

Submission Deadline: October 31, 2021

Title:

Nío Nę P'ęné - Trails of the Mountain Caribou: Renewing Indigenous Relationships in Conservation

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Section 1 Progress Reporting towards Research Goals

Please complete Table 1: *CMN 2021-22 Annual Research Progress Table* to summarize in short form your goals, objectives, performance indicators/measures, and intended outcomes or deliverables for the current fiscal year. In some cases, the table has been preloaded for you as best as could be determined from your application or previous progress reports (if applicable). Please explain in Table 1 deviations, solutions and needs related to your progress this year.

Please concurrently complete Table 2: *CMN 2021-22 Annual Research Statistical Table*. The statistics entered in Table 2 should be supported by Table 1 in some capacity and are required directly for the NCE for their reporting needs.

Section 2 Research Reflection

2.1 Narrative of Activities

Provide a high level narrative description of your activities this year (150 words).

This year's research was affected by the COVID-19 pandemic. However the team was able to find creative solutions in the NWT to move the research forward. **SP1** Following Trails of the Caribou: fecal sampling and local sample processing was completed on 369 samples. **SP2** Understanding Caribou Landscapes: a knowledge sharing and landscape ground truthing camp was held August 11th -30th, 2021, with Indigenous knowledge and science activities including about 60 transects. **SP3** Mapping Knowledge: placenames mapping continued, as well as preparations for setting up an ArcView GIS Hub; a revised map of the proposed Indigenous Protected and Conserved Area (IPCA) was prepared,

and outfitter knowledge maps digitized. **SP4** Livelihoods and Climate Change: Following a virtual qualitative research workshop, community researchers worked remotely with doctoral student Kimberleigh Schultz to conduct interviews. **SP5** Renewing Governance: the project team is preparing to present to the Tulít'a District IPCA Steering Committee.

2.2 Success and Challenges

Tell us about 3 successes you achieved

	What was the success?	How and why were these successes possible?	What or who was most impacted by this success?
1	Community researcher training	Qualitative research workshop, fecal sampling, fecal sample preparation, remote sensing ground truthing were possible as an integral part of our research design.	8 community researchers, including Nę K'édí Kə - Keepers of the Land (Guardians) plus 7 other HQP.
2	Information collection for caribou genetics, landscape change, and livelihoods research.	369 fecal samples of which half were processed; 60 ground truthing landscape transects, 3 pilot livelihoods interviews. Polar Continental Shelf funding supported fecal sampling; NWT based biologists assisted with landscape fieldwork; remote Sustainable Livelihoods interviews possible via zoom.	These activities have contributed greatly to providing information to be applied to results analysis for SP1 , SP2 , SP3 , SP4 , and SP5 . These projects are an effort to support Nío Nę P'ęñé plan objectives as follows: 1. Nę Kédí Kə; 2. reducing disturbance of caribou; 3. land protection; 4. land-based healing program; 5. Education and communication about Dene/Métis law; 6. Indigenous resource laws and agreements; 7 keep moving forward.
3	Expanded research partnerships through establishment of Knowledge Hub.	The team mobilized our network of neighbours and research partners to develop a Hub proposal and held several initial meetings.	The Hub will enhance the benefits of the five Special Projects, by providing opportunities to both geographically expand the research, and expand the knowledge exchange and mobilization opportunities.

Tell us about 3 challenges you experienced

	What was the challenge?	What changes would have prevented or mediated this challenge? What can we learn from this challenge?	What or who was most impacted by this challenge?
1	The pandemic meant that research collaborators from outside the NWT could not travel to assist with fieldwork.	The pandemic caused the Sahtú-based team to find ways to restructure the research so that we were more self-sufficient, working with NWT-based scientists and using various virtual collaboration platforms. There are great opportunities in capacity-building that can arise from this enforced self-sufficiency.	It was a benefit to northerners to see the successful outcomes of their efforts to work independently. However, the non-NWT collaborators were challenged to appropriately support the work.
2	The pandemic meant that community researchers, the Working Group and the broader partners communities were not able to meet in person, and virtual technologies presented barriers for community people to participate.	The team found alternate ways to work together using various virtual collaboration platforms. It was also beneficial to bring key trainees and collaborators together safely on the land.	The Working Group was not able to function effectively, and it was not possible to keep communities up to speed on research activities as much as intended. However, there were benefits for trainees and research team members in the successful fieldwork.
3	There was an added burden on limited SRRB staff capacity to manage projects due to inability of non-NWT based collaborators to travel to the NWT.	The SRRB has been able to hire a Nío Nę P'ęñé Research Manager to focus full time on supporting the five Special Projects, as well as training, communications and knowledge mobilization.	SRRB staff struggled to manage both project implementation and administration; CMN staff were frustrated by administrative delays. On the bright side, researchers were happy with successful outcomes of fieldwork!

