also that there is still a window of opportunity for limiting the effects of climate change.⁴ One way to do so is to limit emissions, and the forthcoming meeting of the states which have ratified the UN Framework Convention on Climate Change

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1. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014 SYNTHESIS REPORT (Core Writing Team et al. eds., 2015), http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full.pdf [<http://perma.cc/GPZ6-FJLM>].

2. *Id.* at 3.

3. *Id.* at 11.

4. *Id.* at 13.

(UNFCCC)⁵ in Paris in 2015 will be an opportunity to set effective standards.⁶ When it comes to human rights, the area in question already shares some basic standards. Notably, all states in which reindeer herding is undertaken have ratified the International Covenant on Civil and Political Rights (ICCPR).⁷ While reindeer herding is practiced across the global North,⁸ the geographical scope of this research is restricted to Sápmi. Sápmi is the homeland of the Sámi,⁹ Northern Europe's only indigenous people living outside of Russia. Consisting of several language groups,¹⁰ the Sámi peoples and their ancestors are thought to have lived in Northern Europe for more than 11,000 years.¹¹ While the ancient Sámi homeland is estimated to have covered not only large parts of Norway, Sweden, all of Finland, Northwestern Russia, and even the lands which today make up the nation of Estonia,¹² the Sámi home area as it is recognized today is significantly smaller.¹³ Living in Norway, Sweden, Finland, and Russia, the

5. United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 30822, https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf [<https://perma.cc/T38R-7CDC>].

6. ICTMN Staff, *U.N. Sounds the Alarm on Climate Change While Emphasizing Opportunities*, INDIAN COUNTRY TODAY MEDIA NETWORK.COM (Nov. 3, 2014), <http://indiancountrytodaymedianetwork.com/2014/11/03/un-sounds-alarm-climate-change-while-emphasizing-opportunities-157667> [<http://perma.cc/3RKX-4R3M>].

7. International Covenant on Civil and Political Rights, Dec. 19, 1966, 999 U.N.T.S. 14668.

8. INGER MARIE G. EIRA ET AL., THE CHALLENGES OF ARCTIC REINDEER HERDING: THE INTERFACE BETWEEN REINDEER HERDERS' TRADITIONAL KNOWLEDGE AND MODERN UNDERSTANDING OF THE ECOLOGY, ECONOMY, SOCIOLOGY AND MANAGEMENT OF SAMI REINDEER HERDING 1 (n.d.), http://library.arcticportal.org/550/1/Eira_127801.pdf [<http://perma.cc/HMX4-W9CV>].

9. Note that the term "Lapps" (Finnish: *Lappalainen*), which can be found in older publications, is today considered derogatory, and that the term "Laplander" (Finnish: *Lappilainen*) can refer to anybody who lives in Lapland. Therefore, the self-designation "*Sami*" is used in this text to refer to the indigenous population.

10. NEIL KENT, THE SÁMI PEOPLES OF THE NORTH: A SOCIAL AND CULTURAL HISTORY 49 (2014).

11. *Id.* at 5–6.

12. See NOEL D. BROADBENT, LAPPS AND LABYRINTHS: SAAMI PREHISTORY, COLONIZATION AND CULTURAL RESILIENCE 4137 (2010) (ebook) (mapping ancient Sámi homeland).

13. *Id.*

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Sámi people continue to refer to this reality as the different “sides” of their homeland, Sápmi, a terminology that is now also used by non-Sámi.¹⁴

Over centuries, colonialization by Germanic people and the national governments has led to large-scale loss of culture, including religious traditions and languages. This makes the remaining examples of indigenous cultures very important in the context of overall efforts to preserve the indigenous cultures. Among these are traditional forms of livelihood such as fishing and, in particular, reindeer herding. Reindeer herding, even if it is only undertaken by about ten percent of the Sámi population, therefore retains an important symbolic value in addition to providing an important source of income for many Sámi families. That said, many aspects of this research will be useful for indigenous peoples elsewhere, in particular for indigenous peoples engaging in pastoralist forms of livelihood. 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 all over the global North.¹⁵ While reindeer herding is not an exclusively indigenous activity,¹⁶ it is an activity that plays a very important role for the livelihood for approximately thirty peoples in the Arctic and Subarctic.¹⁷ 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. It hardly comes as a surprise that reindeer herding is such a successful form of land use in the global North, given that it “[r]epresents a model for sustainable exploitation and management of vast barren circumpolar areas. It

14. See Ludger Müller-Wille et al., *Dynamics in Human-Reindeer Relations: Reflections on Prehistoric, Historic and Contemporary Practices in Northernmost Europe*, in *REINDEER MANAGEMENT IN NORTHERNMOST EUROPE* 27, 34 (Bruce C. Forbes et al. eds., 2006).

15. Irina L. Stoyanova, *The Saami Facing the Impacts of Global Climate Change*, in *CLIMATE CHANGE AND INDIGENOUS PEOPLES: THE SEARCH FOR LEGAL REMEDIES* 287, 290 (Randall S. Abate & Elizabeth Ann Kronk eds., 2013).

16. In Finland, also non-indigenous persons are allowed to engage in reindeer herding.

17. Stoyanova, *supra* note 15, at 291.

is a practice developed through multiple generations and is based on very close observations and accumulated practical knowledge of the animals' behavior and needs."¹⁸ An important aspect of reindeer herding is the widespread practice of seasonal migration between summer and winter pastures.¹⁹ While the former can be found in mountainous areas of Western Sweden, the latter include areas at lower altitudes.²⁰

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. This leads 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 that 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. It is the aim of this article to analyze the rights of indigenous peoples in the context of primary and secondary effects of climate change. For the purposes of this paper, the term "primary effects" will be used to describe immediate effects of climate change. This includes temperatures which move around freezing instead of being solidly below freezing. This can result in a layer of ice forming on top of the snow, the so-called "*ruokha*."²¹ While reindeer can dig

18. *Id.*

19. *See id.*

20. *See id.*

21. Ole Henrik Magga, *Diversity in Saami Terminology for Reindeer and Snow*, ARCTIC LANGUAGES VITALITY, http://www.arcticlanguages.com/papers/Magga_Reindeer_and_Snow.pdf [<http://perma.cc/L79U-TJ35>].

