

Science Project Funding Guide for 2023-2024

NWT CIMP

Northwest Territories Cumulative Impact Monitoring Program

Updated: September 2022



If you would like this information in another official language, call us. English
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Indigenous Languages:
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NEW: Additional funding opportunity for barrenground caribou projects <u>this year only!</u>

NWT CIMP is excited to be working with Polar Knowledge Canada (POLAR) to provide a special one-time funding opportunity for barren-ground caribou monitoring and research through the *Collaborative* barren-ground caribou initiative: understanding drivers of population trends (initiative). This funding is available for projects that are science-based, traditional knowledge-based and/or projects that combine approaches, including community-led monitoring projects.

The initiative can provide up to \$100K per project, per year, for 3 years (larger amounts may be eligible if clearly justified). More information about the initiative, including <u>additional requirements</u> is provided in <u>Appendix A</u>. If applying for this funding, ensure you check the box on your NWT CIMP Letter of Intent form!

1. What is the Science Project Funding Guide?

This Guide explains the funding process for science projects under the Northwest Territories Cumulative Impact Monitoring Program (we use NWT CIMP or 'we' in the rest of this Guide).

In this Guide, we:

- introduce you to NWT CIMP, the projects we fund, and details you need to know before you apply
- explain how to apply for funding and how we assess applications
- outline your next steps and requirements if we approve your project.

But first, let's learn about cumulative impacts and NWT CIMP!

2. What is NWT CIMP?

We are the Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP). We are a source of environmental monitoring and research in the NWT.

NWT CIMP To watch and understand the land so that it can be used respectfully Vision forever. What our When we say watch the land, we mean using traditional knowledge and science to vision means monitor and research our environment. *Understanding* what we see means analyzing what we learned. We then take that information and share it, so it can shape policy and decisions that protect the land *respectfully forever*.

We support projects that monitor and measure **cumulative impacts**. We gather information on cumulative impacts, and we communicate what we learn to key northern decision-makers and the public. Our goal is to contribute to strong decisions on natural resources and sustainable development.

Cumulative impacts are the combined effects that human activities and natural processes have on our environment.

adapted from Canadian Council of Ministers of the Environment, 2014

How we put our vision into practice

NWT CIMP carries out four main activities. We:

- 1. work with our partners to consider what issues, monitoring, research, and approaches are the highest priority.
- 2. coordinate, conduct, and fund projects to collect and analyze data, and report on environmental conditions.
- 3. communicate what we learn to northern decision-makers and the public.
- 4. facilitate environmental audits to assess how the program and regulatory regime are doing.

We have a responsibility to do this work

Understanding cumulative impacts is:

- essential to sustainable development (see NWT CIMP's vision above)
- our legal responsibility. NWT settled land claim agreements and the Mackenzie Valley Resource *Management Act* (MVRMA) all require cumulative impact monitoring.

2.1 WHO ARE WE?

NWT CIMP is set up and managed by the GNWT, Department of Environment and Natural Resources (ENR). We partner with the following groups to set priorities and conduct monitoring and research:

- Indigenous governments and Indigenous organizations
- co-management boards
- universities
- federal and territorial governments

NWT CIMP is advised by a Steering Committee made up of representatives from Indigenous, federal, and territorial governments and co-management boards. The Steering Committee provides guidance and makes recommendations to our staff, who administer the program.

3. What projects do we fund and who can apply?

3.1 WHAT PROJECTS DOES NWT CIMP FUND?

We fund projects that study:

- cumulative impacts of both human activity and natural processes on the environment
- environmental trends, what may have caused them, and what they mean
- the conditions of specific parts of the environment, so we can use that information as a starting point or baseline to measure what happens to that area.

Current monitoring priorities focus on caribou, water and fish.

All projects **must** collect information that:

- reports on cumulative impacts and/or environmental trends
- decision-makers can use to better protect our land and water.

3.2 WHAT INFORMATION DOES NWT CIMP GATHER?

We consider traditional knowledge and scientific data equally valuable.