2.3 Collaboration

Describe how your collaborating organizations have helped realize the research goals and objectives.

SP1 Polar Continental Shelf Fund funded and coordinated helicopter transportation; Trent University

assisted with sampling training and transects design, as well as sample processing training and genetic analysis.. **SP2** Environment and Climate Change Canada (ECCC) provided ground truthing training, photography and drone equipment, design of transects, and data analysis. Drum Lake Lodge hosted and provided a venue. **SP3** Nature United provided funding and technical support for GIS Hub project. ECCC digitized outfitter knowledge maps. **SP4** McMaster University provided doctoral student to offer qualitative analysis training, design of research instruments, and assistance with interviews. **SP5** Indigenous Leadership Initiative and Tulít'a District IPCA Steering Committee are providing leadership to pursue proposed IPCA; Blythe and Bathe and University of Iceland are supporting Ne K'édikē - Keepers of the Land training and research.

What lessons have you learned during this period with respect to collaboration between Indigenous and Western ways of knowing?

We have found that Indigenous knowledge holders are strongly supportive of co-production of knowledge processes that address their questions. It is critical to involve knowledge holders in all phases of the research process, from design to implementation and discussions about results and their implications.

Do you have any other take-home messages from what has been learned from working collaboratively?

We have received strong messages from community collaborators and partners that there is no substitute for working together in person. Although a lot can be accomplished through remote collaboration, we all look forward to resuming normal collaborative processes with in-person visits and meetings, and fieldwork involving our non-NWT based collaborators.

2.4 Impact

Who are the end users of your knowledge as a result of this research? How has this work impacted those end users? Can you provide clear examples of how they have “taken up” your knowledge and used the information from your research either through their communications, mandates, changes to policies or practices, training, etc? If it helps, perhaps consider why these end users are interested in your research. If these include local, regional, provincial/territorial, and/or federal governments or other organizations, please mention them here and provide any examples of how your work impacts their policies or responds to their knowledge needs.

The primary end users include the Tulít'a and Norman Wells leadership organisations, the SRRB as “the main instrument of wildlife management” in the Sahtú region, and the Government of the NWT. It is still early in the research to be seeing significant impacts. However, it is clear that the Tulít'a and Norman Wells leaderships are prepared to consider an IPCA proposal. Also, Norman Wells and Tulít'a are drawing on this research to prepare submissions for the Délı̨ne 2021 Public Listening Session (Hearing) on *ᑕekwé hé Gots'edi (Living With Wildlife): Predators and Competitors* scheduled for February 1-3, 2022 - an event which also includes issues related to governance and harvest regulation in its scope.

How has this research made an impact: locally, regionally or nationally?

The presentations about this research at the CMN Summit raised awareness of our Indigenous-led methodologies on a national scale. As well, the Níó Nę P'ęnę plan is being considered by the NWT Conference of Management Authorities on Species At Risk for adoption as a key component of the NWT Management Plan for Northern Mountain Caribou that is required as a result of this species' recent listing as Special Concern under the NWT *Species at Risk Act*. The experimental landscape change modelling presented in several international academic forums is charting new ground in methods for working with historical landscape data.

Does your research consider or contribute to the Calls to Action of the Truth & Reconciliation Commission? Canada's commitments to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)? The United Nations Sustainable Development Goals? If so, please explain.

With respect to the **TRC Calls to Action**: Our research is framed by the SRRB's priority to achieve reconciliation in wildlife conservation approaches through a consciously decolonizing approach and through support for Indigenous-led research, planning and decision-making.

With respect to **UNDRIP**, the research addresses the following articles by conducting research to support implementation and further development of the Dene and Métis led Níó Nę P'ęnę plan: **Article 4**, which recognizes the right to autonomy in matters relating to the internal and local affairs of Indigenous peoples; **Article 5**, which recognizes the right of Indigenous peoples to maintain and strengthen their distinct political, legal, economic and cultural institutions; **Article 29**, which recognizes the right of Indigenous peoples to the conservation and protection of the environment and the productive capacity of their lands or territories and resources and which requires governments to establish and implement assistance programs for Indigenous peoples for such conservation and protections, without discrimination; **Article 32**, which recognizes the right of Indigenous peoples to determine and develop priorities and strategies for the development or use of their lands or territories and other resources.

