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## Death by a Thousand Cuts? Green Tech, Traditional Knowledge, and Genocide

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# Death by a Thousand Cuts? Green Tech, Traditional Knowledge, and Genocide

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## Introduction<sup>1</sup>

The current international focus on the environment, climate change, and our oceans has ushered in an urgency in thinking about “green tech,” which is technology that can respond to environmental threats (such as carbon emissions) and generate “clean” energy. Hydropower, solar power, and wind power are different kinds of green tech that has found a new fan base given the current push to offset emissions. These particular technologies are mature compared to newer technologies such as wave power.<sup>2</sup>

This article explores the destruction that has been left in the wake of green tech initiatives particularly on the lives of Indigenous Peoples (hereafter referred to as Peoples). Can green tech be considered a benign solution to environmental problems considering what its implementation requires and the horrific impact it has on Peoples? To answer this question the author will focus on the destruction taking place in the *Sápmi* or *Sámi eanan*, the traditional homeland of the Sámi Peoples. In addition to the persecution the Sámi have and continue to face over several decades, the author will focus on green tech and how it destroys knowledge systems like Traditional Ecological Knowledge (TEK), often considered a subset of Traditional Knowledge. TEK is passed down through generations and is a deep-rooted knowledge system often specific to Indigenous and Ethnic Minority Peoples and the continuation of their societies. The author concludes that the destruction of traditional homelands, such as the Sápmi along with the elimination of TEK, should be appropriately considered among the acts which constitute genocide. Green tech, cloaked as a sustainable solution to protect the environment, is actually another manner and method in which to destroy Peoples. Therefore, the elimination of Traditional Knowledge and its subsets must be considered when considering the *actus reus* of the crime of genocide. The author concludes that in order to prevent the further annihilation of Peoples, a specialized “Warning Signs” framework for genocide should be considered.

## TEK: Defined and Practiced

### *The Contours of TEK*

Traditional Knowledge has been defined by the international community as “the knowledge, innovations and practices of indigenous and local communities around the world.”<sup>3</sup> A subset of Traditional Knowledge is TEK, which is “the knowledge base acquired by indigenous and local

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<sup>1</sup> The author would like to note that she is not part of, nor does she work for the Sámi Peoples. Since the Sámi were not consulted regarding the writing of this article and its conclusions, it is entirely probable that the Sámi and other Indigenous Peoples mentioned here would not reach the same conclusions. All resources used to write this article are open source. Further, the author has made a concerted effort to use as primary sources direct from the communities impacted and Indigenous scholars as they are the knowledge holders. The author thanks and honors the leaders and academics who are from the Sámi communities, and academics from different Indigenous communities who are cited within this article. The author encourages anyone who wants to learn more about these issues to contact the communities in question.

<sup>2</sup> Dave Levitan, “Why Wave Power Has Lagged Far Behind as Energy Source,” *Yale Environment* 360, April 28, 2014, accessed June 4, 2022, [https://e360.yale.edu/features/why\\_wave\\_power\\_has\\_lagged\\_far\\_behind\\_as\\_energy\\_source](https://e360.yale.edu/features/why_wave_power_has_lagged_far_behind_as_energy_source).

<sup>3</sup> “Introduction: Traditional Knowledge and the Convention on Biological Diversity,” *Convention on Biological Diversity*, October 19, 2021, accessed June 4, 2022, <https://www.cbd.int/traditional/intro.shtml>.

peoples over many hundreds of years through direct contact with the environment.”<sup>4</sup> Chief Robert Wavery of the Fox Lake Cree Nation states, “traditional ecological knowledge is based on mutual well-being and sharing.”<sup>5</sup> TEK is a culmination of holistic teachings and practices over thousands of years that is passed on through generations. Therefore, any attempt to simplify TEK or Traditional Knowledge systems is misguided as it is “evolving and living knowledge.”<sup>6</sup> TEK emphasizes a way of life.<sup>7</sup>

Historically, as colonialism spread, genocidal policies were employed against Peoples, in turn destroying Traditional Knowledge<sup>8</sup> and its subsets. Leanne Simpson of the Anishinaabeg Nation succinctly notes, “the forces of cultural genocide, colonization, and colonial policy perpetuated over the last several centuries by successive occupying settler governments is responsible for the current state of Indigenous Knowledge...”<sup>9</sup> Those who wished for the erasure of Indigenous Peoples benefited from attacking Traditional Knowledge as it became “a mechanism to annihilate Indigenous nations and assimilate Indigenous Peoples.”<sup>10</sup> A recent example is worth noting here. For the last few years, large numbers of wildfires have burned in California in the US.<sup>11</sup> When the European settlers arrived in North America, fires were seen as a “destructive force” to humans, whereas Tribal culture viewed fires and controlled burnings as a technology that could provide benefits. TEK was suppressed in favor of the European viewpoint.<sup>12</sup> “The main impediment to scientific acceptance of the wide impact of aboriginal burning arises from a lack of understanding of the cultural context in which it took place.”<sup>13</sup>

It is also important to remember that “the transmission of traditional knowledge among generations is a complex and fundamental process embedded within the deep socio-cultural structure.”<sup>14</sup> The passing of Traditional Knowledge and its subsets from one generation is critical as it is the “foundation of [I]ndigenous [P]eoples’ identities, cultural heritage,

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<sup>4</sup> James Bourque et al., “Preface,” in *Traditional Ecological Knowledge: Concepts and Cases*, ed. Julian T. Inglis (Ottawa: International Development Research Centre, 1993), vi; see also Kyle Powys Whyte, “On The Role of Traditional Ecological Knowledge as a Collaborative Concept: A Philosophical Study,” *Ecological Processes* 2 (2013), <https://doi.org/10.1186/2192-1709-2-7>.

<sup>5</sup> Robert Wavery, “International Workshop on Indigenous Knowledge and Community-Based Resource Management: Keynote Address,” in *Traditional Ecological Knowledge: Concepts and Cases*, ed. Julian T. Inglis (Ottawa: International Development Research Centre, 1993), 16.

<sup>6</sup> Elina Helander-Renvall and Inkeri Markkula, “On Transfer of Sámi Traditional Knowledge: Scientification, Traditionalization, Secrecy, and Equality,” in *Indigenous Peoples’ Cultural Heritage*, ed. Alexandra Xanthaki et al., 104–129 (Leiden: Brill Nijhoff, 2017). [https://doi.org/10.1163/9789004342194\\_006](https://doi.org/10.1163/9789004342194_006).

<sup>7</sup> For an excellent and brief discussion on Holistic Indigenous Cultures, see Duane Champagne, “Understanding Holistic Indigenous Cultures,” *Indian Country Today*, September 13, 2018, accessed June 4, 2022, <https://indiancountrytoday.com/archive/understanding-holistic-indigenous-cultures>; see also Rudolph Rýser, “Indigenous Peoples and Traditional Knowledge,” *Berkshire Encyclopedia of Sustainability* 5/10, Ecosystem Management and Sustainability (2011).

<sup>8</sup> Leanne Simpson, “Stories, Dreams, and Ceremonies: Anishinaabe Ways of Learning,” *Tribal College Journal of American Indian Higher Education* 11, no. 4 (May 15, 2000), accessed June 4, 2022, <https://tribalcollegejournal.org/stories-dreams-ceremonies-anishinaabe-ways-learning/>.

<sup>9</sup> Leanne R. Simpson, “Anticolonial Strategies for the Recovery and Maintenance of Indigenous Knowledge,” *American Indian Quarterly* 28, no. 3/4 (2004), 375, <http://www.jstor.org/stable/4138923>.

<sup>10</sup> *Ibid.*, 377.

