

Interim Project Progress Report

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

November 2019-October 2020 Leon Andrew, Principle Investigator











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Principal Investigator: Leon Andrew

Project Title: Nío Ne P'ené - Trails of the Mountain Caribou: Renewing

Indigenous Relationships in Conservation

PART A: 2020-21 Progress Update

Background

This Mode 3 Indigenous-driven research in the shared Nío Nę P'ęnę́ (backbone of the Mackenzie Mountains) area straddling the NWT-Yukon border is an outgrowth of a community conservation planning partnership led by the Tulít'a and Norman Wells ?ehdzo Got'Įnę (Renewable Resources Councils), and the Tu Łidlini (Ross River) Dena Council. The research asks the question, "What is the role of Indigenous people in maintaining the health of caribou and people in times of change?" The three year program addresses three key themes: 1) Ways of Being; 2) Ways of Doing; 3) Biocultural Integrity.

Program Sponsors

The Nío Nę P'ęnę́ program is sponsored by the following contributors:

- ?ehdzo Got'ıne Gots'é Nákedı (Sahtú Renewable Resources Board)
- Canadian Mountain Network (CMN)
- Climate Change and Health Adaptation Program Indigenous Services Canada
- Environment and Climate Change Canada
- Lawson Foundation Youth and the Environment Fund
- Nature United
- Sahtú Dene Council (with funding from CanNor and ECCC)
- Genome Canada



Section 1. Highlights and progress against project deliverables

During the past year, the team learned that knowledge dissemination and mobilization as well as training are integral to all research activities. Key milestones were as follows:

- Clarification of research governance as distinct from governance of proposed Indigenous Protected and Conserved Areas (IPCA) initiatives, and drafting of Steering Committee Terms of Reference for the proposed IPCA associated with Nío Nę P'ęnę́ plan
- Consolidation and training of HQP team, including community interns and academic collaborators
- Refinement of research themes, questions, and methods, and completion of research ethics and license approvals
- Completion of ?ehdzo Got'įnę Gots'ę́ Nákedı (Sahtú Renewable Resources Board SRRB)
 Public Listening 2020 report and decisions encompassing community and science evidence regarding conservation requirements for mountain caribou and people
- Engagement related to proposed listing of mountain caribou as special concern under the NWT Species at Risk Act
- Production of the first peer reviewed academic deliverable from the Nío Nę P'ęnę́ program, a poster for ArcticNet

Activities Deliverables Nío Ne P'ene Working Group/Caucus Meetings Community conservation planning workshop, Written submissions by Tu Łidlini (Ross River) November 12-14, Colville Lake (preparing Dena Council and Norman Wells Renewable Public Listening [Hearing] presentations Resources Council to Colville 2020 Public including mountain caribou conservation **Listening Session** perspectives) Presentations to Fort Good Hope and Tulít'a and Norman Wells Public Listening Norman Wells regarding mountain caribou preparation meetings and workshops, status and proposed NWT Species at Risk November listing, and input on proposed listing to Conference of Management Authorities in Sahtú Youth Network caucus, including Tulít'a and Norman Wells youth/Guardians, to preparation (due December 4) prepare presentations for Public Listening Oral presentations by Tulít'a, Norman Wells and Sahtú Youth Network Panels and Session January 21-23 Public Listening Session, Indigenous Leadership Initiative at Colville Colville Lake: Sahtú Ragóa (Hunting Law and 2020 Public Listening Session, and graphic recordings by Sam Bradd (DrawingChange) Approaches to Wildlife Harvesting related to each presentation (4 graphic Joint Norman Wells/Tulít'a Working Group recordings) meeting, March 10-12, Tulít'a SRRB report on the Colville 2020 Public Listening Session, including evidence, law,



Activities

- Working Group teleconferences: March 26, April 6, July 9, July 21, July 29, August 6, August 13, August 27, September 18
- Norman Wells Renewable Resources Council Public Listening report workshop, November 24
- Tulít'a Community Public Listening report workshop, November 27

Deliverables

- findings of fact, and decisions/recommendations related to mountain caribou conservation
- Steering Committee terms of Reference drafted
- Land Corporation delegates formally designated to Working Group (in addition to Renewable Resources Council delegates)
- Discussions underway for Land Corporations to take the lead on Indigenous Protected and Conserved Areas initiative.