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through snow to access their food, they cannot dig through ice,²² and, in the winter of 2013-2014, more than 60,000 (according to another source, 70,000)²³ reindeer starved to death in Russia due to this effect.²⁴

Primary effects of climate change also include the increased presence of deciduous instead of evergreen²⁵ coniferous trees. The loss of leaves causes less snow to stay on top of the trees, when compared to evergreen trees, hence more snow reaches the ground, resulting in an increase in snow cover, which in turn makes it more difficult for reindeer to move around and to dig through the snow for food.

Secondary effects of climate change, for the purposes of this research, refer to increased (usually but not necessarily non-indigenous) activities in previously inaccessible areas such as Sápmi. This can include the construction of new roads, railways or other infrastructure, increased logging, mining or tourism activities, but also, for example, the construction of wind energy installations. Although the focus of the legal issue will be secondary effects, the text will first provide a look at primary

22. EMILIE. D. HATT, *WITH THE LAPPS IN THE HIGH MOUNTAINS: A WOMAN AMONG THE SAMI, 1907–1908* 161 (Barbara Sjöholm ed. & trans., Univ. of Wis. Press 2013) (1913).

23. Robert Lindsay, *70,000 Reindeer Die of Starvation in Russia's North*, BEYOND Highbrow – Robert Lindsay (May 13, 2014, 10:51 PM), <http://robertlindsay.wordpress.com/2014/05/13/70000-reindeer-die-of-starvation-in-russias-north/> [<http://perma.cc/E2BE-DHTX>].

24. *Tens of Thousands of Reindeer Die of Extreme Weather in Russia's North*, MOSCOW TIMES (May 13, 2014, 6:42 PM), <http://www.themoscowtimes.com/news/article/tens-of-thousands-of-reindeer-die-of-extreme-weather-in-russias-north/500060.html> [<http://perma.cc/XP7N-XRSQ>].

25. It has to be noted, though, that *larix decidua*, which loses its needles and is coniferous but not evergreen, could live in Fennoscandia but is commonly found in the Alpine region. European Forest Data Centre, *Species Distribution*, EUR. COMMISSION, <http://forest.jrc.ec.europa.eu/efdac/applications/species-distribution/> [<http://perma.cc/KY3M-G8GK>]. In Russia, *larix* is very common. H. Hytteborn et. al, *Boreal Forests of Eurasia*, in 6 ECOSYSTEMS OF THE WORLD, CONIFEROUS FORESTS 23, 68 (F. Andersson ed., Elsevier 2005). Indeed, warming is said to lead to a reduction in *larix* in favor of *betula*, which already are common in Fennoscandia. *Id.* at 69. For the purposes of this research, the replacement of one non-evergreen tree by another non-evergreen tree as a result of climate change would be of limited importance, although locally the importance could be significant given the role of the timber industry for the countries which control Sápmi and the different properties of *larix* and *betula* wood.

effects of climate change on reindeer herding²⁶ before looking at the secondary effects caused by an increase in infrastructure which has been made possible by climate change.

Because it would go beyond the scope of an article, the issue of wind energy installations will be dealt with in more detail as an example for such measures which cause secondary effects.²⁷ Wind energy was chosen as an example because it remains an emerging issue in Sápmi, but one which has a lot of growth potential and which can be seen as a way to fight climate change. It is also highly relevant due to the continued uncertainty with regard to the long-term effect it has on reindeer herding.

After these practical considerations, the focus of the text will shift towards rights of indigenous peoples under international law²⁸ in order to answer the question of how international law protects indigenous reindeer herders in the context of climate change.

II. CLIMATE CHANGE AS A CHALLENGE FOR REINDEER HERDING

A key feature of herding is the dependency on nature. The availability of land and feed for the animals is essential for commercially successful reindeer herding. Climate change, however, affects no part of the world as much as the Arctic.²⁹ This means that information about nature and about specific sites is no longer relevant in the same way that it used to be. This results in a significant disruption of the indigenous way of life, which is often related to the use of specific lands for many generations.

International law, such as Article 27 of the International Covenant on Civil and Political Rights (ICCPR),³⁰ the International Labour Organization's Indigenous and Tribal

26. *See infra* Part 2.

27. *See infra* Part 3.

28. *See infra* Part 4.

29. *Sámi & Finns – Finland*, INT'L CTR. FOR REINDEER HUSBANDRY, <http://reindeerherding.org/herders/sami-finns-finland/> [<http://perma.cc/W9GW-SHWU>].

30. International Covenant on Civil and Political Rights, *supra* note 8, art. 27.

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Peoples Convention of 1989 (ILO 169),³¹ and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP),³² aims at securing indigenous ways of life and livelihoods. *De lege lata*, not all situations resulting in de facto violations of indigenous peoples' rights can be prevented through international law. Despite the possibility of overlaps, international law distinguishes between state responsibility in international law in general (*i.e.*, a responsibility in relation between states) and the responsibility of states for violations of human rights (a responsibility both towards other states as well as to the victims of human rights violations).

Despite efforts to limit greenhouse emissions, the issue of state responsibility under international law for climate change, particularly in the context of economic activities which are not (yet) outlawed, remains controversial. Increasing international efforts to combat climate change can provide indicators as to the emergence of new rules of customary international law, which, in the future, might provide indigenous peoples with some legal recourse in this regard. To this end, existing legal instruments could be utilized, but on the international as well as on the national level.