<sup>11</sup> Gabrielle Canon, “Big Sur Fire: Hundreds of Firefighters Battle Blaze Raging in California,” *Guardian*, June 22, 2021, accessed June 4, 2022, <https://www.theguardian.com/us-news/2021/jun/21/big-sur-wildfire-willow-fire>; see also Fulvio Mazzocchi, “Western Science and Traditional Knowledge: Despite Their Variations, Different Forms of Knowledge Can Learn From Each Other,” *EMBO Reports* 7, no. 5 (2006), 463–466, <https://doi.org/10.1038/sj.embor.7400693>.

<sup>12</sup> Robin Wall Kimmerer and Frank Kanawha Lake, “The Role of Indigenous Burning in Land Management,” *Journal of Forestry* 99, no. 11 (November 2001), 36, <https://doi.org/10.1093/jof/99.11.36>.

<sup>13</sup> *Ibid.*, 38.

<sup>14</sup> Kenneth Ruddle, “The Transmission of Traditional Ecological Knowledge,” in *Traditional Ecological Knowledge: Concepts and Cases*, ed. Julian T. Inglis, 24 (Ottawa: International Development Research Centre, 1993).

civilizations, livelihoods and coping strategies over several centuries. Its promotion, protection, and preservation are fundamental for the sustainability of the livelihoods of [I]ndigenous [P]eoples, their resilience to human-made and natural disasters and the development of their communities.”<sup>15</sup>

#### *Traditional Knowledge Recognized, and Protected*

The international community, whether it be through regional summits or the United Nations, have memorialized and emphasized the importance of Traditional Knowledge. There are three Declarations and Agreements authored by Peoples which emphasize the connectivity between Traditional Knowledge and Peoples way of life. In 2009, the Anchorage Declaration called upon states to abandon green tech and to instead focus on empowering Indigenous communities.<sup>16</sup> In 2010, the Cochabamba Peoples Agreement<sup>17</sup> recognized the rights of nature and called upon responses to climate change to further incorporate in a “balanced and integral manner, measures regarding capacity building, production and consumption patterns, and other essential factors such as the acknowledging of the Rights of Mother Earth to establish harmony with nature.”<sup>18</sup> In 2018, the Managua Declaration emphasized similar principles and denounced “false solutions” such as geoengineering.<sup>19</sup>

States around the world have also given a nod to Traditional Knowledge in international instruments. For instance, and, although not explicitly, the importance of TEK makes an appearance in Recommendation 5 adopted by the International Union for Conservation of Nature (IUCN) Assembly in 1975. The recommendation, among other points, calls for:

1. That governments maintain and encourage traditional methods of living and customs which enable communities, both rural and urban, to live in harmony with their environment;
2. That educational systems be oriented to emphasize environmental and ecological principles and conservation objectives derived from local cultures and traditions, and that these principles and objectives be given wide publicity; [and]
6. That existing natural values be respected and integrated in the early planning stage of every urban or industrial development scheme, this requiring that ecological principles be taken as the basis for all planning.<sup>20</sup>

<sup>15</sup> See interview with Chandra Roy-Henriksen, Chief of the Secretariat of the UN Permanent Forum on Indigenous Issues. “Traditional Knowledge—An Answer to the Most Pressing Global Problems?,” *United Nations Department of Economic and Social Affairs (DESA) News*, April 22, 2019, accessed June 4, 2022, <https://www.un.org/development/desa/en/news/social/permanent-forum-on-indigenous-issues-2019.html>.

<sup>16</sup> Indigenous Peoples’ Global Summit on Climate Change, “The Anchorage Declaration,” April 24, 2009, accessed June 4, 2022, <http://unfccc.int/resource/docs/2009/smsn/ngo/168.pdf>.

<sup>17</sup> World People’s Conference on Climate Change and the Rights of Mother Earth, “Peoples Agreement,” (blog), April 22, 2010, accessed June 4, 2022, <https://pwccc.wordpress.com/support/>.

<sup>18</sup> Ibid.

<sup>19</sup> “Managua Declaration: From the Meeting of the Broadened International Collective on Environmental and Climate Justice,” *La Via Campesina*, August 27, 2018, accessed June 4, 2022, <https://viacampesina.org/en/managua-declaration-the-meeting-of-the-broadened-international-collective-on-environmental-and-climate-justice/>.

<sup>20</sup> International Union for Conservation of Nature (IUCN), “Recommendation 5, Protection of Traditional Ways of Life,” 12th IUCN General Assembly Meeting, Kinshasha, 1975, accessed June 4, 2022, [https://portals.iucn.org/library/sites/library/files/resrecfiles/GA\\_12\\_RES\\_005\\_Protection\\_of\\_Traditional\\_Ways\\_of\\_Li.pdf](https://portals.iucn.org/library/sites/library/files/resrecfiles/GA_12_RES_005_Protection_of_Traditional_Ways_of_Li.pdf).

Eventually TEK made an entrance into the international lexicon in the 1980s and was further incorporated into international instruments beginning with the 1989 International Labour Organization Indigenous and Tribal Peoples Convention, also known as C169.<sup>21</sup> Subsequently, TEK was highlighted in the 1992 Rio Declaration as Principle 22. In sum, Principle 22 states that Indigenous People have a “vital role in environmental management and development because of their knowledge and traditional practices.”<sup>22</sup> The broader category of Traditional Knowledge made its way into the 1992 Convention of Biological Diversity. The Working Groups of the Convention sought to incorporate Traditional Knowledge through implementation of Article 8(j) and Article 15.<sup>23</sup> The parties to the Convention on Biological Diversity specifically emphasized the importance of Traditional Knowledge as it is “considered a ‘cross-cutting’ issue that affects many aspects of biological diversity...”<sup>24</sup> Finally, the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) emphasizes that Indigenous Peoples have the “right to maintain, control, protect, and develop... Traditional Knowledge.”<sup>25</sup>

The incorporation of these knowledge systems into international instruments should not be interpreted to mean that this Knowledge is vigilantly protected by the international community. At best, the incorporation of Traditional Knowledge and TEK in some of these instruments highlights the awareness that State governments have regarding Traditional Knowledge systems. It also shows that Traditional Knowledge and its subsets appear to be reduced to and perceived as “tools” that can be used to favorably resolve environmental challenges, as opposed to a genuine understanding the complexity of these systems and how it is integrated into a Peoples’ way of life.

The author now turns her attention to the Sámi who suffer as a result of green tech projects which destroy the Sápmi. As this next section will highlight, “...the destruction of the environment is a colonial manifestation and a direct attack on Indigenous Knowledge and Indigenous nationhood.”<sup>26</sup> Following the discussion about the destruction of the Sápmi and TEK, the author will examine how these actions constitutes genocide, and moreover, how the protection of TEK and traditional homelands could prevent genocide from taking place.

### Exploring TEK and the Traditional Homeland

The Sámi are an ancient people whose original homeland is the Sápmi which spreads across the states of Russia, Finland, Norway, and Sweden. For the Sámi, inherited knowledge, or *árbediehtu* is the collective wisdom and skills of the Sámi people used to enhance their livelihood for centuries. It has been “passed down from generation to generation both orally and through work and practical experience. Through this continuity, the concept of *árbediehtu* ties the past, present and future together.”<sup>27</sup> Their knowledge of the region, which they have been an integral part of for so long and has formed their “systems of traditional knowledge,” have been under attack for a century.<sup>28</sup>

<sup>21</sup> International Labour Organization (ILO), *Convention 169–Indigenous and Tribal Peoples Convention 1989*.

<sup>22</sup> United Nations General Assembly, *Rio Declaration on Environment and Development*, Aug 12, 1992 (UN Doc. A/CONF/151/26 (Vol 1)), Principle 22.

<sup>23</sup> Convention on Biological Diversity, *Traditional Knowledge*.

<sup>24</sup> Ibid; see also Claudia Card, “Genocide and Social Death,” in “Feminist Philosophy and the Problem of Evil,” ed. Robin May Schott, special issue, *Hypatia* 18, no. 1 (Winter 2003), 63–79, accessed June 23, 2022, <https://www.jstor.org/stable/3811037>.