With respect to **UN Sustainable Development Goals** (listed below): the research addresses **Goals 1, 2 and 8** through Sustainable Livelihoods research; **Goals 3-5 and 10** through Nę K'édikę - Keepers of the Land and on the land learning opportunities involving families, including women, men, elders, harvesters and youth; **Goals 13 and 15** through landscape change, livelihoods and caribou populations research to identify climate change impacts and actions required; **Goal 17** through broad and expanding partnerships including Indigenous communities, universities, governments, and non-governmental organisations.

- **Goal 1.** End poverty in all its forms everywhere
- **Goal 2.** End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- **Goal 3.** Ensure healthy lives and promote well-being for all at all ages
- **Goal 4.** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- **Goal 5.** Achieve gender equality and empower all women and girls
- **Goal 8.** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- **Goal 10.** Reduce inequality within and among countries

- **Goal 13.** Take urgent action to combat climate change and its impacts
- **Goal 15.** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- **Goal 17.** Strengthen the means of implementation and revitalize the global partnership for sustainable development

Has your work advanced training?

Training includes academic, non-academic, Indigenous and non-Indigenous trainees. Describe training activities in terms of:

- Who was trained and what were they trained to do well?
- Has this training advanced intercultural competency including but not limited to providing experience working with Indigenous and western knowledge systems and approaches and/or learning to help a diverse group of people and organizations work together to build meaningful & sustained relationships required for solutions-oriented research?
- How has the training improved employment and livelihood outcomes?
- Describe your audience and the number of individuals who received training (refer to Table 2 as required)
- If training workshops or other targeted training initiatives have been undertaken, describe your audience and the number of individuals who received or were impacted by the training initiative. What feedback have you received from those who attended? How did they use the training?

This year's research provided 8 community researchers, including Neḡ K'édí Kə - Keepers of the Land (Guardians) plus 7 other HQP with the opportunity to assist with qualitative research workshop, fecal sampling, fecal sample preparation, remote sensing, and ground truthing under **SP1** and **SP3**. **SP3** training has also included training in development of an ArcGIS Hub for our newest HQP, NNP Research Manager Manisha Singh. Tulít'a youth were also trained in the scientific processes that were carried out and hence were part of the research. Additionally, 3 Neḡ K'édí Kə were trained in vegetation research, transect sampling, drone and camera photography, and lichen profiling as part of the knowledge sharing camp under **SP2** and **SP4**. All the trainees received support from research teams, technical research leads, knowledge holders and elders of the community, and SRRB staff members. Participants involved in working towards **SP2** and **SP4** had the opportunity to lead food security workshops which yielded the ideas and plans to improve food security and preserve cultural techniques and hence promote and improve youth participation towards the same. Unfortunately, the Sahtú COVID 19 outbreak in August posed many challenges for the community members including limiting the capacity to conduct any in-person research. Though, the team is hopeful that once the situation allows, participants and community members will be able to resume and conduct the in-person surveys and research they have been trained on and use it towards supporting the biocultural and socio-economic significance of Nío Neḡ P'ęneḡ area and address the three major themes of: Ways of Being, Ways of Doing, and Indigenous Resurgence.

All components of the research involve Indigenous ways of knowing. Leon Andrew has led Indigenous knowledge training along with the Wright-Bird family that hosted the landscape change workshop. The training has without exception been on the job, so has provided HQP with employment opportunities. We have received positive feedback from participants, some of whom hope to translate their experiences into full time employment.dd

What type of knowledge mobilization has taken place to share the impact of your research.

Knowledge mobilization involves sharing knowledge in all forms and from all phases of your work to an extended community and might include workshops, webinars, videos, social media posts, articles, stories about your work (written or oral), publications or other. In Table 2, we ask that you list types of knowledge mobilization produced through your research. What has been the most successful mechanism to disseminate information about your research results or learnings? Who is the intended audience?

The focus of activities over the past year was on planning and implementing field research. However, community partners have been preparing to translate knowledge arising from the research into submissions by our partner communities to the SRRB's four Public Listening Sessions (PLS) during 2021-2024 related to the core PLS question, "What is the The submissions that have been completed or are near completion by Tulít'a and Norman Wells related to mountain caribou are responses to Rounds 1 and 2 Information Requests related to the Délı̄nę 2021 PLS on the "hot topic" *ᑭekwé hé Gots'edí (Living With Wildlife): Predators and Competitors*. These two partner communities will also participate in a regional PLS Preparation Workshop on November 2-4 to begin preparing plan components related to the three key topics of the PLS, which include deferred questions from the 2020 PLS related to harvest regulation, as well as questions about caribou relationships with predators in the mountains. The Délı̄nę 2021 PLS was delayed due to COVID contingencies and is now scheduled for February 1-3, 2022. Tu ı̄idlini (Ross River) has not been as active a participant in the 2021 PLS process as they were in 2020 due to capacity issues, in part related to the pandemic.

