

Commentary

Indigenous peoples proven to sustain biodiversity and address climate change: Now it's time to recognize and support this leadership

Steve Nitah¹¹Yellowknife, NT X1A1L2, Canada

People around the world increasingly see the urgent need to tackle the twin emergencies of climate change and biodiversity loss. We can make progress on both these fronts if the world also recognizes the leadership of Indigenous peoples who oversee the most healthy, biodiverse, and intact lands and waters left on Earth.

The territories of Indigenous peoples and local communities contain 80% of the world's remaining biodiversity and intersect about 40%¹ of all terrestrial protected areas and ecologically intact landscapes. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) 2019 global assessment² stressed the important role of these communities in biodiversity conservation by noting that 35% of the areas formally protected and 35% of all remaining terrestrial areas with very low human intervention are traditionally owned, managed, used, or occupied by Indigenous peoples.

Indigenous peoples sustain nature because we know we are a part of nature. We realize that trying to bend nature to our will would harm us as well as the animals, plants, and ecosystems we all depend on. Instead, Indigenous peoples have a reciprocal relationship with our territories. We know that if we take care of the land, the land will take care of us. And so, we honor our cultural responsibility to be careful stewards. When these relationships are respected and when the rights and responsibilities of Indigenous peoples are recognized and supported, the entire planet will benefit. Our territories span massive, vibrant areas that serve as sanctuaries for humans, animals, and plants; hold massive amounts of carbon; and ensure the health of our water and air. These lands—and the Indigenous relationship to them—have global significance, especially as governments seek ways to achieve increasingly urgent biodiversity and climate goals.

In Canada, the biggest, most ambitious proposals for protecting lands and waters are being led by Indigenous nations. I served as the lead negotiator for the Łutsël

K'e Dene First Nation, and we worked for several years to realize our vision of protecting an area known as Thaidene Nënë ("land of the ancestors" in English; see Figure 1). We conserved it under our own Dene laws, and we negotiated directly with the government of Canada to establish the entire area as an Indigenous protected area and parts of it as a national park, territorial park, and wildlife conservation area. At 26,376 km², it is now one of the largest protected areas in North America.

All of Thaidene Nënë will be co-managed by the Łutsël K'e Dene First Nation with the assistance of the Ni hat'ni Dene Guardians, trained experts in Indigenous and Western science. Łutsël K'e is drafting a management plan for the area that includes Dene worldviews and laws. It will allow us to continue our Dene way of life and honor our responsibility to the caribou, the moose, the smallest of insects, and all other lifeforms that make up the web of biodiversity. Many other Indigenous nations across the country are proposing and creating protected areas. The Dehcho First Nations, for instance, led the establishment of the Edézhíe Dehcho Protected Area.³ It is managed through a partnership between the Dehcho First Nations and the government of Canada. Five times the size of Yosemite National Park, the forested area is home to many endangered species, including the woodland caribou, the northern leopard frog, and the peregrine falcon. It is managed in ways that respect Dene laws and encourage the Dehcho Dene way of life.

The Sayisi Dene First Nation is currently working with the Crown government to conserve the Seal River Watershed Indigenous Protected Area.⁴ About the size of

Costa Rica, the expanse of tundra, wetlands, and forests is untouched by development—making it one of the last truly wild places on the planet. It sustains cultural traditions as well as caribou, polar bears, beluga whales, seals, and millions of birds. The Sayisi Dene are leading the process along with Dene, Cree, and Inuit from the region, the people best equipped to ensure that it remains intact.

Protecting enough land to keep the climate and biodiversity crises at bay will require the establishment of many more of these Indigenous-led protected places. Scientists say we must protect at least 30% of the land and oceans by 2030.⁵ Some argue that we must protect 50%.⁶ Whatever the target, Indigenous peoples must be a large part of the equation.

Yet in recent history and currently, Indigenous rights and responsibilities have often been disrespected. In the 1950s, the nomadic Sayisi Dene peoples, who rely on caribou for their food, clothing, and way of life, were forcibly removed from their lands by the government in a misguided attempt to protect the region's dwindling caribou populations. This government policy tried to isolate the caribou from the people who had cared for them for millennia, and it prioritized the species over the Dene people. Once nomads, the Sayisi Dene were forced to live far away in an unfamiliar environment, which led to death and great suffering. Meanwhile, caribou populations continued to decline. In 2016, the government formally apologized for relocating these communities and recognized that they were the best protectors of the caribou. This is just one example of global patterns in which Indigenous peoples are separated from their territories, and their ability to sustain biodiversity is



Figure 1. The Thaidene Nënë Indigenous protected area in the Northwest Territories, Canada

The Łutsël K'e Dene First Nation led the conservation of these lands and waters. At 26,376 km², it is one of the largest protected areas in North America. Photo credit: Pat Kane.

discounted. Science has increasingly shown that this fortress style of conservation, which removes people from protected lands, doesn't work. Instead, the Indigenous approach to protection, which sees people living in harmony with nature, leads to lasting conservation.