In Sweden, there has already been some financial support for reindeer herders in the context of climate change. There, the right to herd reindeer is held by the members of the so-called Sami Villages.³³ A Sami Village (*sameby*) is not a municipality but an administrative unit for the purpose of managing reindeer herding, and, while a *sameby* is not identical to the traditional Sámi concept of *siida*, there are parallels. Essentially, the *sameby* system imposed by the Swedish state has replaced the Sami people's traditional *siida* system.³⁴ Specific tracts of land are

31. Indigenous and Tribal Peoples Convention, art. 27, June 7, 1989, 1650 U.N.T.S. 28383, http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---normes/documents/publication/wcms_100897.pdf [<http://perma.cc/ELC3-RMUY>].

32. G.A. Res. 61/295, Declaration on the Rights of Indigenous Peoples (Sept. 13, 2007), http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf [<http://perma.cc/FS2Q-RRNP>].

33. See Tim Horstkotte, *Contested Landscapes: Social-Ecological Interactions Between Forestry and Reindeer Husbandry* (2013) (Ph.D. dissertation, Umeå University), <http://umu.diva-portal.org/smash/get/diva2:606665/FULLTEXT03.pdf> [<http://perma.cc/R7G6-52TN>].

34. YVES DELAPORTE, *LE VÊTEMENT LAPON: FORMES, FONCTIONS, ÉVOLUTION* 473 (Peeters 2004).

assigned to the *sameby*. Like indigenous peoples often are, the *sameby* will therefore be dependent on the local natural environment.

The diet of the reindeer changes with the seasons, from grass in the summer to lichens in winter.³⁵ To access the lichens, reindeer have to dig through the snow.³⁶ Normally, that is no problem on the winter pastures. However, sometimes the temperature rises above freezing and it rains on top of the snow; when temperatures go below freezing again, the aforementioned layer of ice forms on top of the snow, which makes it harder or even impossible for the reindeer to dig through.³⁷

When reindeer have to break the ice to access the lichen, it requires the reindeer to exert extra energy. Consequently, reindeer have to utilize to a greater extent the body fat reserves built up during summer grazing, which in turn reduces their fitness. This has a clear connection with the calf percentage of the following summer, [the] mortality rate of calves and the [birth] weight of the calves. In some years, this has caused massive loss of reindeer. One traditional adaptive strategy of the past has been to let reindeer spread wider and eat tree lichen on spruce and pine trees. However, with all the industries (forestry, mining, hydropower and wind power) competing for land used by

35. See Thrine M. Heggberget et al., *Reindeer (Rangifer Tarandus) and Climate Change: Importance of Winter Forage*, 22 RANGIFER 13 (2002); Berit Inga, *Reindeer (Rangifer Tarandus Tarandus) Feeding on Lichens and Mushrooms: Traditional Ecological Knowledge Among Reindeer-Herding Sami in Northern Sweden*, 22 RANGIFER 93 (2007); see also Samuel Roturier, *Sami Herders' Classification System of Reindeer Winter Pastures – A Contribution to Adapt Forest Management to Reindeer Herding in Northern Sweden*, 31 RANGIFER 61, 63 (2011).

36. Samuel Roturier & Marie Roué, *Of Forest, Snow and Lichen: Sami Reindeer Herders' Knowledge of Winter Pastures in Northern Sweden*, 258 FOREST ECOLOGY & MGMT. 1960, 1961 (2009); Jouko Kumpula et al., *The Use of Woodland Lichen Pastures by Reindeer in Winter with Easy Snow Conditions*, 57 ARCTIC 273, 273 (2004).

37. See *Extensive Reductions of Reindeer Lichen Heaths - Repeated Freeze-Thaw Cycles and Ground-Icing as Potential Key Factors: Summary*, FORSKNINGRÅDET, <https://www.forskningsradet.no/prosjektbanken/#!/project/171542/en> [<https://perma.cc/4RD4-ANTW>]. The importance of the condition of the snow can be derived from the amount of terminology the Saami use to describe it. See also Magga, *supra* note 22; N.J.C. Tyler et al., *Saami Reindeer Pastoralism Under Climate Change: Applying a Generalized Framework for Vulnerability Studies to a Sub-Arctic Socio-Ecological System*, 17 GLOBAL ENVTL. CHANGE 191, 194 (2007).

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the Saami herders, there are fewer pastures available, thus limiting the flexibility to move reindeer herds.³⁸

The thawing and freezing which makes the reindeers' natural food less accessible can also require reindeer herders to buy additional feed for the reindeer.³⁹ This in turn increases the cost of reindeer herding and makes it less profitable.

In fact, reindeer herders might quickly run up losses, depending on the additional costs that they have to bear just to maintain their herd. In the winters of 2006–2007 and 2007–2008, the situation had become so serious that the national Sámi parliament in Sweden even had to apply for money from the national disaster aid fund.⁴⁰ In response, the government of Sweden funded the acquisition of additional fodder for reindeer with the approximate equivalent of five million U.S.-dollars.⁴¹ Such subsidies are not sustainable in the long run, create dependency, and make reindeer herders vulnerable to policy changes.⁴² What might be a viable tool to assist in an emergency situation (the money paid in Sweden came from an emergency aid fund)⁴³ can lead to dependency if the same emergency is repeated again and again in the following years.