<sup>25</sup> United Nations Declaration on the Rights of Indigenous Peoples, Article 31; see also Erik Gómez-Baggethun et al., “Traditional Ecological Knowledge and Global Environmental Change: Research Findings and Policy Implications,” *Ecology and Society* 18, no. 4 (December 2013), accessed June 4, 2022, <http://www.jstor.org/stable/26269385>.

<sup>26</sup> Simpson, *Anticolonial Strategies*, 377.

<sup>27</sup> Helander-Renvall and Markkula, *On Transfer of Sámi Traditional Knowledge*, 104–105.

<sup>28</sup> Kaisu Mustonen and Tero Mustonen, *Drowning Reindeer, Drowning Homes: Indigenous Sámi and Hydroelectricity Development in Sompio, Finland* (s.l.: Snowchange Cooperative, 2010).

It is clear from Sámi history there has been a consistent struggle for protection of the Sápmi and their traditions, particularly reindeer herding and husbandry.<sup>29</sup> Due to the geographical spread of the Sápmi, the Sámi People face constant pressures. Historically, “the land of the [Sámi] is and has been of central importance to the colonizers, both strategically and politically, on account of its geographical situation, its natural resources, and its ice-free harbors.”<sup>30</sup> In the last few decades new pressures revolve around different green tech projects.<sup>31</sup>

Reindeer play a critical role in Sámi culture and life.<sup>32</sup> Reindeer are considered part of the “cosmology” of the Sámi.<sup>33</sup> Reindeer herding provides economic security and is an integral part of promoting the Sámi way of life. One Sámi reindeer herder noted that reindeer have been “key to helping the Sámi people survive Scandinavian and Russian governments’ forced-assimilation policies.”<sup>34</sup> The reindeer have been instrumental to maintaining and bringing back the Sámi language and culture.<sup>35</sup> Besides the sustenance that reindeer provide to the people, other parts of the reindeer are used to create products that express cultural traditions.<sup>36</sup> One example is *duodji* which is a traditional Sámi craft that uses reindeer “bones, sinews, skin, and fur.”<sup>37</sup>

The Sámi have faced different forms of persecution for being a nomadic people. They were often charged fees to use lands that were once theirs and have been victims of hate crimes as “farmers sometimes started forest fires to burn away the reindeer pasture around swamps where they gathered winter feed for their cattle.”<sup>38</sup> Prior to 1751, the reindeer herders used *siidas*, groups which had an area of land where reindeer could roam in their designated patch. “This system of managing reindeer and grazing provisions has worked well for centuries with the Sámi treating Norway, Sweden, Finland and Russia as one landmass.” But as the borders closed, the “reindeer and herders were moved from border regions, preventing reindeer from following their traditional migrations and halting trade and exchange that had sustained herders and settled populations for centuries.”<sup>39</sup>

Herding is regulated through the laws of each national government, thus creating restrictions on how Sámi reindeer herders operate.<sup>40</sup> The reindeer “must have as much

<sup>29</sup> Sámi Parliament and Sweden Ministry of Agriculture, Food and Consumer Affairs, *The Sámi—An Indigenous People in Sweden*, trans. Robert Crofts (Västerås: Edita Västra Aros, 2005), 12, accessed June 23, 2022, [http://elibrary.lt/resursai/Uzsienio%20leidiniai/Countries/Sweden/Agriculture/2005/ma2005\\_03.pdf](http://elibrary.lt/resursai/Uzsienio%20leidiniai/Countries/Sweden/Agriculture/2005/ma2005_03.pdf).

<sup>30</sup> Harald Gaski, “The Sami People: The ‘White Indians’ of Scandinavia,” *American Indian Culture and Research Journal* 17, no. 1 (January 1993), 115–128, accessed June 4, 2022, <https://doi.org/10.17953/aicr.17.1.6427j6g14h536v13>.

<sup>31</sup> Henry Minde, “Sami Land Rights in Norway: A Test Case for Indigenous Peoples,” *International Journal on Minority and Group Rights* 8, no. 2/3 (2001), 107–125. <http://www.jstor.org/stable/24675167>.

<sup>32</sup> The author notes that there is some scholarship that references the disadvantages that women face in the reindeer herding communities and national laws only make it harder for women to work in the industry. See Sámi Parliament and Sweden Ministry of Agriculture, Food and Consumer Affairs, *The Sámi*, 20–21. Citation first appeared in note 28.

<sup>33</sup> Robert Paine, “Dam a River, Damn a People? Saami (Lapp) Livelihood and the Alta/Kautokeino Hydro-Electric Project and the Norwegian Parliament” (Copenhagen: IWGIA, June 1982), 24, accessed June 4, 2022, [https://www.iwgia.org/images/publications/0102\\_45\\_Dam\\_a\\_river.pdf](https://www.iwgia.org/images/publications/0102_45_Dam_a_river.pdf).

<sup>34</sup> Rebecca Harris, “The Deer that Reigns,” *Cultural Survival Quarterly Magazine*, September 2007, accessed June 4, 2022, <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/deer-reigns>.

<sup>35</sup> Ibid.

<sup>36</sup> Stefan Kirchner, “Cross-Border Forms of Animal Use by Indigenous Peoples,” *American Journal of International Law (AJIL) Unbound* 111, (2017), 406 <https://www.jstor.org/stable/27003772>.

<sup>37</sup> Harris, *The Deer that Reigns*, 5.

<sup>38</sup> Sámi Parliament and Sweden Ministry of Agriculture, Food and Consumer Affairs, *The Sámi*, 3, 14. Citation first appeared in note 28.

<sup>39</sup> Iiona Kater, “Reindeer: Ancient Migration Routes Disrupted by Roads, Dams—and Now Wind Farms,” *Conversation*, February 8, 2021, accessed June 4, 2022, <https://theconversation.com/reindeer-ancient-migration-routes-disrupted-by-roads-dams-and-now-wind-farms-153941>.

<sup>40</sup> Kirchner, *Cross-Border*, 403.

undisturbed grazing as possible in summer to be able to grow and put on fat to survive the long winter.”<sup>41</sup> Further, “access to good winter grazing is essential to keep the reindeer alive, but summer grazing is key for enlarging a herd.”<sup>42</sup> Therefore, open space and terrain are critical elements in helping reindeer to flourish, but the status quo shows an alarming trend in the opposite direction.

Of course, it would be remiss of the author not to point out that climate change is negatively impacting reindeer populations and the Sápmi. “Even a change of a few degrees, like the current average rise of about 2.3 degrees Celsius across the Arctic since the 1970s, can greatly impact reindeer feeding patterns—and, with those, the Sámi’s economy.”<sup>43</sup> In recent years, climate change has forced herders to buy feed instead of allowing for grazing to occur.<sup>44</sup> Sámi elders have reported that they cannot trust “traditional weather reading skills” anymore due to the effects of climate change.<sup>45</sup>

The Sámi have faced many challenges in the Sápmi as a result of green tech, which has included but has not been limited to hydropower dams, wind farms, and solar geoengineering. All of these situations repeatedly show the destruction of the Sápmi and the dismissal of *árbediehtu* in favor of technologies that will render the Sámi way of life obsolete.<sup>46</sup>

### Green Energy Projects in the Sápmi

#### *Hydropower: Alta Dam (Norway)*

Hydropower is one of the most controversial green technologies that is built to generate clean energy but has deleterious impacts on Peoples.<sup>47</sup> The Alta Dam controversy is perhaps one of the stark examples where green tech has disrupted and contributed to the eradication of the Sámi way of life. As one scholar noted, “[t]he project was, in many ways, an extension of Norwegian modernist and development ideologies that had long defined hydropower projects both in Norway and abroad, as well as relegating Saami populations to politically marginal status.”<sup>48</sup> In 1970, Norway proposed a hydroelectric dam to be built on the Alta River, which runs through the reindeer herding grounds of the Sámi, and would submerge Masi, a Sámi

<sup>41</sup> Jesper Larsson and Eva-Lotta Päiviö Sjaunja, “Early Modern Reindeer Husbandry, Sami Economy, and Grazing Rights,” *International Journal of the Commons* 14, no. 1 (2020), 91–107. <https://www.jstor.org/stable/27016555>.