Shúhta Ne K'ádíke – Keepers of the Land and Sahtú Youth Network

- Tets'ehxe on the land training program, August 31-September 13
- Meeting, hike and community celebration, September 29-October 1, Tulít'a
- Teleconference, future projects food security
- Tulít'a presentation to Elders Council meeting, November 5
- Trip on Begáadə (Keele River), August (4 days): Leon Andrew and Danny Yakeleya inventory of waste sites for future cleanup

- Video about Tets'ehxe training completed (available by permission of the Shúhta Nę K'ádíke)
- Presentation to elders
- Reporting in progress
- Letter of support and presentation materials for Kassi On the Land training Arctic Inspiration Prize submission
- Funding proposals under development

Research and HQP Training

- 1. Outfitter knowledge project/mapping
- 2. Sahtú Research Results Workshop, December 10-12, Tulít'a
- 3. Refined research themes and methods
- 4. Employed three community interns: Nío Nę P'ené Coordinator, Youth, and Research
- 5. Intern and university HQP training includes participation in Sahtú Study Circle, Sahtú Gender Working Group, and Nę K'a Dene Ts'ılı Forum meetings
- Intern training includes Indigenous Canada online certificate course, University of Alberta
- Applied for approvals of ethical protocols (Aurora College, Trent University and McMaster University ethics committees/boards)
- 8. Applied for Aurora Research Institute research license

- Association of Mackenzie Mountain
 Outfitters preliminary results presentation/
 mapping session, November 18, Yellowknife
 (map digitizing and report underway)
- 11. Blair Kennedy and Norman Wells/Tulít'a delegate presentations and poster (Sahtú Research Results Workshop
- 12. COVID safety plan
- 13. Community engagement log
- 14. Consent form
- Cory Fournier (TrentU Master's student), Kimberleigh Schultz (McMasterU doctoral student) and Blair Kennedy (ECCC postdoctoral researcher) confirmed as academic HQP
- 16. William Andrew, Jasmine Plummer and Jessie Yakeleya confirmed as community HQP



Activities	Deliverables
9. ArcticNet 2020 Conference, December 7-10 (online)	 Research projects defined, all led by Leon Andrew with research collaborators as follows: Following trails of the caribou (Cory Fournier/Micheline Manseau) Understanding caribou landscapes (Blair Kennedy/Micheline Manseau) Mapping knowledge (Cory Fournier, Micheline Manseau) Livelihoods and climate change (Kimberleigh Schultz) Renewing governance (Deborah Simmons) Update letter to Tulít'a/Norman Wells community leaders Research questions Ethical protocol approved by Aurora College (Protocol #20190603) Research license awarded by Aurora Research Institute (License No. 16761) Cory Fournier and Kimberleigh Schultz thesis proposals approved Poster, Mapping Historical Changes to Alpine Extent and Treeline Ecotones across Nío Nę P'ęnę́ (Mackenzie Mountains, NT/YT, Canada) submitted to ArcticNet 2020 conference Abstract to 2020 North American Caribou Workshop accepted (conference delayed due to pandemic) Indigenous Research Priority Areas in the North-Canadian Mountain Network webinar presentation, July 28
State of Knowledge	
State of knowledge literature review and research scoping	 Relevant literature on mountain caribou and Dene people posted to SRRB Public Registry for Colville 2020 Public Listening Session. Literature review provided in appendix to SRRB's Colville 2020 Public Listening report SRRB and Norm Barichello (biologist and Tu Łidlini consultant) hard copy libraries scanned and online library compiled in EndNote as resource for research team members



Activities	Deliverables
	Graduate student and post-doctoral student literature reviews underway
Networks	
 Participation in CMN's Research Management Committee meetings (Leon Andrew) NWT and Indigenous Leadership Initiative Guardian networks Reconciliation through Conservation network (Deborah Simmons) 	

Section 2. Deviations from the original research plan

Note in bullet form any significant deviations not included in the 2019-20 report and provide the justification for each. Also specify any COVID-related delays.

- Initiation of field research was delayed to 2021, pending COVID contingencies
- Cory Fournier and Leon Andrew agreed to redesign their Indigenous knowledge research as an in-depth one-on-one/remote research collaboration as a COVID safety measure – outcomes of this work will be presented for validation to other knowledge holders

Section 3. Budget FY20/21

Provide an anticipated Statement of Account for 1 April 2020 - 31 March 2021. See the attached Excel spreadsheet - "CMN Research SOA & Budgets.xlsx" - and complete the attached worksheet - "Worksheet - SOA Oct 2020".