If climate change continued unabated, what was a one-time emergency will become the new normal scenario. Well-intentioned emergency aid can, therefore, have the negative long-term effect of not enabling indigenous reindeer herders to adapt to climate change based on their own knowledge, observation, and understanding of the terrain and thereby risks contributing to turning indigenous reindeer husbandry a non-sustainable land use.⁴⁴ A changing climate means changing weather patterns and

38. Stoyanova, *supra* note 15, at 293.

39. See Maria Furberg et al., *Facing the Limit of Resilience: Perceptions of Climate Change Among Reindeer Herding Sami in Sweden*, 4 GLOBAL HEALTH ACTION (2011), <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3204920/pdf/GHA-4-8417.pdf> [<http://perma.cc/6XL4-TDWB>].

40. Stoyanova, *supra* note 15, at 294.

41. *Id.*

42. *Id.*

43. *Id.*

44. See generally Stefan Gruber, *The Impact of Climate Change on Cultural Heritage Sites: Environmental Law and Adaptation*, 2 CARBON & CLIMATE L. REV. 209 (2011). In fact, in this situation, the land should have to suffer less from unsustainable use.

an increased likelihood of such events.⁴⁵ This adds to the already problematic situation as already “[i]n the last 50 years, around 25 per cent of the traditional grazing lands of the . . . Barents Region have been lost due to development of roads, power lines, dammed lakes and rivers and building of recreational cabins.”⁴⁶ In Norway’s Finnmark province, the number is around thirty-five percent.⁴⁷ Such a “continued loss of grazing land will constrain reindeer husbandry practices and make the livelihood less capable of handling the future challenges such as climate change,”⁴⁸ and, “[u]nless a no-net loss of reindeer grazing ranges is implemented, continued piecemeal development will seriously threaten the entire platform upon which reindeer herding is based.”⁴⁹ In the long run, the way reindeer husbandry is conducted sustainably will have to adapt⁵⁰ to a rapidly changing environment, as in the future:

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 Higher temperatures and increased precipitation can result in much worse insect plagues and the spread of new

45. Cf. EIRA ET AL., *supra* note 8, at 1.

46. Stoyanova, *supra* note 15, at 292.

47. *Id.*

48. *Id.* (quoting INGUN I. VISTNES ET AL., INT’L CTR. FOR REINDEER HUSBANDRY, REINDEER HUSBANDRY AND BARENTS 2030: IMPACTS OF FUTURE PETROLEUM DEVELOPMENT ON REINDEER HUSBANDRY IN THE BARENTS REGION 5, http://www.grida.no/files/publications/reindeer-husbandry-barents_lores.pdf [<http://perma.cc/4ZUX-8QWY>]).

49. *Id.* at 293; *see also* JUKKA KÄYHKÖ ET AL., NORDIC CENTRE OF EXCELLENCE, THE CHANGING TUNDRA: CAUSES AND CONSEQUENCES, http://www.utu.fi/en/sites/tundra/publications/Documents/The_changing_tundra_causes_and_consequence.pdf [<http://perma.cc/2XJM-NYD5>]; UNITED NATIONS EDUC., SCI. & CULTURAL ORG., CLIMATE CHANGE IN THE CLASSROOM: DAY ONE: CLIMATE CHANGE LEARNING FOR SUSTAINABLE DEVELOPMENT 18, http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/CCESD/day-1/files/assets/common/downloads/kitlayout_Day1_educators.pdf [<http://perma.cc/L5NT-NH3V>].

50. Horstkotte, *supra* note 34, at 1; *cf.* Roturier & Roué, *supra* note 37 (discussing the interactions between Sámi reindeer herding and commercial forestry).

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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.⁵¹

III. WIND ENERGY AND REINDEER HERDING

Additionally, attempts to combat climate change can also have negative impacts on indigenous peoples. In 2014, the Kenyan government agreed to pay at least 100 million Kenyan Shilling to indigenous Maasai who had been displaced for the purpose of enabling geothermal energy projects.⁵² In the Nordic countries, we can also see a number of measures aiming at increasing the percentage of energy from renewable sources be problematic. Hydro energy has long been an issue of contention between indigenous peoples and governments, as can be seen in the case of the longstanding indigenous protests against the Belo Monte Dam project in Brazil⁵³ and in the case of the Alta Dam in Norway.⁵⁴

In recent years, wind energy has begun to play a role on a large scale. While the usefulness of wind energy is well proven,⁵⁵ there is often a “not in my backyard” attitude with regard to new wind energy installations.⁵⁶ Some countries, particularly

51. Stoyanova, *supra* note 16, at 293.

52. Macharia Mwangi & Kitavi Mutua, *Evicted Families Paid Sh100m for Loss of Property*, DAILY NATION, (Sept. 21, 2014), <http://www.nation.co.ke/counties/-Evicted-families-paid-Sh100m-for-loss-of-property/-/1107872/2460886/-/format/xhtml/-/few2r7z/-/index.html> [<http://perma.cc/LW4V-C9NY>].

53. *Belo Monte Dam*, SURVIVAL, <http://www.survivalinternational.org/about/belo-monte-dam> [<http://perma.cc/28HN-WRLP>]; *Brazil's Belo Monte Dam: Sacrificing the Amazon and Its Peoples for Dirty Energy*, AMAZON WATCH, <http://amazonwatch.org/work/belo-monte-dam> [<http://perma.cc/5S65-ETJR>].

54. William Lawrence, *Saami and Norwegians Protest Construction of Alta Dam, Norway, 1979–1981*, GLOBAL NONVIOLENT ACTION DATABASE (Jan. 30, 2011), <http://nvdatabase.swarthmore.edu/content/saami-and-norwegians-protest-construction-alta-dam-norway-1979-1981> [<http://perma.cc/WE6K-6NMX>].

55. *E.g.*, *Benefits of Renewable Energy Use*, UNION OF CONCERNED SCIENTISTS, http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/public-benefits-of-renewable.html#.VGFFV4dK8o4 [<http://perma.cc/M6CQ-DSKG>].