To establish the Thaidene Nënë, the Łutsël K'e Dene First Nation worked with the Crown government of Canada and the Northwest Territories to create a new kind of agreement that is built on the relationship between people and land and recognizes the mutually beneficial benefits of protecting nature. When we protect nature, nature protects us.

A track record of success

Recent research by leading scientific bodies confirms the role of Indigenous communities in protecting biodiversity and fighting climate change. A 2018 study¹ used map data to show that Indigenous peoples manage or have tenure rights

over at least 38 million km² in 87 countries on almost every continent. The researchers concluded that “collaborative partnerships involving conservation practitioners, Indigenous peoples and governments would yield significant benefits for conservation ... for future generations.”

Other research⁷ noted that Indigenous peoples' lands hold at least 36% of the world's remaining intact forests. The authors called on world governments to recognize Indigenous peoples' rights, including land-tenure rights, “as critical given the urgent need to reduce deforestation rates in the face of escalating climate change and global biodiversity loss.”

In 2019, both the Intergovernmental Panel on Climate Change (IPCC)⁸ and IPBES issued reports that cited the importance of formally recognizing and securing the customary lands of Indigenous peoples and other communities as an effective strategy for reducing carbon emissions and biodiversity loss.

The IPCC's report⁸ on climate and land use asserted that Indigenous and local knowledge (ILK) plays “a key role” in managing lands sustainably across ecosystems and in protecting food security. It argues that local communities protect wild relatives of agricultural crops, thus providing genetic resources that can arm valuable food crops against dangerous pathogens. And it notes that land-titling efforts, “particularly those that authorize and respect indigenous and communal tenure,” can lead to improved management of carbon-dense forests.

The IPCC⁸ further found that land rights for Indigenous peoples and local communities are vital for the protection of land and reductions in climate emissions. The report noted that securing and recognizing tenure for Indigenous communities has been shown to be highly cost effective in reducing deforestation and improving land management in certain contexts.

The authors of the 2019 IPBES report² warning of massive threats to biodiversity worldwide concluded that ILK should be incorporated into plans for preventing climate change and biodiversity loss—at least at the local level. “Opportunities exist for integration of ILK with scientific knowledge,” the researchers concluded.

Indigenous peoples, the report said, “can play a key role in understanding climate processes and impacts, adaptation to climate change, sustainable land management across different ecosystems, and enhancement of food security. Cultural and biological diversity are deeply integrated⁹ in Indigenous cultures and Indigenous leaders argue that their survival depends on the unbroken cord that ties local communities to their ancestral lands.”

The evidence is overwhelming. A recent report¹⁰ by the Food and Agriculture Organization of the United Nations and the Fund for the Development of Indigenous Peoples of Latin America and the Caribbean (FILAC in Spanish) analyzed the findings of 300 research papers and found that when Indigenous peoples and local communities in the region have strong land rights, their lands hold more carbon, their forests are denser, and the biodiversity in their forests is greater than in forests managed by others.

Together, this evidence makes the powerful case that the world cannot achieve its climate and biodiversity goals unless it conserves nature—and partners with Indigenous peoples when it does so.

It appears that governments are starting to listen. The government of Canada has increasingly recognized Indigenous leadership in conservation. It has funded over 25 proposals for Indigenous protected and conserved areas already and repeatedly emphasizes that partnerships with Indigenous peoples are essential for meeting biodiversity and climate targets.

These collaborations offer a case study for how to break down the fortress model of conservation in favor of protected areas built on partnerships with Indigenous peoples. Led by Costa Rica, France, and the United Kingdom, a global effort to protect 30% of Earth’s land and oceans by 2030 calls for the inclusion of Indigenous peoples and local communities as essential partners for achieving this target. If this group supports Indigenous land management, including through

Indigenous protected areas and Indigenous and community conservation areas, it is possible that this target can be reached.