<sup>42</sup> *Ibid.*, 98.

<sup>43</sup> Mara Santilli, “These Indigenous Reindeer Herders are Fighting for the Right to their Ancestral Lands” *Marie Claire*, December 22, 2020, accessed June 23, 2022, <https://www.marieclaire.com/politics/a34977366/sami-women-reindeer-herders-ancestral-lands/>.

<sup>44</sup> Harris, *The Deer that Reigns*, 5.

<sup>45</sup> United Nations Economic and Social Council, *Study on the Impact of Climate Change Adaptation and Mitigation Measures on Reindeer Herding: Submitted by the Special Rapporteur*, February 12, 2010 (UN Doc. E/C.19/2010/15), para 36, accessed June 4, 2022, <https://www.un.org/esa/socdev/unpfii/documents/E.C.19.2010.15en.pdf>.

<sup>46</sup> Indigenous self-determination in discussions relating to environmental challenges is an appropriate and highly relevant topic. Given the complexity and history of self-determination the author does not explore it in this article. “As land and territory are central to indigenous peoples’ identity and culture, they especially claim the right of the group effectively to participate in decisions concerning the property and use of their homelands. As in the case of the other indigenous peoples, the claim of the Saami to be allowed to exercise control over their homeland has been the most contentious issue.” See Lukas H Meyer, “Transnational Autonomy: Responding to Historical Injustice in the Case of the Saami and Roma Peoples,” *International Journal on Minority and Group Rights* 8, no. 2/3 (2001), 263–301, <http://www.jstor.org/stable/24675173>.

<sup>47</sup> The author has argued previously that hydropower construction, its construction and impact may amount to crimes against humanity. See Regina M. Paulose, “Crouching Tiger, Hidden Dragon, Hydropower and Crimes against Humanity,” in *Green Crimes and International Criminal Law*, ed. Regina Paulose, (Wilmington: Vernon Press, 2021). The author has also questioned why the findings of the World Commission on Dams has been ignored. See also Regina M. Paulose, “Hydropower and Human Rights: Revisiting the World Commission on Dams Report,” *Indian Journal of Projects, Infrastructure and Energy Law*, December 17, 2021, accessed June 4, 2022, <https://ijpiel.com/index.php/2021/12/17/hydropower-and-human-rights-revisiting-the-world-commission-on-dams-report/>.

<sup>48</sup> Chad M. Briggs, “Science, Local Knowledge and Exclusionary Practices: Lessons from the Alta Dam Case,” *Norwegian Journal of Geography*, 60, no. 2 (2006), 149–160.



village which was recognized as a “cultural heritage area.”<sup>49</sup> Several protests followed the decision by Norway to construct the proposed dam. In 1974, the Parliament undertook an investigation into the proposed dam. The investigation was considered improper because it did not adequately assess the impact the dam would have on reindeer pastoralism.<sup>50</sup> In 1980, the government formed the Sámi Human Rights Commission to attempt to broker peace on the issues.<sup>51</sup> That same year, the Court of Appeals in Norway issued a decision supporting the construction of the dam; despite having acknowledged the impact the dam would have on Sámi livelihood, the Court ultimately appeared to dismiss the objections raised.<sup>52</sup> More protests continued off and on until 1982 when the Supreme Court ruled in favor of Norway and allowed construction of the Alta Dam to continue.<sup>53</sup>

Often overlooked when evaluating dam construction and the accompanying reservoirs is the amount of homeland that is taken from Peoples. “Land grabbing can occur both in physical removal, in changing cultural norms of land management, and in claiming rights to attributes like mineral, eminent domain, or even carbon rights.”<sup>54</sup> The construction of the Alta Dam and the elimination of grazing territory, or “land grabbing,” undermined the traditional ownership of the land. Some reindeer herders reported that they felt pressured to support the Alta project in order to prevent “endangering” the interests of other reindeer herders.<sup>55</sup> All of this, as with projects that had taken place in other parts of the Sápmi, had detrimental consequences for the reindeer. By the 1980s, this damage to the Sápmi was labeled “insurmountable.”<sup>56</sup> As of 2006, “the damage to reindeer, salmon and farming, and changes in local climate have occurred in accordance with ecological predictions made in the early 1980s.”<sup>57</sup> It must be emphasized that “major ecological disturbances such as hydroelectric development...have profound cultural impacts by obliterating reference points and actual resources.”<sup>58</sup>

The Alta Dam situation also highlights the dismissal of *árbediehtu*, as “scientific research was used selectively to support such goals but without ignoring the important contributions of local knowledge and scientists who opposed the project.”<sup>59</sup> Further, “the Norwegian government of the 1970s and 1980s did not consider local knowledge to be useful in its determinations of political goals.”<sup>60</sup> The Alta Dam should have served as a cautionary tale of “how exclusionary practices may only be taken so far. The perceived need to present policies as if they were justified by science, when in actuality the scientific knowledge was constrained and incomplete, created tension in the system.”<sup>61</sup>

### *The Hydropower Projects of Finland and Sweden*

<sup>49</sup> “Saami and Norwegians Protest Construction of Alta Dam, Norway, 1979–1981,” *Global Nonviolent Action Database* (website, n.d.), accessed June 28, 2021, <https://nvdatabase.swarthmore.edu/content/saami-and-norwegians-protest-construction-alta-dam-norway-1979-1981>.

<sup>50</sup> Paine, *Dam a River*, 47.

<sup>51</sup> Briggs, *Lessons from the Alta Dam Case*, 151.

<sup>52</sup> Paine, *Dam a River*, 58, 52.

<sup>53</sup> *Ibid.*, 58.

<sup>54</sup> Mariaelena Huambachano and Lauren Cooper, “Values, Knowledge, and Rights Shaping Land Use in the Peruvian Amazon: The Shimaa and Diamante Case Studies,” *Case Studies in the Environment* 4, no. 1 (2020), 1–14. <https://doi.org/10.1525/cse.2020.1234945.1>.

<sup>55</sup> Paine, *Dam a River*, 43.

<sup>56</sup> *Ibid.*, 25–46.

<sup>57</sup> Briggs, *Lessons from the Alta Dam Case*, 155.

<sup>58</sup> Wavey, *Knowledge and Community*, 13. First mentioned in note 5.

<sup>59</sup> Briggs, *Lessons from the Alta Dam Case*, 150.

<sup>60</sup> *Ibid.*, 151.

<sup>61</sup> *Ibid.*, 157.

Finland and Sweden have also pursued ambitious hydropower plans. In Finland, the Lokka and Porttipahta reservoirs—the largest in Europe—on the Kemijoki River destroyed the southern part of the Sápmi.<sup>62</sup> The construction of these reservoirs “resulted in system shifts in the whole ecological complex of the region.”<sup>63</sup> Reports indicate that the construction included “immense damages to the Sámi and their way of life. Reservoirs came on top of a highway, clear-cut forests and herbicides such as the “Agent Orange” which had been employed in the Vietnam War.”<sup>64</sup> Further, “the whole Indigenous governance structure of reindeer herding, *tokkakuntapaimennus*, was destroyed with the reservoirs.”<sup>65</sup> The construction of the dam and its reservoirs in the area did not take into account the perspectives of the local communities, and further “local people had no other possibilities to influence the process than through the sales of land or the juridical process.”<sup>66</sup> According to oral histories from Sámi in the area, forced assimilation practices already in practice were “sped up” as a result of the arrival of the reservoirs. “With the arrival of the reservoir the social networks that had been acting as cultural buffers and survival mechanisms until the late 1960s were torn apart.”<sup>67</sup>

When studying the reservoirs in Finland, Markku Laukkanen noted, “economical forces penetrate to areas where traditional livelihoods based on nature’s resources have great significance for the local population; it has become the basis of life, a necessity. This creates a conflict.”<sup>68</sup> Therefore, it is inevitable as resource scarcity increases in different areas and humanity continues to face climate change that these conflicts will increase.