56. *E.g.*, Lisa Curtis, *'Not in My Backyard' Attitude Ruins Wind Power Prospects*, PIONEER (Nov. 5, 2009), <http://whitmanpioneer.com/opinion/>

Denmark, Germany, and Great Britain, are investing heavily in offshore wind energy.⁵⁷ Elsewhere, the solution has been to choose locations in thinly settled areas. However, a low population density does not mean an absence of population. In the North, it will be the reindeer herders who will suffer from an increase in the number of wind energy installations.

While there are a number of different studies on the effect of the construction of wind energy installations on the behavior of reindeer,⁵⁸ and it appears that more research is required before a complete picture becomes available, it appears that at least female reindeer who are accompanied by their calves intentionally avoid areas with wind energy installations,⁵⁹ at times by several kilometers.⁶⁰ Given that many of these installations are over 100 meters high, some as high as 160 or 180 meters, that the rotors throw quickly moving shadows over the land and in the far North, the low sun makes for very long shadows. What is an annoyance for humans positively scares young reindeers and leave the mother animals no choice but to avoid these areas. Every wind energy installation in reindeer grazing areas means several square miles of lost grazing areas for these animals.

In many countries, environmental concerns, such as the protection of migrating birds, are taken into account when

columnists/2009/11/05/not-in-my-backyard-attitude-ruins-wind-power-prospects/
[<http://perma.cc/7C2S-DRBG>].

57. Richard Green & Nicholas Vasilakos, *The Economics of Offshore Wind*, IMPERIAL COLLEGE, <http://spiral.imperial.ac.uk/bitstream/10044/1/10426/2/Economics%20of%20Offshore%20Wind%20accepted%20version.pdf> [<http://perma.cc/EA7G-FN88>].

58. *E.g.*, Jonathan E. Colman et al., *Wind Power Plants and Reindeer Feeding Behavior, Movements and Area Use*, in BOOK OF ABSTRACTS: CONFERENCE ON WIND POWER AND ENVIRONMENTAL IMPACTS 42 (Naturvårdsverket ed., 2013), <http://www.naturvardsverket.se/Documents/publikationer6400/978-91-620-6546-1.pdf?pid=6332> [<http://perma.cc/3EQQ-4FCP>]; Kjetil Flydal et al., *Effects of Wind Turbines on are Use and Behavior of Semi-Domestic Reindeers in Enclosures*, 24 RANGIFER 55, 56 (2004), <http://septentrio.uit.no/index.php/rangifer/article/viewFile/301/282> [<http://perma.cc/4FB8-CP5R>].

59. See Flydal et al., *supra* note 58, at 57.

60. U.S. ARMY ALASKA, TRANSFORMATION ENVIRONMENTAL IMPACT STATEMENT app. at F-12 (2004), <http://www.jber.af.mil/shared/media/document/AFD-111121-087.pdf> [<http://perma.cc/4KU6-TNMQ>]. See generally Pernille S. Bøving & Eric Post, *Vigilance and Foraging Behaviour of Female Caribou in Relation to Rredation Risk*, 17 RANGIFER 55 (1997).

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designating areas for wind energy. Reindeer grazing grounds not only have an environmental but also a cultural as well as an economic role. Even more, the users of such areas have specific interests, which are to be protected legally. Therefore, any environmental and social impact assessment will have to take the effect of wind energy installations on female reindeer and calves into account.

For landowners, the possibility to sell or rent land for a long term can be the most effective use of land. Often, reindeer herders only have usage rights but do not own the land they use. This is particularly problematic. Landownership and land use rights of indigenous groups is often a highly problematic issue. Because territory is one of the defining elements of statehood, States generally are very reluctant to risk losing control over their territory to an indigenous group. After all, group ownership could lead to claims for autonomy or even independence.

The international law concept of the right of every people to self-determination could be understood as giving every people a right to its own state.⁶¹ As the often-cited Quebec decision, *Reference re Secession of Quebec*, indicates, this is not necessarily the case.⁶² After all, states also enjoy the right to territorial integrity.⁶³ *Quebec* shows that the principle of territorial integrity can only be trumped by claims to self-determination in extreme cases. But more often, land right conflicts are already important on a local level. These local issues may remain local; at times they can also become relevant nationally and even receive international attention. Often, such conflicts are not necessarily about exclusive property in the private law sense of the term.

IV. INDIGENOUS RIGHTS

As the example of reindeer herding shows, often it is not complete ownership but only the possibility to use a specific area

61. Cf. CHRISTOPHER C. JOYNER, *INTERNATIONAL LAW IN THE 21ST CENTURY: RULES FOR GLOBAL GOVERNANCE* 46 (Rowman & Littlefield, 2005) (arguing that the right of self-determination is often misunderstood as a right of a people to establish their own state).

62. *Reference re Secession of Quebec*, [1998] 2 S.C.R. 217, 221 (Can.), <http://scc-csc.lexum.com/scc-csc/scc-csc/en/item/1643/index.do> [<http://perma.cc/4BVA-89EV>].