The partner communities are also already preparing to undertake knowledge mobilization at the 2022-2024 PLS by conducting the NNP research. The future hot topics are Wildfires and Climate Change (2022) addressed through **SP2** and **SP3**; Knowledge about Caribou and Landscapes (2023) addressed through **SP1**, **SP2**, and **SP3**; and Caribou and the Mixed Economy (2024) addressed through **SP4**. All three PLS will consider questions related to **SP5** regarding governance, through the community conservation planning processes that are integral to the PLS approach.

The research, by way of the NNP plan that is the foundation for the research agenda, is also an important underpinning for the key contribution that the Sahtú region is making to the NWT Species at Risk process.

What non-monetary support could CMN provide to strengthen the impact of your research?

CMN could support organizing and promoting more networking sessions with Indigenous community leaders and Guardians which would help facilitate opportunities for people to learn from knowledge holders and strengthen the way of life of the Sahtúot'ine (Sahtú Dene) and to discuss Dene laws relevant for natural resource management.

2.5 Storytelling

Give us a small window into what it is like contributing to this research initiative. Anecdotes, quotes from collaborators, funny stories - all are welcome, just please ensure that you receive consent to share from any individuals involved in the event.

"What goes on in the Mackenzie Mountains matters to us," says Leon Andrew, Research Director and Chair of the Nę K'ə Dene Ts'ı́łı (Living on the Land) Forum of SRRB, who was involved thoroughly in this year's research. As one of the most experienced researchers of the Sahtú Region, Leon shared his experiences contributing to this research initiative. As part of the research team this year, Leon also highlighted how fecal sample collection was meaningful to the community and researchers in terms of ways of knowing about the Northern Mountain Caribou genetics, habitat, movement, and migration. The research also helped him connect the dots between past and future and explained what impacted people's movement and setting up campsites in certain regions in the past. The answer to this is caribou movement. He was also able to explain and share this knowledge with the Nę K'édikə - Keepers of the Land, who were part of this research, and later with the community members too. He highlighted that it was very enlightening for the younger generation and him to have experienced the research themselves and not through second-hand information.

During the helicopter surveys, Leon and the research team spotted the landslides across the Mackenzie Valley and raised a fundamental and interesting question- are these landslides also a reason for caribou displacement? According to Leon, these research experiences and others conducted in the past have helped answer many questions and raised some new ones. Such research in the future would help answer more questions that, when combined with the Indigenous knowledge, would help support the establishment of Indigenous-led Guardian and land protection initiatives and help set a standard for defining the nature of such initiatives in Canada.

In another instance, Lisa McDonald, Shúhta Nę K'édí Ke (Guardian), when talking about her experiences contributing towards the research initiatives says, "I would have to say this job was challenging. I jump at any chance to work in the Mackenzie Mountains as this is where I am from and love working on my land. I think the work we did was very important but one thing that needs to be remembered is that as important as it is to do the scientific side of work, the other side, the traditional knowledge side, is just as important. I think when work is being done in an area such as Drum Lake, it is vitally important to remember to talk to the people who use that area. They have extensive knowledge of the land and use of that land. When the two sides of knowledge are used together, I believe the outcome of the data/work will be much more useful. I am grateful for being able to be a part of this program and look forward to more work in the future as it is vitally important to work that is presently being done in the Sahtu region".

Section 3 Media - Picture and Video Uploads

Please provide 10-15 photos and 1-3 videos that reflect the activities of your research.

Most of the photos and videos should contain people (please limit landscape/equipment photos to no more than 4). These photos may be featured through several CMN channels, such as the website and

social media. Please ensure you obtain consent to share all photos and videos. Please provide a short description of the photo for context, location it was taken, and acknowledge the photographer.

If you have a google account you can upload your photos and videos [here](#). Otherwise, please email them to kirsten@cmn-rcm.ca.

Section 4 EDIJ (Equity, Diversity, Inclusion, Justice)

Once we receive Table 2 from your research initiative, we will be distributing an EDIJ survey to all of the people involved in your research. We thank your team for the cooperation in this NCE requirement.