Sweden’s hydroelectric thirst also caused damage to reindeer husbandry, land use, and culture.<sup>69</sup> Ola Utsi, a reindeer herder and handicrafts teacher in Sirges sameby (Sámi village in Sweden) summarized the impact of the Swedish projects:

They say that waterpower is environmentally friendly energy, but I say that stands for those who don’t live here. For those of us that live next to a big reservoir it isn’t environmentally friendly. It is inflicting damage. My way of living is damaged. My environment is damaged. My source of livelihood is damaged. You have to take another perspective. You cannot say that waterpower is green energy. It is a lie. It is green for some, but not for me. This point is easily forgotten.<sup>70</sup>

In 2009, Girjas, a Sámi village, filed suit against the Swedish government in state court for sole administrative rights for use over their land. The case eventually made it to the *Högsta domstolen* (Supreme Court) who decided in 2020 that “the village has the sole right to administer hunting and fishing rights based on ‘prescription from time.’”<sup>71</sup> The *Högsta domstolen* decision was a significant decision in favor of the Sámi, but how it will impact the reinforcement of land grabs for hydropower projects in Sweden remains to be seen.

<sup>62</sup> Mustonen and Mustonen, *Drowning Reindeer*, 47.

<sup>63</sup> *Ibid.*, 12.

<sup>64</sup> *Ibid.*, 35.

<sup>65</sup> *Ibid.*, 36.

<sup>66</sup> *Ibid.*, 40.

<sup>67</sup> *Ibid.*, 44.

<sup>68</sup> *Ibid.*, 19, citing Laukkanen.

<sup>69</sup> Rasmus Kløcker Larsen and Katarina Inga. “Sámi Lands and Hydroelectric Power in Sweden—What’s the Potential to Redress Harm and Injustice?” *Stockholm Environment Institute Headquarters*, February 20, 2020, accessed June 4, 2022, <https://www.sei.org/perspectives/Sámi-lands-and-hydroelectric-power-in-sweden-opportunities-to-redress-injustice/>.

<sup>70</sup> Mustonen and Mustonen, *Drowning Reindeer*, 65.

<sup>71</sup> Heidi A. Darvell, “Increased Hate Against Sweden’s Indigenous People,” *Organization for World Peace*, August 4, 2021, accessed June 4, 2022, <https://theowp.org/reports/increased-hate-against-swedens-indigenous-people/>.

*Wind Power: Death in the Air*

In an effort to promote sustainable solutions to climate change, the government of Norway decided to build wind farms to generate clean energy, allowing Norway to cut its CO<sub>2</sub> emissions. Norway has been awarding licenses to companies who are building wind farms in areas that are “vital” for reindeer pastoralists which include “migration routes and crucial pastures.”<sup>72</sup> In addition, the wind power farms will “disrupt key hunting and fishing areas” for the Sámi.<sup>73</sup>

In 2004, a report by the Norwegian Reindeer Husbandry Association stated that “wind power in areas with reindeer pastures were minimal,” and the report sought ways in which land use for both wind power and reindeer husbandry could “coexist.”<sup>74</sup> Unfortunately, in an updated report issued in 2020, the Association concluded that “wind power interventions in reindeer grazing land mean that reindeer herders no longer can continue like they have done for generations.”<sup>75</sup> The report supports this finding with studies that were completed a few years earlier and updated in 2020. Specifically, the report noted, “all the districts then still have problems due to wind power development and several have lost large grazing and operating areas. None of the districts say that the reindeer have been accustomed to the wind turbines.”<sup>76</sup> The reindeer must keep moving to find food but stay away from where they would normally graze because of the noise of the wind turbines.<sup>77</sup>

In Sweden, “large wind power plants are regarded as environmentally hazardous activities” and most applications are rejected because of reindeer husbandry.<sup>78</sup> Currently, Sweden has developed wind power on a larger scale than Norway. The Sámi in this area have stated the result of the wind farms “is much worse than they thought in advance.”<sup>79</sup>

It appears that others in the region have an issue with the resources being utilized for wind power farms. In fact, an unlikely alliance between oil and gas supporters and environmentalists has been created to oppose wind farms.<sup>80</sup> One could surmise that Norway learned some lessons from the 1970-1980 debacle of the Alta Dam, as there have also been reports that due to local opposition and varying interests, such as reindeer herding, that the wind power projects will be “limited” and “moderate” but will “not end.”<sup>81</sup>

It is clear that wind power has created another means to destroy the Sápmi. Wind power “is in a league of its own in this matter, executing pressure for a pace and scale of development by wind power companies and authorities that is without comparison

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<sup>72</sup> Piera Heaika Muotka, “The Saami Council Addresses UN Special Rapporteur Regarding Øyfjellet Wind AS,” Saami Council, September 18, 2020, accessed June 4, 2022, <https://www.saamicouncil.net/news-archive/the-saami-council-addresses-u-special-rapporteur-regarding-the-oyfjellet-wind>.

<sup>73</sup> Santilli, *Indigenous Reindeer Herders*, 15.

<sup>74</sup> Svein Lund et al., eds. “Wind Power or Reindeer Husbandry?” Thematic Report 3 (Motvind Norge and Naturvernforbundet i Ávjovárri, June 18, 2020), accessed June 4, 2022, <https://motvind.org/wp-content/uploads/2020/07/vindrein-eng-alt.pdf>.

<sup>75</sup> *Ibid.*, 24.

<sup>76</sup> *Ibid.*, 26.

<sup>77</sup> Kater, *Reindeer: Ancient Migration Routes*.

<sup>78</sup> Lund, *Wind Power*, 31.

<sup>79</sup> *Ibid.*, 32.

<sup>80</sup> Lars Taraldsen et al., “Norway Wind Farm Backlash Spans Political Spectrum,” *Bloomberg*, December 9, 2020, accessed June 4, 2022, [https://www.rigzone.com/news/wire/norway\\_wind\\_farm\\_backlash\\_spans\\_political\\_spectrum-09-dec-2020-164065-article/](https://www.rigzone.com/news/wire/norway_wind_farm_backlash_spans_political_spectrum-09-dec-2020-164065-article/).

<sup>81</sup> Nerijus Adomaitis, “Norway Will Slow Down Onshore Wind Power Developments,” *ArcticToday* (blog), June 19, 2020, accessed June 4, 2022, <https://www.arctictoday.com/norway-will-slow-down-onshore-wind-power-developments/>.

historically.”<sup>82</sup> Perhaps there is hope on the horizon for the Sámi. In October 2021, the Supreme Court of Norway ruled that the construction of wind turbines in the Fosen district was illegal and the wind farm licenses were invalid. The Court stated, “there was no question of a collision between environmental considerations and the reindeer owners’ right to cultural practice.”<sup>83</sup>

In these situations, involving wind farms, “there are many who have both practical experience and theoretical knowledge about reindeer husbandry, but they are not desired by the developers for reindeer husbandry impact assessments. Developers want people without special reindeer husbandry knowledge, with an apparent professional authority that can be used to provide conclusions that can justify intervention.”<sup>84</sup> Perhaps working with the Sámi and utilizing *árbediehtu* in these situations would have provided for holistic response.