63. See JOYNER, *supra* note 61, at 47.

of land, which is of importance for an indigenous group. In the case *Länsman et al. v. Finland*, the Human Rights Committee (HRC) found no violation of Article 27 ICCPR in a case involving loss of reindeer herding land,⁶⁴ not on principle but based on the conclusion that the impact on reindeer herding was small and that the indigenous livelihood was not threatened *per se*.⁶⁵ The HRC also highlighted that allowing non-indigenous persons to engage in an indigenous form of livelihood, in this case reindeer herding, may negatively affect indigenous peoples,⁶⁶ and has also demonstrated interest in the Sámi traditional means of subsistence in Finland—particularly reindeer breeding—and has asked whether the divisions of lands in private and public endanger their traditional culture, way of life, and, hence, their identity.⁶⁷ This view is reinforced by Article 14 (1) ILO 169⁶⁸ as well as by the United Nations Declaration on the Rights of Indigenous Peoples⁶⁹ (UNDRIP).⁷⁰ States that, like Norway, have ratified ILO 169 must protect indigenous rights, especially if indigenous ancestral homelands are also used by non-indigenous persons.⁷¹ While Norwegian courts have recognized customary Sámi land use rules in several cases,⁷² including the landmark *Selbu* case,⁷³ “[t]he [UN Committee on Economic, Social and Cultural Rights] urges [Norway] to ensure that the Finnmark

64. Ilmari LLmari et al. v. Finland, Communication No. 511/1992, Human Rights Committee [Human Rights Comm.], ¶ 7.2 (Oct. 14, 1993), <http://www1.umn.edu/humanrts/undocs/html/vws511.htm> [<http://perma.cc/W73M-65GS>].

65. *Id.* ¶¶ 7.9, 7.13.

66. *See id.* ¶ 8.5.

67. ALEXANDRA XANTHAKI, *INDIGENOUS RIGHTS AND UNITED NATIONS STANDARDS: SELF-DETERMINATION, CULTURE AND LAND* 257 (Cambridge Univ. Press, 1st ed. 2007).

68. *Id.*; *see also* Gonzalo Aguilar Cavallo, *Pascua Lama, Human Rights, and Indigenous Peoples: A Chilean Case Through the Lens of International Law*, 5 GÖTTINGEN J. INT’L L. 215, 226 (2013) (Ger.).

69. G.A. Res. 61/295, *supra* note 32.

70. *See* XANTHAKI, *supra* note 67, at 257.

71. *See id.*

72. *See* Øyvand Ravna, *The Fulfilment of Norway’s International Legal Obligations to the Sámi Assessed by Protection of Rights to Lands, Waters and Natural Resources* 21 INT’L J. ON MINORITY & GROUP RTS. 297, 298 (2014); Øyvand Ravna, *The Legal Protection of the Rights and Culture of Indigenous Sámi People in Norway*, 11 J. SIBERIAN FED. U., HUMAN. & SOC. SCI. 1575, 1587 (2013).

73. *Sirum v. Essand Reindeer Pasturing Dist.*, Rt. 2001 s. 769 (Nor.).

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Act . . . gives due regard to the rights of the Sami people to participate in the management and control of natural resources in the county of Finnmark,”⁷⁴ which is home to many indigenous Sámi people as well as ethnic Norwegians.

The rights of indigenous peoples, however, are not limited to participation in decision-making. Rather, they not only have a right to “use” and “own” but also to “control” and “develop” their resources.⁷⁵

Traditionally though, in cases concerning the negative effects of multinational companies on indigenous rights, the Committee has sidestepped the controversial issue of indigenous rights to natural resources and has used the “safer” right to traditional activities and the right of minorities to a culture. . . . Article 15 of ILO Convention No. 169 recognises that governments often retain some of the natural resources for their own exclusive ownership, but provides indigenous peoples with rights “to the natural resources pertaining to their lands. These rights include the right of these peoples to participate in the use, management and conservation of these resources.” Paragraph 2 notes that even when states own mineral resources, consultations before permitting exploitation or even exploration must take place. Thus, whilst recognising the principle of state sovereignty over resources, the provision also notes the need for prior consultation with indigenous peoples.⁷⁶

In the last years, there has been, and continues to be, a desire for an enforceable legal recognition of a human right to live in a healthy environment, although this view is not yet universal. This human right applies to everybody. Often this human right is at risk because of infrastructure projects like the ones mentioned

74. Comm. on Economic, Social and Cultural Rights, Consideration of Reps. Submitted by States Parties Under Articles 16 and 17 of the Covenant, ¶ 26, U.N. Doc. E/C.12/1/Add.109 (June 23, 2005), http://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=E%2FC.12%2F1%2FAdd.109&Lang=en [<http://perma.cc/JU6S-MSH9>].

75. G.A. Res. 61/295, *supra* note 32, art. 26(2); *see also* Katja Göcke, *Protection and Realization of Indigenous Peoples' Land Rights at the National and International Level*, 5 GÖTTINGEN J. INT'L L. 87, 128–29 (2013) (Ger.). Furthermore, the protection comprises the right of indigenous peoples to practice their customs and traditions. Sven Pfeiffer, *Rights of Indigenous Peoples and the International Drug Control Regime: The Case of Traditional Coca Leaf Chewing*, 5 GÖTTINGEN J. INT'L L. 287, 292 (2013) (Ger.).

76. Xanthaki, *supra* note 67, at 259–60.

earlier, the construction of a new airport or even large scale strip mining which leads to the destruction of entire villages. This raises the question of whether the right to live in a healthy environment might be restricted for the common good. After all, taking action against climate change serves the common good. In most legal systems, including international human rights systems, such as the European Convention on Human Rights, the right to live in a healthy environment can indeed be limited by the state for specific purposes, provided that the measures taken by the state are not disproportionate.

Often, such large-scale measures can lead to expropriations. International human rights treaties recognize a right to property. Article 1 of the 1st Protocol to the European Convention on Human Rights even recognizes a far-reaching right to “peaceful enjoyment of . . . possessions,” which can go beyond private law ownership.⁷⁷ However, while property and usage rights are protected, this protection is not unlimited. If we would just look at these articles, there would be little to stop the government from taking away lands which are used by indigenous peoples and using them for other purposes,⁷⁸ be it mining or the creation of wind energy installations, as long as the right to live in a healthy environment is not violated. Indigenous persons have the right to live in a healthy environment just like everybody else. In this case, however, this is not enough to ensure that indigenous groups can maintain their traditional ways to make a living.