Traditional knowledge monitoring and research

We place a high priority on environmental monitoring and research that uses traditional knowledge. The goal is to apply what we learn from traditional knowledge to inform northern decision-making. Monitoring ideas for traditional knowledge projects are found in Appendix B. Communities choose the focus of traditional knowledge projects they propose. See the Traditional Knowledge Project Funding Guide.

Scientific monitoring and research

Science projects must respond to the monitoring and research priorities listed in the monitoring and research Blueprints for caribou, water and fish found in <u>Appendices C-E</u>. These Blueprints not only inform applicants of our priorities, they also guide how funds should be allocated.

To make the best use of funding, NWT CIMP is focused on geographic areas of past, current or proposed development where cumulative impacts of development are most likely to occur. Decision-makers are most likely to be interested in the results from these areas. A useful tool to identify these areas is the Inventory of Landscape Change web-viewer.

As necessary, science projects should collaborate with existing programs to agree upon the use of standardized data collection and analysis protocols. NWT CIMP recommends several monitoring protocols and guidance listed in <u>Appendix F</u>. This will help ensure the compatibility of datasets for use in regional cumulative impact assessment.

If your project collects both traditional knowledge and scientific data

Only **one** application needs to be submitted. However, the application must follow **both** the Traditional Knowledge Project Funding Guide **and** the Science Project Funding Guide to be complete. This requires:

- 1. ensuring a Traditional Knowledge Data-Sharing Agreement is completed prior to receiving funds;
- 2. addressing the specific monitoring and research priorities for caribou, water and fish outlined in the Blueprints.

3.3 WHAT PROJECTS DOES NWT CIMP PRIORITIZE?

All projects **must** meet the criteria in our *How do I apply for funding* section, but we are most likely to fund projects with the characteristics below. When you apply, we may suggest ways to make your project more relevant to our program to help you get funding.

We encourage projects that:

✓ Work with communities, Indigenous organizations, Elders, and youth

We support projects that include community members, local decision-makers, Indigenous organizations, Elders, and youth in all stages. This:

- · engages and builds capacity in the community
- promotes strong and self-sustaining communities
- involves Elders and traditional knowledge holders in decision-making
- helps preserve and pass down traditional knowledge to future generations
- encourages young people to build careers related to the environment where their work will contribute to long-term monitoring. We give preference to formal, short-term training that is more likely to help youth get jobs in the future.

✓ Study current monitoring priorities

Our current priorities are monitoring **caribou, water** and **fish**, so monitoring and research related to them is especially valuable. These monitoring priorities are provided by co-management boards and key regulators and decided together by our Steering Committee. See <u>Appendix G</u> for a list of these influential decision-makers.

✓ Benefit our partners

We share what we learn with the organizations and communities we partner with. We fund projects that gather information these partners can use to make decisions and to support new monitoring and research.

✓ Support or build on current research and collaborate with others

We encourage multidisciplinary and collaborative studies. Our funding process connects and encourages collaboration among researchers working in similar locations or addressing similar questions.

✓ Meet our criteria and are well designed

A well-designed project is key! You must meet our criteria and deadlines to receive funding. Please:

- contact communities and potential partners early to share your project idea and build support.
- follow the instructions in the forms carefully, including page limits, font sizes, and word counts.
- use the step-by-step "Designing Your Project" guide in <u>Appendix H</u>. It will help you design a project that is more likely to receive NWT CIMP support.

3.4 WHAT PROJECTS DOES NWT CIMP NOT CONSIDER?

We do **not** fund projects that:

- are clearly another organization's responsibility.
- collect baseline data for a specific development, for example a proposed or operating mine. We may consider a project that includes a development like a mine if the project goes **beyond** the physical area or scope of environmental study for that mine or development.
- focus **only** on community capacity-building or training.