#### *Solar Geoengineering (Sweden)*

In 2010, the Swedish Commission on Climate and Vulnerability, predicted “a risk of conflict regarding land use between reindeer herding infrastructure, mining, wind power, space operations, and military exercises.”<sup>85</sup> Despite this statement, Sweden continued to build wind farms in the Sápmi and in the last three years began to explore the idea of another planet cooling scheme intended to decrease the earth’s rapid warming.<sup>86</sup> Up until 2018, “solar geoengineering” was only done through computer models. Harvard University’s Project, Stratospheric Controlled Perturbation Experiment (SCoPEX) intends on launching the project in the skies and in different phases.<sup>87</sup> SCoPEX intends to spray particles into the air, which in turn cool the earth by reflecting sunlight back into space.<sup>88</sup> What kinds of material would be needed to make the spray particles effective is still being debated and determined.

Between 2018 and 2021, Swedish Space Corporation and Harvard joined together and determined that the first test flight would take place in Kiruna, Sweden.<sup>89</sup> The SCoPEX test flight was not intended to spray any particles according to researchers.<sup>90</sup> Regardless, the Sámi objected and petitioned to stop the experiment stating that it “entails risks of catastrophic consequences” and constitutes a “real moral hazard.”<sup>91</sup> The Sámi’s position makes sense given the circumstances already unfolding in Kiruna and throughout their history; Kiruna is home to controversial iron ore mines that have grown wider and closer to the city center of Kiruna every year. The plan by the Luossavaara-Kiirunavaara AB is to move the entire city.<sup>92</sup> Moreover, the

<sup>82</sup> Lund, *Wind Power*, 15. The wind turbines create environmental hazards, canceling out emissions goals. See Nora Buli, “Sweden’s Vattenfall to Stop Sending Wind Turbine Blades to Landfill,” *Reuters*, October 12, 2021, accessed June 4, 2022, <https://www.reuters.com/business/sustainable-business/swedens-vattenfall-stop-sending-wind-turbine-blades-landfill-2021-10-12>.

<sup>83</sup> “Norwegian Wind Farms Violate Rights of Sámi Reindeer Herders, Says Court,” *Euronews*, October 11, 2021, accessed June 4, 2022, <https://www.euronews.com/2021/10/11/norwegian-wind-farms-violate-rights-of-sami-reindeer-herders-says-court>.

<sup>84</sup> Lund, *Wind Power*, 19.

<sup>85</sup> UN Doc. E/C.19/2010/15, para. 41. Citation first appeared in note 45.

<sup>86</sup> Jeff Tollefson, “First Sun-Dimming Experiment Will Test a Way to Cool Earth.” *Nature* 563 (November 27, 2018), 613–615, accessed June 4, 2022, <https://www.nature.com/articles/d41586-018-07533-4>.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Natalie L. Kahn and Simon J. Levien, “SEAS Researchers Postpone Test Flight for Controversial Geoengineering Project to Block Sun,” *Harvard Crimson*, April 5, 2021, accessed June 4, 2022, <https://www.thecrimson.com/article/2021/4/5/seas-sun-blocking-test-flight-postponed/>.

<sup>90</sup> Ibid.

<sup>91</sup> Shannon Osaka, “Why A Landmark Experiment into Dimming the Sun Got Canceled,” *Grist*, April 8, 2021, accessed June 4, 2022, <https://grist.org/science/who-gets-to-decide-if-we-study-solar-geoengineering-after-the-scopex-project-canceled/>.

<sup>92</sup> Chris Michael, “‘Will I Have Existed?’ The Unprecedented Plan to Move an Arctic City,” *Guardian*, December 2, 2018, accessed June 4, 2022, <https://www.theguardian.com/cities/2018/dec/02/kiruna-swedish-arctic-town-had-to-move-reindeer-herders-in-the-way>.

town sits in the Sápmi and mining has frequently disrupted the reindeer herding. The mines have caused earthquakes<sup>93</sup> and contribute to Sweden's greenhouse gas emissions.<sup>94</sup> The Sámi have made it clear that these projects are not the solution to the problems posed by climate change and suggest to, "transform to zero carbon societies in harmony with nature."<sup>95</sup> Although the tests will not take place in Sweden at this time, SCoPEX is looking for a new area in the coming year.<sup>96</sup>

In 2021, the Sámi were also able to successfully defend themselves against the Arctic Ocean Rail. The project was intended to pass through Finland into Norway and thus through Sápmi.<sup>97</sup> Had the Council continued to pursue the project, it would have decimated reindeer herds.<sup>98</sup>

#### *Mineral Extraction for Green Cars (Russia)*

The northern part of Russia is rich in minerals, resources, and a diversity of Indigenous cultures; yet Russia only recognizes a small number of the Indigenous Minority Peoples in the country.<sup>99</sup> Russia abstained from adopting the UNDRIP in 2007.<sup>100</sup> Recently, Russia started a registry in order to track the identity of the Indigenous Peoples in the northern part of Russia, but it appears to have run into some challenges.<sup>101</sup>

It is reported that the smallest population of Sámi live in North Russia.<sup>102</sup> The Sámi in Russia face similar challenges to their counterparts in Sweden, Finland, and Norway in terms of the persecution of their people, language, and culture. A significant distinction between the populations is that there is no separate Sámi Parliament in Russia.<sup>103</sup> The Sámi in Russia mainly reside in the Murmansk, which is also referred to as the Kola Peninsula. The Sámi in North Russia face an "existential threat" due to climate change as their livelihoods are "intrinsically

<sup>93</sup> David Nikel, "Kiruna: A Mining Town on the Move in Northern Sweden," *Forbes*, March 23, 2021, accessed June 4, 2022, <https://www.forbes.com/sites/davidnikel/2021/03/23/kiruna-a-mining-town-on-the-move-in-northern-sweden/?sh=6513ea434080>.

<sup>94</sup> Simon Johnson, "Pulling Power: The Green Lure of Sweden's Industrial Far North," *Nasdaq*, May 31, 2021, accessed June 4, 2022, <https://www.nasdaq.com/articles/pulling-power%3A-the-green-lure-of-swedens-industrial-far-north-2021-05-31>. It should be noted that in February, protests ramped up in the Gallock region as a result of iron-ore mine. The UN has interjected and asked for the government not to allow the mining to proceed given the impact to the Sámi. See Johan Ahlander, "UN Advisers Urge Sweden to Stop Mine in Home of Indigenous Sami," *Reuters*, February 10, 2022, accessed June 4, 2022, <https://www.reuters.com/world/europe/un-advisers-urge-sweden-stop-mine-home-indigenous-sami-2022-02-10/>.

<sup>95</sup> Laurie Goering, "Sweden Rejects Pioneering Test of Solar Geoengineering Tech," *Reuters*, March 31, 2021, accessed June 4, 2022, <https://www.reuters.com/article/us-climate-change-geoengineering-sweden/sweden-rejects-pioneering-test-of-solar-geoengineering-tech-idUSKBN2BN35X>.

<sup>96</sup> Ibid.

<sup>97</sup> "Lapland Council Scraps Plans for Controversial Arctic Rail Line," *YLE News*, May 19, 2021, accessed June 4, 2022, [https://yle.fi/uutiset/osasto/news/lapland\\_council\\_scraps\\_plans\\_for\\_controversial\\_arctic\\_rail\\_line/11938427](https://yle.fi/uutiset/osasto/news/lapland_council_scraps_plans_for_controversial_arctic_rail_line/11938427).

<sup>98</sup> Tom Wall, "The Battle to Save Lapland: 'First, They Took the Religion. Now They Want to Build A Railroad,'" *Guardian*, February 23, 2019, accessed June 4, 2022, <https://www.theguardian.com/world/2019/feb/23/battle-save-lapland-want-to-build-railroad>.