V. CLIMATE CHANGE AND INDIGENOUS LIVELIHOODS

These developments also have an impact on the legal qualification of the effects of climate change on indigenous reindeer herding. Every square meter of grazing ground is one square meter where you cannot build roads or schools or engage in mining. Often, members of the dominant group in a society resent this because the protection of indigenous groups is not

77. EUROPEAN COURT OF HUMAN RIGHTS, EUROPEAN CONVENTION ON HUMAN RIGHTS 31 (2013).

78. See Giovana F. Teodoro & Ana Paula N. L. Garcia, *A Step Further on Traditional Peoples Human Rights: Unveiling the Key-Factor for the Protection of Communal Property*, 5 GÖTTINGEN J. INT’L L. 155, 158–66 (2013) (Ger.).

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perceived as protection or correction for past wrongs but simply as a form of special treatment, which benefits the minority over the interests of the majority. This is one reason why it is important to clarify the true role of indigenous rights—not to create additional rights but to protect those members of a society who, as a group, find themselves, in a vulnerable position. Unlike in other cases, the approach taken in the context of indigenous rights is not one of paternalism. Rather, indigenous groups are to be included in the decision-making process. Instead of giving indigenous groups more rights, indigenous rights as a legal category aims at amplifying the voice of indigenous groups and at giving them a chance to be heard. This is particularly important in the context of activities, which have an impact on the land on which indigenous groups live.

Indigenous and non-indigenous reindeer herders are affected by climate change, but, while all reindeer herders can seek protection under general rules, the legal situation of indigenous reindeer herders under international human rights law is different due to Article 1, paragraph 2, sentence 2 of the ICCPR. This norm requires that indigenous peoples may not be deprived of their livelihood.⁷⁹ By engaging in activities which are detrimental to reindeer herding, such as the construction of infrastructure, states can run afoul of their obligations under Article 1, paragraph 2, sentence 2 of the ICCPR if such activities make it outright impossible for indigenous peoples to engage in traditional forms of livelihood.

VI. A RIGHT TO BE PROTECTED AGAINST CLIMATE CHANGE?

Yet, ICCPR Article 1, paragraph 2, sentence 2 provides that “[i]n no case may a people be deprived of its own means of subsistence.”⁸⁰ In the case of indigenous peoples that rely on reindeer herding as a source of food, this norm objectively prevents the state from taking action that makes reindeer herding de facto economically impossible, *i.e.* unsustainable. This obligation also has a positive dimension. Thus, the state is not

79. G.A. Res. 61/295, *supra* note 32, art. 2(2).

80. International Covenant on Civil and Political Rights, *supra* note 7, art. 1(2).

only required to refrain from actions which harm indigenous peoples but also the state has an obligation to take positive action when it is necessary to protect human rights against outside interference by non-state actors.

It could be argued that “subsistence” only refers to the access to self-produced food necessary for the survival of a people. This would not be sufficient to comply with Article 1, paragraph 2, sentence 2 of the ICCPR because ICCPR Article 1 has to be understood in light of ICCPR Article 27 and *vice versa*. Also, ICCPR Article 1 is identical to Article 1 of the International Covenant on Economic, Social and Cultural Rights (ICESCR).⁸¹ Legal certainty demands that both ICCPR Article 1 and ICESCR Article 1 are interpreted in parallel. ICESCR Article 11 includes a right to food.⁸² Were the term “subsistence” in ICESCR Article 1, paragraph 2, sentence 2 to be understood as only providing for food security, ICESCR Article 11 would have been superfluous prior to the entry into force of the Optional Protocol to the ICESCR in 2013.⁸³

Unlike the right to food, rights under ICESCR Article 1 and ICCPR Article 1 are said to not be justiciable.⁸⁴ If a narrow understanding of ICESCR Article 1 is maintained, it would follow that at the time the ICESCR was drafted, ICESCR Article 1, paragraph 2, sentence 2 would have been superfluous as a virtually identical obligation, albeit towards individuals or groups rather than peoples, and would have been incumbent on the state already under the right-to-food clause of ICESCR Article 11. This apparent duplication of rights has to be kept in mind when interpreting ICCPR Article 1, paragraph 2, sentence 2. The inclusion of the right to subsistence in the ICCPR, in addition to the ICESCR, shows that this right has not only an economic but also social and cultural rights dimensions. It therefore goes beyond the right to food. However, it would also be wrong to

81. *Compare id.* art. 1, with G.A. Res. 2200A (XXI), International Covenant on Economic, Social and Cultural Rights art. 1 (Dec. 16, 1966).

82. International Covenant on Economic, Social and Cultural Rights, *supra* note 81, art. 11; *see also* Committee on Economic, Social and Cultural Rights General Comment 12 U.N. Doc. E/C.12/1999/5 (1999).

83. *See* G.A. Res. 63/117, annex, Optional Protocol to the International Covenant on Economic, Social and Cultural Rights (Dec. 10, 2008).

84. *See* Kitok v. Sweden, Communication No. 197/1985, Human Rights Committee [H.R. Comm.], ¶ 6.3 (Mar. 25, 1988).