If you anticipate >25% carryover from 2020-21 to 2021-22 (1 April 2021 - March 31 2021), please provide your justification in Section 4 below. Prior to completing, please review the attached Corporate Policy - Research Project Funding Carry Over and Budget Reallocation.



Section 4. Carry Over Request

If the difference between Column A and Column B+C in SOA Oct 2020 is >25% (\$33,750.00) of your 2020-21 funding, then complete this section. In this section describe how the updates provided in Section 1 and Section 2 resulted in lower-than-anticipated expenditure of funds. Any funds not carried over must be returned to the Canadian Mountain Network by March 31, 2021.

- Doctoral researcher unable to travel and conduct research.
- Indigenous youth and research coordinator COVID-19 supplement used to support program extension.
- On the land research not possible, affecting:
 - Professional and technical services/contracts/stipends (including honoraria)
 - Equipment (including rental)
 - Materials, supplies and other expenditures
 - Travel
- Knowledge dissemination and mobilization activities significantly reduced, affecting:
 - Communication
 - Workshops
 - Knowledge mobilization
- Overall expenditures reduced, affecting 10% administration expenses

Section 5. Knowledge Mobilization

The list below provides highlights of products related to the Nío Nę P'ęnę́ program. For more details about knowledge dissemination/mobilization activities, see Section 1 above.

- HQP: Blair Kennedy, Leon Andrew, Micheline Manseau, Deborah Simmons. 2020.
 Mapping Historical Changes to Alpine Extent and Treeline Ecotones across Nío Nę
 P'ené (Mackenzie Mountains, NT/YT, Canada). ArcticNet 2020 Conference poster.
- ?ehdzo Got'inę Gots'ę Nákedi (Sahtú Renewable Resources Board). 2020. Sahtú
 Ragó?a (Hunting Law) and Approaches to Wildlife Harvesting: Report and Reasons for
 Decision on the Colville 2020 Public Listening Session. SRRB Public Registry,
 www.srrb.nt.ca
- DrawingChange (Sam Bradd). 2020. Indigenous Leadership Initiative, Norman Wells Panel and Tulít'a Panel graphic recordings. SRRB Public Registry, www.srrb.nt.ca.
- *HQP:* Shúhta Nę K'édí Ke and Pierre Chaillon. 2020. Tets'ehxe Shúhta Nę K'édí Ke Training. Documentary video.
- Joe Sacco. 2020. Paying the Land. Metropolitan Books, Henry Holt. [This book features Nío Nę P'ęnę Working Group participants Frederick Andrew, Gordon Yakeleya, Douglas Yallee, and Deborah Simmons, and Shúhtaot'ine (Mountain Dene) knowledge holders



David and Theresa Etchinelle and Paul Andrew. The Ne K'a Dene Ts'ılı Forum is planning a virtual dialogue with author Joe Sacco.]

Section 6. Research Personnel

Role*	Full Name	Organization	Email
Leon Andrew	Principle Investigator	SRRB	lamountaindene@theedge.ca
Deborah Simmons	Co-Investigator	SRRB	director@srrb.nt.ca
Micheline Manseau	Co-Investigator	SRRB	micheline.manseau@canada.ca
Cory Fournier	HQP/Master's student	TrentU	cfour009@uottawa.ca
Kimberleigh Schultz	HQP/PhD student	McMasterU	schultzk@mcmaster.ca
Blair Kennedy	HQP/Postdoctoral	ECCC	blair.kennedy3@canada.ca
William Andrew	HQP/Indigenous youth	SRRB	nionepene@gmail.com
Jessie Yakeleya	HQP/Indigenous youth	SRRB	research@srrb.nt.ca
Jasmine Plummer	HQP/Indigenous youth	SRRB	syn@srrb.nt.ca
Kirsten Jensen	HQP/ program	SRRB	planner@srrb.nt.ca
	coordinator		

^{*}indicate if project lead/PI, undergraduate, MSc, PhD, PDF, technician, research associate, indigenous youth, network investigator (receives CMN funds) or collaborator (does not receive CMN funds), other – explain

Community HQP (new section)

In this section, we outline the roles of community HQP in each of the five projects to be undertaken as part of this CMN program. Note that for the purpose of this program, HQP are defined as the following:

- Nío Nę P'ęnę Working Group members, including knowledge holders, Shúhta Nę K'ėdíke – Keepers of the Mountains (Guardians), Sahtú Youth Network, ?ehdzo Got'Įnę (Renewable Resources Council), Tulít'a Dene Band, and Land Corporation delegates.
- Knowledge holders from Tulít'a and Norman Wells.
- Community researcher

Project	Community HQP Roles
1. Following trails of the caribou (Cory Fournier/Micheline Manseau)	 Field support by Shúhta Nę K'ádíke members. Spatial plan for sampling designed with input from knowledge holders and ?ehdzo Got'Įnę delegates. Interpretation of analysis results by Nío Nę P'ęnę́ Working Group.