One specific way that the Canadian government can be a standout leader in this global effort is by creating tools and methods for the private sector to engage through carbon financing. So much of the Boreal Forest in Canada—managed by the Indigenous people for millennia—holds vast amounts of carbon. Yet, current carbon-market rules preclude the consideration of much of these at-risk carbon pools to enter the market. Developing innovative financing mechanisms and investing in Indigenous protected and conserved areas create a winning strategy: carbon is secured, jobs are created, and this model from Canada can be adapted to many corners of the globe under Indigenous management.

But we need to see more progress and more commitments at the national and global levels in the leadup to two critical UN-level meetings on climate change and biodiversity expected to take place later this year. Canada can become a global leader in conservation if it makes a historic investment in Indigenous protected and conserved areas and Indigenous guardian programs and accelerates progress on conservation by supporting stewardship, cultural continuity, and economic sustainability for Indigenous peoples in Canada. As 196 countries negotiate the UN post-2020 global biodiversity framework, all nations have a new opportunity to codify a rights-based approach to conservation. The world has an opportunity to embrace a new paradigm for conservation with a new conception of protected and conserved areas in which the rights of Indigenous peoples are fully respected and secured.

In June, the graves of 215 Indigenous children were found at a former institution near Kamloops, British Columbia, and 751 graves were found in Saskatchewan. These so-called residential schools were designed by the Canadian government to “kill the Indian in the child.” They were not successful in eradicating our cultures. Now the world, including Canada, can be grateful because the entire planet is benefiting from Indigenous knowledge and leadership in conservation. It is the time to respect and support this leadership and to remember what’s at stake. I

do this work because I have children, and I have a responsibility to care for the land they will inherit. This is not just a personal responsibility but also a societal one, and we must all participate.

ACKNOWLEDGMENTS

S.N. is a senior leader of the Indigenous Leadership Initiative.

REFERENCES

- Garnett, S.T., Burgess, N.D., Fa, J.E., Fernández-Llamazares, Á., Molnár, Z., Robinson, C.J., Watson, J.E.M., Zander, K.K., Austin, B., Brondizio, E.S., et al. (2019). A spatial overview of the global importance of Indigenous lands for conservation. *Nat. Sustain* 1, 369–374. <https://doi.org/10.1038/s41893-018-0100-6>.
- (2019). Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, E.S. Brondizio, J. Settele, S. Díaz, and H.T. Ngo, eds. (IPBES). <https://doi.org/10.5281/zenodo.3831673>.
- Edézhie Protected Area. <https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/locations/edehzhie.html>.
- Seal River Watershed. <https://sealriverwatershed.ca/>.
- Dinerstein, E., Vynne, C., Sala, E., Joshi, A.R., Fernando, S., Lovejoy, T.E., Mayorga, J., Olson, D., Asner, G.P., Baillie, J.E.M., et al. (2019). A global deal for nature: Guiding principles, milestones, and targets. *Sci. Adv.* 5, w2869. <https://doi.org/10.1126/sciadv.aaw2869>.
- Dinerstein, E., Joshi, A.R., Vynne, C., Lee, A.T.L., Pharand-Deschênes, F., França, M., Fernando, S., Birch, T., Burkart, K., Asner, G.P., and Olson, D. (2020). A “global safety net” to reverse biodiversity loss and stabilize Earth’s climate. *Sci. Adv.* 6, 2824. <https://doi.org/10.1126/sciadv.abb2824>.
- Fa, J.E., Watson, J.E.M., Leiper, I., Potapov, P., Evans, T.D., Burgess, N.D., Molnár, Z., Fernández-Llamazares, A., Duncan, T., Wang, S., et al. (2020). Importance of Indigenous peoples’ lands for the conservation of intact forest landscapes. *Front. Ecol. Environ.* USA, 18, 135–140. <https://doi.org/10.1002/fee.2148>.
- Intergovernmental Panel on Climate Change (2019). Climate change and land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. <https://www.ipcc.ch/srccl/>.
- Schuster, R., Germain, R.R., Bennett, J.R., Reo, N.J., and Arcese, P. (2019). Vertebrate biodiversity on indigenous-managed lands in Australia, Brazil, and Canada equals that in protected areas. *Environ. Sci. Policy* 101, 1–6. <https://doi.org/10.1016/j.envsci.2019.07.002>.
- Food and Agriculture Organization of the United Nations; Fund for the Development of Indigenous Peoples of Latin America and the Caribbean (2021). Forest governance by indigenous and tribal peoples. An opportunity for climate action in Latin America and the Caribbean. <https://doi.org/10.4060/cb2953en>.