



Uniting Knowledge Systems

“When we talk about Níó Nę P’ęnę, we’re talking about historic, sacred places. Those kinds of areas, according to the Elders, are meant to be, to hold things together for us.”

LEON ANDREW
RESEARCH DIRECTOR
SAHTÚ RENEWABLE RESOURCES BOARD

Níó Nę P’ęnę is a vast region in the Northwest Territories that spans more than 7.9 million hectares, where Elders have observed declining wildlife, melting permafrost, and increased human disturbance. © Tracey Williams /Nature United

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Breakthrough Science in the Northwest Territories

Leon Andrew is Shúhtaot'Iné, born and raised in Tulí'ta, Northwest Territories (NWT). Shúhtaot'Iné are the people of the mountains and call the ridges and peaks that straddle the colonial border between the NWT and the Yukon 'Nío Nẹ P'ẹné.' Leon knows this landscape intimately. "I haven't walked all of it," he says, "but most of it I did."

Nío Nẹ P'ẹné holds immense importance. It has long been a gathering place for Nations and a source of traditional knowledge and practices. It provides critical habitats for various wildlife species, including mountain caribou, which migrate through the area.

Nío Nẹ P'ẹné, a vast region that spans over 7.9 million hectares (19.5 million acres), is changing. In recent decades, Elders such as Leon have observed declining wildlife, melting permafrost, increased wildfire activity and human disturbance.

Leon is also concerned about the water. "The Elders talk about Nío Nẹ P'ẹné as the place where the water is born," he says. It is the headwaters of many



This region is important for species and people — it contains the headwaters of mountain rivers that flow into the Dehcho (Mackenzie River), the longest river in Canada, and is habitat for mountain caribou.
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The Níó Nę P'ęné (NNP) Working Group gathering brought together representatives and Guardians from the larger Níó Nę P'ęné Hub, along with partners from Tuli'ta, Norman Wells, and Tu Łidlini (Ross River) Dena. © Tracey Williams/Nature United



The NWT is home to almost **30,000** different species, including caribou, arctic foxes, grizzly bears and musk oxen.

mountain rivers that flow into the Dehcho (Mackenzie River) — the longest river in Canada. This means that contamination can have a much wider impact on ecosystems across the region.

It was concerns about changes that brought Shúhtaot'Inę, Métis and Tu Łidlini Dena together at Dechenla/Dech'ıłq more than a decade ago to discuss the future of Níó Nę P'ęné and mountain caribou. Over the years, Leon, the Research Director for the Sahtú Renewable Resources Board (SRRB) — with strategic support from Nature United — has led a diverse partnership of Nations, Indigenous Guardians, researchers, outfitters, government agencies, non-profits and community youth, to develop a collaborative plan for caribou and landscape monitoring and protection. The ultimate goal is to improve the co-management of Níó Nę

P'ęné, strengthen Indigenous stewardship and monitoring of mountain caribou herds, and keep the Dene kədə/Ke (language), Dene ts'ıł/Dene Ke (ways of life) and Dene Ɂe'a/a' nızın (law/respect) strong.

In 2021, the Níó Nę P'ęné Working Group, with technical support from Nature United and Braiding Knowledges Canada, launched the Níó Nę P'ęné ArcGIS Hub. Guided by Indigenous values and priorities, the Hub was created to help provide Sahtú communities and their partners access to spatial data and important information about lands, waters and caribou across the region.

This year, we supported the completion of the Hub design and infrastructure on the ArcGIS online platform. The Hub combines traditional knowledge with today's ArcGIS technology. It allows

communities to share information about things like hunting areas, sacred sites, ice thickness and other important observations. The Hub can also help communities "keep track" of their knowledge, making sure this wisdom is integrated into broader land-use decisions.

Mountain Dene/Dena and Métis communities know that the key to understanding this landscape is understanding the caribou — as one does not exist without the other. Together, the Hub and ongoing caribou research efforts are generating a body of evidence to ensure that Indigenous communities are not just consulted but actively leading the way in how their lands and waters are cared for. Níó Nę P'ęné is about more than protecting the land — it is about ensuring that Sahtú communities have the tools and authority to lead for generations to come.

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New tools developed in partnership with communities will make it easier to access information about ecological health in this northern region. © Tracey Williams /Nature United

Níó Nę P'ęńę ArcGIS Hub

The Hub emerged as a critical tool to support the wildlife management goals of Sahtú communities across Níó Nę P'ęńę. This living resource abides by the principles of Indigenous data sovereignty, as understood in Canada as the fundamental right of Indigenous Peoples to control and interpret data about their communities, lands and cultures.

Co-developed by the Níó Nę P'ęńę Working Group and the Sahtú Renewable Resources Board, the Níó Nę P'ęńę ArcGIS Hub makes it easy to access maps, reports and other important information about the land and water. It collects information like map-based visualizations of Níó Nę P'ęńę geographies, photos and audio and video recordings of local knowledge holders. Nature United provided technical and financial support to develop the Hub, which is now being shared with partners and communities to encourage contributions and new data from both sides of the colonial border.

Land and water management works best when everyone has a seat at the table. The Hub provides tools for collaboration, so Sahtú communities can actively participate in planning conversations alongside government agencies, co-management peers from other regions, researchers and non-profits. Through interactive maps, everyone can see how different actions might affect the land and water — helping leaders make decisions in a way that reflects community priorities and minimizes disturbances to caribou, habitat and water.



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