3.5 WHAT FUNDING IS AVAILABLE?

NEW: For barren-ground caribou projects, the new initiative can provide up to \$100K per project, per year, for 3 years (larger amounts may be eligible if clearly justified). More information about the initiative, including <u>additional requirements</u> is provided in <u>Appendix A</u>.

For all other NWT CIMP projects, the **maximum** amount of funding per project is **\$60,000** per year (see <u>Appendix I</u> for a list of eligible costs). We consider both single and multi-year proposals. We encourage long-term monitoring projects, but we:

- review them annually to ensure continued funding
- approve them for a maximum of three years at a time
- usually start with a larger funding amount and reduce to smaller amounts over time.

We may consider additional funding:

- if your project has unexpected results or new questions that need more study (evaluated on a caseby-case basis)
- for larger collaborative projects.

3.6 WHO CAN APPLY?

The following groups are eligible to apply:

- Indigenous, federal, territorial and municipal governments
- academic institutions
- non-government organizations

Industry is **not** eligible for funding. If you represent an industry, you can partner with an Indigenous organization or community.

4. How do I apply for funding?

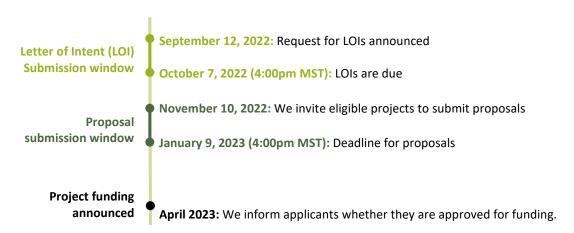
This section explains how to apply for funding which happens in two stages. The same process and forms are for both the NWT CIMP and **the special barren-ground caribou initiative funding.** In Section 5, we explain your next steps if we approve your project.

To apply, you must:

- 1. submit a letter of intent (LOI)
- 2. receive an invitation from us to submit a full proposal
- 3. submit a proposal.

4.1 WHEN DO I NEED TO APPLY? (KEY DATES)

For 2022-23 funding



4.2 SUBMITTING A LETTER OF INTENT

Your letter of intent is a **short description** of your project so we can understand your idea and assess if it meets our criteria.

How do I submit my LOI?

- 1. Fill out the **LOI form** in **Appendix J**.
- 2. E-mail the form (in PDF format) to nwtcimp@gov.nt.ca
 The deadline to submit a LOI is October 7th, 2022 by 4:00pm MST.

We will send you an email confirming we have received your LOI. **If you do not receive this email within 24 hours,** please call (867) 767-9233 ext. 53084.

What information do I need to include in my LOI?

There are detailed instructions in the LOI form. **Be sure to follow them!** Note the page limits, font sizes and word counts. We will evaluate your LOI using the criteria in Table 1. This evaluation criteria **must** be met to be invited to submit a proposal. **All sections and questions are mandatory**. LOIs that clearly address all evaluation criteria will be more successful in receiving an invitation to submit a proposal.

Please note: You only need to submit **one LOI** if your project collects both traditional knowledge and science information, but you must address the evaluation criteria in **both** this guide **and** the Traditional Knowledge Project Funding Guide.

Table 1—Letter of Intent Evaluation Criteria

Collaborative barren-ground caribou initiative		
Form section	#2	
Main question	Are you applying for one-time funding under the Collaborative barrenground caribou initiative?	
Additional information	See Appendix A to determine if your project is part of the scope for this special funding opportunity. Ensure that you are aware of the extra requirements of this special funding.	
Project idea		
Form section	#3	
Main question	What is the project idea?	
Required information to include	 What is your project? What is your monitoring or research question, or what do you want to investigate? What is the expected impact to northern decisions? 	
	Who is involved?	
Relevance to cumula	tive impact monitoring and research	
Form section	#4	
Main question	How will the project improve our understanding of cumulative impacts?	
Required information to include	 How does it improve our understanding of cumulative impacts, baseline conditions, and/or environmental trends? How will project results contribute to and influence northern resource management decisions? Identify the specific monitoring and research Blueprint priorities to be studied. (see Appendices C-E) 	
Study Plan		
Form section	#5	
Main question	How do you plan to carry out your project?	
Required information to include	How do you plan to carry out your project?Where is the project happening (location and nearest community)?	