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assume that only activities which are required to ensure the survival of a people as a people are protected under this norm. Although it can be used for this purpose, ICCPR Article 1, paragraph 2, sentence 2 provides more than protection against genocide through famine crimes.⁸⁵

Climate change threatens not only the right to food, it also threatens traditional ways of life.⁸⁶ In light of ICCPR Article 27, it can be concluded that Article 1 paragraph 2 sentence 2 of the ICCPR protects peoples' traditional livelihoods. The state must not create, nor must it allow to come into existence or to continue, a situation in which traditional livelihoods are no longer sustainable. This might explain also the decision by some states to allow the hunting of whales by indigenous peoples, despite the general ban on whaling. Whether this human rights consideration actually justifies large-scale indigenous whaling is questionable, given that the ban on whaling in international law is nearly universal, which raises serious hierarchical questions. While the *lex lata* does not include a legal equivalence between humans and animals, whaling is an exceptional issue. While the right to life of a human being is to be protected at all times, even if it means the death of a protected animal if no other source of food is available, the legal status of marine mammals is influenced by the level of endangerment (after all, even the International Whaling Commission allows indigenous subsistence whaling as long as the survival of the hunted species is not threatened as such).⁸⁷ The legal status of marine mammals is also derived from their moral status, which in turn is based on species-specific (*i.e.*, not necessarily individual) intelligence, which should lead to individual protection of all members of the species rather than protection of the species as such. In the context of the right to protection of subsistence, the example of indigenous whaling highlights the relative importance that has been assigned to this issue by states.

85. See David Marcus, *Famine Crimes in International Law*, 97 AM. J. INT'L L. 245, 248–50 (2003) (arguing the ICESCR can support criminalization of famine).

86. SIOBHAN MCINERNEY-LANKFORD ET AL., *HUMAN RIGHTS AND CLIMATE CHANGE: A REVIEW OF THE INTERNATIONAL LEGAL DIMENSIONS* 14 (World Bank Grp ed., 1st ed., 2011).

87. *Aboriginal Subsistence Whaling*, INT'L WHALING COMM'N, <http://iwc.int/aboriginal> [<http://perma.cc/NVK8-4KPR>].

As reindeer herding is far less likely to violate international conservation standards than whaling, it can be argued that indigenous reindeer herding as a traditional livelihood enjoys a far-reaching protection as well. Therefore, the state has an obligation to protect indigenous reindeer herders' activities. This can include obligations on the part of the state to refrain from development and infrastructure projects that take up land which has long been used for reindeer herding or which can provide barriers for reindeers. One example can be the construction of roads or railways that intersect with the seasonal migratory routes of reindeer in Sweden. The obligation under ICCPR Article 1, paragraph 2, sentence 2 might even lead to limiting reindeer herding to indigenous peoples (a measure which could be possible in Finland) so as to reduce competition which could render herding unprofitable. The latter possibility, though, raises questions concerning the relationship between indigenous rights and domestic and EU competition law, a field that will require more research in the future.

While the rights which are contained in Article 1 of the ICCPR cannot be claimed under the Optional Protocol, which has been adopted in order to facilitate the enforcement of the ICCPR,⁸⁸ there is an objective duty on the part of states which are parties to the ICCPR to ensure that reindeer herding by indigenous peoples remains possible in a sustainable manner. All Arctic states are parties to the ICCPR. Like elsewhere, the full compliance with these human rights, including, if necessary, the compensation for expropriation, can provide a contribution to safeguarding the rights of members of indigenous groups in the Arctic. However, for indigenous peoples in the Arctic, which already today suffer from the effects of climate change, the ICCPR provides more than individual human rights: it provides an objective obligation on the part of the state to take positive action to safeguard indigenous livelihoods. Unlike in the case of the ICESCR,⁸⁹ this obligation under Article 1, paragraph 2,

88. G.A. Res. 2200A (XXI), Optional Protocol to the International Covenant on Civil and Political Rights (Dec. 16, 1966).

89. "Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, *to the maximum of its available resources*, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption

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sentence 2 of the ICCPR is not dependent on the state's ability to take action. It is also not an obligation that can be claimed to disappear due to changed climatic or environmental conditions. Article 1, paragraph 2, sentence 2 of the ICCPR imposes an absolute obligation on the state to ensure traditional livelihoods of indigenous peoples. This also means that reindeer herding by indigenous herders must remain a livelihood, which in turn means that it has to remain sustainable and profitable in the long run. States therefore have an obligation to create the conditions under which this remains possible. How states do so is left to them, although a simple way would be to limit or reduce other land uses.

This brings us to the political dimension of these problems, and to the limits of this research project: climate change might provide short term benefits for agriculture or forestry, but indigenous economic activities, while usually imbued with a certain degree of resilience, are impacted negatively by climate change due to the close dependency on the local natural environment. While some members of the dominant society in the Arctic countries might perceive climate change as a possibility for more economic development, indigenous peoples are likely to see climate change as a threat to their long-established ways of life.

VII. CONCLUSIONS

While some of the problems, which have been outlined here, may be new, what is necessary are not merely new rules (although an international customary law rule requiring greater indigenous involvement seems to be emerging) but rather the full realization of existing human rights. International human rights law has been developed to an extent that, if fully respected, can, if not always then at least often, effectively protect human rights also under changing conditions. Article 1, paragraph 2, sentence 2 of the ICCPR provides a safeguard for indigenous peoples against direct and, in particular, indirect effects of climate change to traditional livelihoods. In the Arctic context, this norm obliges states to ensure that reindeer herding will remain not only

of legislative measures.” G.A. Res. 2200A (XXI), *supra* note 81, art. 2(1) (emphasis added).

possible in theory but also a practically relevant, sustainable, source of income for indigenous peoples.

Livestock-related challenges caused by climate change may also affect non-indigenous herders, but it is indigenous peoples who enjoy a particular protection of their way of life under Article 27 of the International Covenant on Civil and Political Rights as well as under the common Article 1 of that treaty and the International Covenant on Economic, Social and Cultural Rights. While the Arctic is already experiencing significant climate change today, indigenous peoples elsewhere are affected as well, for example the Navajo nation in the United States.⁹⁰ Experiences gained in the context of reindeer herding might also be useful for future claims by indigenous peoples elsewhere.

90. *See, e.g.*, JULIE NANIA ET AL., CONSIDERATIONS FOR CLIMATE CHANGE AND VARIABILITY ADAPTATION ON THE NAVAJO NATION (2014).