<sup>99</sup> "The Indigenous World 2021: Russian Federation," *International Work Group for Indigenous Affairs (IWGIA)*, March 18, 2021, accessed June 4, 2022, <https://www.iwgia.org/en/russia/4246-iw-2021-russian-federation.html>.

<sup>100</sup> Ibid.

<sup>101</sup> Adam Goodman, trans., "They are No Longer Counted as Indigenous People," *Novaya Gazeta*, October 7, 2020, accessed June 4, 2022, <https://thebarentsobserver.com/en/indigenous-peoples/2020/10/they-are-no-longer-counted-indigenous-people>.

<sup>102</sup> Yekaterina Sinelschikova, "How the Disappearing Sámi People are Reviving Russian Lapland," *Russia Beyond*, November 21, 2019, accessed June 4, 2022, <https://www.rbth.com/history/331311-how-disappearing-s%3A1mi-people>.

<sup>103</sup> "Russia: Kola Saami Congress Held Amidst Massive State Pressure Authorities Push Back Against Saami Parliament," *International Work Group for Indigenous Affairs (IWGIA)*, November 28, 2014, accessed June 4, 2022, <https://www.iwgia.org/en/sapmi/2169-russia-kola-saami-congress-held-amidst-massive-sta.html>.

wedded” to the climate.<sup>104</sup> Among the visible impacts are “thinning reindeer herds, fish stocks, drying lakes, and forest fires.”<sup>105</sup> The Sámi are not guaranteed traditional hunting rights.<sup>106</sup> Further complicating problems for the Sámi and other Indigenous Peoples in the region is the Russian government’s interest to expand its presence in the region in order to exploit its resources and minerals. The registry, mentioned above, appears to have been created to aid this effort.<sup>107</sup>

Palladium, a precious metal that is used in electric cars, is mainly produced in Russia, South Africa, and Canada.<sup>108</sup> The largest area of palladium production in Russia is located in the Arctic area, both in Taymur Peninsula and Kola Peninsula. The largest producer is NorNickel or Norilsk Nickel, which was started in the 1930s, and is a privately owned company.<sup>109</sup> NorNickel has had the worst environmental track record in North Russia. NorNickel’s products have raised ecological concerns for years because of the large amount of sulfur dioxide (1,953,000 tons in 2019) emitted.<sup>110</sup> Murmansk gained a reputation for acid rain as a result of NorNickel’s output.<sup>111</sup> In 2020, a power plant of a subsidiary company of Norilsk Nickel, began leaking oil. It was reported that at least 21,000 tons of oil had contaminated the Ambarnaya river and surrounding area.<sup>112</sup> The contamination eventually reached the Arctic Ocean through Lake Pyasino and linked rivers,<sup>113</sup> and Russia began investigating the plant for criminal negligence.<sup>114</sup> Four years prior, in 2016, an accident caused by heavy rains led to the filtration dam of its plant to turn the Daldykan river, red.<sup>115</sup> The “mega polluter” has such an impact on Indigenous ways of life that the communities have collectively called upon US carmaker Tesla not to purchase mineral resources from the company for its electric cars.<sup>116</sup> Sámi activists have stated that the pollution has “poisoned” the Sámi soul because the nature is poisoned.<sup>117</sup>

<sup>104</sup> Michael Scollon, “At Risk: Russia’s Indigenous Peoples Sound Alarm on Loss of Arctic, Traditional Way of Life,” *Radio Free Europe*, November 28, 2020, accessed June 4, 2022, <https://www.rferl.org/a/russia-arctic-indigenous-peoples-losing-traditional-way-life-climate-change/30973726.html>.

<sup>105</sup> Ibid.

<sup>106</sup> Tatiana Britskaya, “Back to the Tundra,” *Novaya Gazeta*, December 4, 2019, accessed June 4, 2022, <https://novayagazeta.ru/articles/2019/12/04/82985-nazad-v-tundru>.

<sup>107</sup> Goodman, *No Longer Counted*.

<sup>108</sup> The Barents Observer, “Russia to Become World’s Top Palladium Producer After \$15Bln Arctic Investment,” *Moscow Times*, November 20, 2019, accessed June 4, 2022, <https://www.themoscowtimes.com/2019/11/20/russia-worlds-top-palladium-producer-15bln-arctic-investment-a68252>.

<sup>109</sup> Vera Shcherbina, “#AnswerUsElonMusk: Russia’s Indigenous Peoples Campaign Against Arctic Pollution,” *Global Voices*, October 16, 2020, accessed June 4, 2022, <https://globalvoices.org/2020/10/16/answeruselonmusk-russias-indigenous-peoples-campaign-against-arctic-pollution/>.

<sup>110</sup> Ibid.

<sup>111</sup> The Barents Observer, “Russia to Close Down Barents Region’s Biggest Air Polluter,” *Moscow Times*, November 27, 2020, accessed June 4, 2022, <https://www.themoscowtimes.com/2020/11/27/russia-to-close-down-barents-regions-biggest-air-polluter-a72167>.

<sup>112</sup> “Russian Arctic Oil Spill Pollutes Big Lake Near Norilsk,” *BBC*, June 9, 2020, accessed June 4, 2022, <https://www.bbc.com/news/world-europe-52977740>.

<sup>113</sup> Shcherbina, #AnswerUsElonMusk.

<sup>114</sup> BBC, *Russian Arctic Oil Spill*.

<sup>115</sup> “Russia’s Norilsk Nickel Admits ‘Red River’ Responsibility,” *BBC*, September 12, 2016, accessed June 4, 2022, <https://www.bbc.com/news/world-europe-37345105>.

<sup>116</sup> Maddie Stone, “Russian Indigenous Communities Are Begging Tesla Not to Get Its Nickel from This Major Polluter,” *Grist*, September 21, 2020, accessed June 4, 2022, <https://grist.org/justice/russian-indigenous-communities-are-begging-tesla-not-to-get-its-nickel-from-this-major-polluter/>.

<sup>117</sup> “A Plea to Swiss Banks from the Russian Arctic,” *Expatica*, June 17, 2021, accessed June 4, 2022, <https://www.expatica.com/ch/multinationals/sw-a-plea-to-swiss-banks-from-the-russian-arctic-214710/>.

These particular corporate-made environmental hazards, alongside climate change, exacerbate poor health conditions of Indigenous People in the area.<sup>118</sup> The Sámi have a 2.4 times higher death rate among other people in Murmansk.<sup>119</sup> Norwegian scientists have claimed that the closure of a local NorNickel plant has already brought great improvement to pollution indicators.<sup>120</sup> However, the damage to the Sámi people, their ability to graze on the tundra with reindeer, and, fish appear past the point of no return.

### **Traditional Homelands, Traditional Knowledge, and Genocide**

#### *Genocide and the Traditional Knowledge Factor*

One must consider the intentional act of destroying traditional homelands belonging to Peoples and the destruction of intricately woven Knowledge systems belonging to these groups as the commission of genocide. For Peoples, “these relationships are encoded in the structure of Indigenous languages and in Indigenous political and spiritual systems.”<sup>121</sup> Separating and minimizing acts of “environmental destruction” and the eradication of Traditional Knowledge may lend itself to assisting the perpetrator achieve the desired result of destroying a group in whole or in part. Further, legal experts in the genocide field should carefully consider why there is a reaction to always separate acts related to the environment from Peoples. For example, the destruction of the Sápmi in the contexts highlighted above should not be considered as anything but genocide considering the connection and importance the Sámi have to the Sápmi.<sup>122</sup>

As the late Judge Antonio Cassese, a leading jurist in international criminal law, sensibly pointed out, the Genocide Convention was based on compromise and since then, “international law has undergone significant transformation...Furthermore, it is even more difficult to understand why genocide can be carried out only through one of the enumerated acts, since there may be other acts that can be resorted to with a view to destroying one of the protected groups.”<sup>123</sup> Cassese articulated that the “rigidity” around genocide was being “softened” by the international court system.<sup>124</sup>

Raphael Lemkin, in his incomplete work, *History of Genocide*, references cases throughout three different historical time periods where he examines the genocidaire and the victim group utilizing the Genocide Convention.<sup>125</sup> One such case was the genocide of the Herero Peoples. The Herero were pastoralists who resided on their ancestral territory. They were dependent on large herds of cattle, both as a source of sustenance and the cattle were believed to belong to the ancestors of the Herero People and thus were considered sacred.<sup>126</sup> The Herero were forced to give up their lands to the German settlers, despite treaties that recognized

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<sup>118</sup> Aborigin Forum, “COVID-19 in Russia. The Impact on Indigenous Peoples’ Communities. UN Special Rapporteur on the Rights of Indigenous Peoples,” *Office of the High Commissioner for Human Rights*, July 2020, accessed June 4, 2022, <https://www.ohchr.org/Documents/Issues/IPeoples/SR/COVID-19/IndigenousCSOs/RUSSIA%20-%20Aborigin%20Forum%20position%20.docx>.