2. Understanding caribou landscapes (Blair Kennedy/Micheline Manseau)	 Field support by Shúhta Nę K'ádíke members. Field program co-designed with designed with knowledge holders and ?ehdzo Got'Įnę delegates. Interpretation of results by Nío Nę P'ęnę́ Working Group.
3. Mapping knowledge (Cory Fournier, Micheline Manseau)	 Co-research by Leon Andrew, and gap analysis, validation, and additional knowledge provided by the Nío Nę P'ęnę́ Working Group.
4. Livelihoods and climate change (Kimberleigh Schultz)	 Community researcher to work with Kimberleigh and Leon to conduct interviews and analyse results. Food security planning by Sahtú Youth Network and Shúhta Nę K'édíke working with elders/knowledge holders. Interpretation of results and development of conclusions/recommendations by Nío Nę P'ęnę́ Working Group.
5. Renewing governance (Deborah Simmons)	 Interviews and analysis by community researcher with support from Leon and Deborah. Evaluation report co-developed with Nío Nę P'ęnę́ Working Group.

Section 8. Project partners

The following list of contributions covers the period November 2019-October 2020 only.

Partner organization	Role in the project	Total Cash Contribution s	Total In-Kind contributions
Sahtú Dene Council (ECCC and CanNor)	Shúhta Nę K'édíke/ Tourism program		\$100,000
Environment and Climate Change Canada	Science program	\$60,000	\$50,000
Nia Tero/Ducks Unlimited	Shúhta Nę K'édíke/ IPCA programs	\$300,000	
Nature United	Public Listening preparation workshops (Tulít'a and Norman Wells)	\$20,000	



Lawson Foundation	Shúhta Ne K'édíke/	\$20,000	
	Youth program		
Climate Change and Health	Climate	\$40,000	
Adaptation Program	adaptaion/resilience		
	research		

PART B: Future Planning

Section 1. One-year, no cost extension

Do١	ou wish to acce	ot the one-v	ear, no-cost	extension*:	Yes: X	No:
/						

If yes, please ensure you complete sections 4 & 5

Section 2. Year 3 deliverables

List detailed deliverables for Year 3 (1 April 2021 - 31 March 2022). Be as explicit and detailed as possible to support RMC approval of Year 3 funds and/or any carryover request provided in Part A - Section 4.

We require: (1) a clear work plan, including milestones for core activities; (2) HQP recruitment targets and training plans; and (3) plans for partner meetings, conference presentations, workshops, or other knowledge exchange and mobilization activities.

Pandemic Contingencies (new section)

The Project Team has worked hard since March 2020 to revise approach to this program so that objectives can be achieved in a COVID-19 safe manner. As a result, we are confident that most if not all deliverables will be completed by Year 4 (thanks to the no-cost extension provided). The following is a list of key adaptations:

^{*}Note: there will be NO additional funding from CMN, only an additional year to complete project deliverables.



- 1. Development of methods for academic collaborators to work with the team remotely.
- 2. Expertise has been recruited from within the NWT "bubble" for scientific fieldwork and on the land training.
- 3. COVID-19 safety protocols have been developed for on the land activities.
- Research Deliverables (Revised to provide additional details, including updates on activities in progress since October 2020)

Project	Project Co-Leads/Activities (Leon Andrew overseeing all projects)		
ls of the caribou	 Co-Leads: Cory Fournier/Micheline Manseau Fecal sampling planned for March 15 week with funding from Polar Shelf, led by Leon Andrew and with site identification contributions from Rhea McDonald, 		
Following trails of the caribou	Frederick Andrew, Douglas Yallee, Daniel Jackson; sampling will take place with expertise from NWT "bubble" and Shúhta Nę K'édíke – Keepers of the Mountains field support.		
Follo	 Analysis of fecal sampling results already begun, and further analysis of newly collected samples will be completed in Year 3. 		
-	 Full caribou genome analysis underway to look at the different ecotypes within the Sahtú region, funded by Genome Canada. 		
	Co-Leads: Blair Kennedy/Micheline Manseau		
. Understanding caribou landscapes	 Old aerial landscape photos and satellite imagery have been purchased, and time series analysis of landscape features to identify landscape change over time has been piloted, data processing methods developed. Full analysis of time series has begun with acquisition of additional aerial photos from the 1940s to 1980s, and satellite imagery from 1980-2020, with in-kind support and funding from ECCC. Plans underway for fieldwork in summer 2021 with expertise from NWT "bubble." 		
_ii	Co-Leads: Cory Fournier, Micheline Manseau		
Mapping knowledge	 Revised research design to focus on co-development of knowledge with one knowledge holder, Leon Andrew using conversational and mapping methods by Zoom. Digitizing, analysis and completion of outfitter knowledge project. 		
က်			



Project	Project Co-Leads/Activities (Leon Andrew overseeing all projects)			
	Co-Leads: Kimberleigh Schultz, Deborah Simmons, Suzanne Mills			
4. Livelihoods and climate change	 Project design and remote interviews involving a local HQP co-researcher. Food security workshop involving Shúhta Nę K'édíke and Sahtú Youth Network completed February 8, as a basis for food security planning, with funding from Climate Change and Health Adaptation Program. Further planning to be completed as part of summer on the land activities. 			
ıg	Co-Lead: Deborah Simmons			
5. Renewing Governanc	Continuation of Indigenous Protected and Conserved Areas and Guardian framework, including establishment of Steering Committee (workshop completed on February 18-19) and development of workplan.			

Training (e.g. HQP) Deliverables

- Participation in Indigenous knowledge research, sustainable livelihoods research, caribou sampling and remote sensing ground truthing
- o On the land training for interns, Shúhta Ne K'édíke and Sahtú Youth Network

Knowledge Mobilization Deliverables

- Presentation at North American Caribou Workshop (per accepted abstract deferred from 2020)

Section 3. Year 3 budget

Pls previously confirmed the overall 10% budget cut in light of the 27% cut to the NCE grant. We now need you to revise your Year 3 (1 April 2021-31 March 2022) budget accordingly, as CMN is not able to determine for you where best to apply that cut. Provided you meet your previous commitments to HQP training and knowledge mobilization activities, you may move funds between budget categories as you see fit. The one exception is any additional transfers to the Equipment category, which require approval of the co-Research Directors if up to 25% of the annual grant total, and approval of the RMC if above 25% of the annual grant total. Finally, please ensure that you budget to send one investigator and one HQP to the Network's annual meeting.

See "CMN Research SOA & Budgets.xlsx" and complete "Worksheet -Y3 & 4"



Section 4. Year 4 deliverables

If you indicated that you wish to apply for the one-year, no-cost extension, please list detailed deliverables for Year 4 (1 April 2022-31 March 2023). Be as explicit and detailed as possible to support RMC approval of your carryover request as it relates to this additional year.

We require: (1) a clear work plan, including milestones for core activities; (2) HQP recruitment targets and training plans; and (3) plans for partner meetings, conference presentations, workshops, or other knowledge exchange and mobilization activities.

Research Deliverables

- Cory Fournier Master's thesis, and associated journal article drafted for peer review
- Kimberleigh Schultz doctoral thesis, and associated journal article(s) drafted for peer review
- Blair Kennedy results report and associated journal article(s) drafted for peer review
- Food security plan completion
- Evaluation report on Nío Nę P'ęnę governance project (Shúhta Nę K'édíke and IPCA) and associated journal article drafted for peer review
- Community research validation workshops

Training (e.g.) HQP Deliverables

- Continue on the land training for interns, academic HQP, Shúhta Nę K'édíke and Sahtú Youth Network (with funding from other sources)
- Continue on the job training for interns (Nío Nę P'ęnę́, Research and Youth interns)
- Continue participation in final phase research activities, including validation of research products

Knowledge Mobilization Deliverables

- Community photo book completed on Shúhtaot'ıne relationships with mountain caribou



Tulít'a and Norman Wells presentations to Dél_lnę 2021 Public Listening Session,
 Wildfires and Climate Change, and graphic recordings

Section 5. Year 4 budget

Using your estimated carryover from year 3, provide a detailed budget for the Year 4 (1 April 2022-31 March 2023) deliverables.

See "CMN Research SOA & Budgets.xlsx" and complete "Worksheet -Y3 & 4"