<sup>119</sup> “The Sámi,” *Barentsinfo.org* (website, n.d.), accessed August 11, 2021, <http://www.barentsinfo.org/barents-region/Indigenous-people/Sami>.

<sup>120</sup> “Norwegian Scientists Finally Find Good News from Norilsk Nickel,” *Modern Diplomacy*, April 12, 2021, accessed June 4, 2022, <https://moderndiplomacy.eu/2021/04/12/norwegian-scientists-finally-find-good-news-from-norilsk-nickel/>.

<sup>121</sup> Simpson, *Anticolonial Strategies*, 378.

<sup>122</sup> See Lauren J. Eichler, “Ecocide Is Genocide: Decolonizing the Definition of Genocide,” *Genocide Studies and Prevention* 14, no. 2 (2020), 104–121. The author does suggest however that not all Peoples have the same connection to their traditional homelands. Therefore, that distinction should be evaluated on a case-by-case basis.

<sup>123</sup> Antonio Cassese and Paola Gaeta, *Cassese’s International Criminal Law*, 3rd ed. (Oxford: Oxford University Press, 2013), 110.

<sup>124</sup> *Ibid.*

<sup>125</sup> Raphael Lemkin, *Lemkin on Genocide*, ed. Steven Leonard Jacobs (Lanham: Lexington Books, 2014).

<sup>126</sup> *Ibid.*, 267.

“strict equality of the two races.”<sup>127</sup> Lemkin utilized observations from those who lived in the area at the time. One particular writer stated that the Herero were “reduced to a state of slavery...they do not allow the Herero to own cattle or land except under conditions which make it next to impossible.”<sup>128</sup>

Although Lemkin does not examine Traditional Knowledge systems in this writing, Lemkin’s attention to the Herero matter emphasizes a point he makes earlier in his volume: “surgical operations on cultures and deliberate assignation of civilizations, *which are genocide*, have caused such drastic changes that they can be noticed and scientific accounts of their occurrences can be made.”<sup>129</sup> Today, the Herero still face the impacts of genocide. Their land has not been returned to them and the younger generations travel to obtain work. It is reported that Herero Elders are being asked to preserve their Traditional Knowledge in electronic tablets so that the next generation can learn the Herero way of life.<sup>130</sup>

The impact of genocide is far reaching. The destruction of the Sápmi and *árbediehtu* are actions that cannot be reversed once they are lost and should be examined as genocide. Using Lemkin’s words, the “surgical operation” destroying the Sápmi and *árbediehtu* would be the equivalent to removing a brain from a human and expecting it to function the way it would if it still had one.

#### *Preventing Genocide: Towards Specialized Warning Signs?*

It would be fruitful to consider that while the international community races to reach “carbon zero,” the situations involving the Sápmi and TEK no longer serve as a cautionary tale. There are many Peoples around the world who are suffering and will continue to suffer the same consequences as the Sámi because governments and corporations can use different means and methods to carry out unfinished business of persecution. Further, it is likely time to consider that Peoples need updated mechanisms which can assist in the prevention of genocide.

One starting point is re-assessing whether or not the United Nations Framework of Analysis for Atrocity Crimes (Framework) adequately reflects various forms of technology, as discussed in this article, green tech. It is not an overreach to suggest that the United Nations Atrocity Framework should consider—at a minimum—hydropower dams, given the World Commission on Dams report released in 2000. Moreover, the Framework should be updated to include the environment.<sup>131</sup> The United Nations should also consider whether or not the Framework currently operates in a fashion that would protect Peoples, given the considerations outlined in UNDRIP which the member states must pay heed to.

Another place that deserves some more attention are the warning signs of genocide. Dr. Gregory Stanton has indicated that there are 10 stages of genocide which are “predictable” and therefore, adequate prevention measures can stop genocide.<sup>132</sup> The 10 warning stages are classification, symbolization, discrimination, dehumanization, organization, polarization, preparation, persecution, extermination, and denial. While these 10 stages appear comprehensive, it is necessary to reconsider them in the context of Peoples, Traditional Knowledge, and Traditional Homelands. As we have seen with the Sámi, they have been through various stages of genocide up until present day.

<sup>127</sup> Ibid., 268.

<sup>128</sup> Ibid., 273.

<sup>129</sup> Ibid., 12.

<sup>130</sup> Mark Oppenheimer, “The Herero People of Erindiroukambe: Using Tablet PCs to Preserve Indigenous Knowledge,” *Ethnos Project*, June 21, 2012, accessed June 4, 2022, <https://www.ethnosproject.org/the-herero-people-of-erindiroukambe-using-tablet-pcs-to-preserve-indigenous-knowledge/>.

<sup>131</sup> United Nations, “Framework of Analysis for Atrocity Crimes” (New York: UN Office on Genocide Prevention and Responsibility to Protect, 2014), accessed June 4, 2022, [https://www.un.org/en/genocideprevention/documents/our-work/Doc.1\\_Framework\\_of\\_Analysis\\_for\\_Atrocity\\_Crimes\\_EN.pdf](https://www.un.org/en/genocideprevention/documents/our-work/Doc.1_Framework_of_Analysis_for_Atrocity_Crimes_EN.pdf). Emphasis added by author.

<sup>132</sup> Gregory H. Stanton, “The Ten Stages of Genocide,” *Genocide Watch*, 1996, accessed June 4, 2022, <https://www.genocidewatch.com/tenstages>.



None of the prevention systems are working to stop the destruction of the Sápmi. No matter how nuanced the genocide label may be (calling it cultural genocide, ecocide, etc.), all of this must be considered in order to stop the repeated cycles of destruction Peoples like the Sámi face.

### Conclusion

Traditional Knowledge carries significant importance to Peoples and this particular knowledge system is intimately tied with their Traditional Homelands. As the author has illustrated in this brief article, the Sámi in the Sápmi have a deep-rooted connection to their Homeland and utilize Traditional Knowledge. The Sámi, like all of us in the world, are also facing the pressures of climate change and, in addition, the pressures from governments and corporations, who are annihilating the Sápmi.

This article focuses on why the *actus reus* of genocide should be expanded and stay flexible to the needs of Peoples around the world. As the author has highlighted in this article, the acts that constitute genocide should be expanded to include destruction of Traditional Homelands and Traditional Knowledge and its subsets such as TEK because of its central importance to Peoples. States have an option to always extend across the aisle to work with Peoples to find common ground and holistic solutions instead of treating such systems of Knowledge hostile to their interests. Recent announcements by the United States government indicating that it will elevate Indigenous Traditional Ecological Knowledge into US policy, and the recent announcement of Truth Commissions in Finland and Sweden regarding the Sámi, are appropriate steps in this direction.

In today's ever evolving world, with the advent of newer technologies and rapidly unfolding situations, the crime of genocide must be ready to bend from a narrow view and not be limited in its application.

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