	What kind of information or data will you collect?	
	What are your general timelines?	
Additional information	Use the "Designing Your Project" guide in <u>Appendix H</u> to help you design a better study. Projects that include communities and decision-makers will score	
	highly. Depending on your research focus, we may have standardized methods and protocols you should follow.	
Who benefits?		
Form section	#6	
Main question	Who will benefit from your project and why?	
Required	How are you involving community members and Indigenous organizations?	
information to include	 How will you support long-term capacity in the community or Indigenous organization? NWT CIMP strongly supports this! 	
	How will the project benefit others, including decision-makers?	
Additional information	Please do not include letters of support until the proposal stage.	
Communication		
Form section	#7	
Main question	How will you communicate your results?	
Required	How will the results be communicated?	
information to include	Who is your audience? (should include communities, decision-makers and us)	
	 What do you see as the expected end-products? Which products do you see being available to the public? What products will be provided to NWT CIMP? 	
Funding		
Form section	#8	
Main question	How much funding will you need?	
Required information to include	 How much will you need per year? (maximum of \$60K per year, for up to 3 years or \$100K per year, for 3 years, if applicable for the barren-ground caribou initiative) How will you spend funds? 	

What happens after I submit my LOI?

NWT CIMP staff will review your LOI and send you a letter with one of the following messages.

Your project:

1. may be eligible for funding, and we invite you to submit a full proposal.

- 2. may be eligible for funding **if** you make certain changes or collaborate with other applicants. We invite you to submit a full proposal incorporating the changes we suggest.
- 3. is not eligible for funding because it does not meet the evaluation criteria or our needs.

4.3 SUBMITTING A PROPOSAL

If we review your LOI and decide your project is eligible for funding, we will **invite** you to submit a proposal. Proposals are more in-depth than LOIs—this is your opportunity to provide us with the **full** picture of your project idea.

How do I submit my proposal?

- 1. Include the following documents in your proposal:
 - **proposal form**—we will send this to you when we invite you to submit your proposal
 - **budget template**—we will send this to you when we invite you to submit your proposal
 - **letters of support**—see Table 2 for the letters of support you need
 - any other supporting documents
- E-mail the above documents (in PDF format) to nwtcimp@gov.nt.ca
 The deadline to submit a Proposal is January 9th, 2023 by 4:00pm MST.

We will send you an email confirming we have received your proposal. **If you do not receive this email within 24 hours,** please call (867) 767-9233 ext. 53084.

What information do I need to include in my proposal?

There are detailed instructions in the proposal form. **Be sure to follow them!** Note the page limits, font sizes and word counts. We will evaluate your proposal using the criteria in Table 2. **All sections and questions are mandatory**. Your proposal will be evaluated based on the rating criteria of each section outlined in Table 2.

Please note: You only need to submit **one proposal** if your project collects both traditional knowledge and science data, but you must answer the questions in **both** this guide **and** the Traditional Knowledge Funding Guide.

Table 2—Proposal Evaluation Criteria

Project Summary			
Form section #3 Our evaluation (not rated)			
Required information to include	and why.		
Project objectives			
Form section Our evaluation			

Required information to include

- List the project objectives.
- Identify your monitoring and research questions.
- Identify expected outcomes and impact of your project.

Relevance to cumulative impact monitoring and research

Form section Our evaluation

#5

20% rating

Required information to include

- Describe how the objectives improve our understanding of cumulative impacts, baseline conditions, and/or environmental trends.
- Describe how the project will contribute to and influence northern resource management decisions, including specific examples.

Important things to consider

- Expand the information for this section submitted in your LOI.
- Specific examples of northern decisions may include those at a local, regional or territorial level.

Study design

Form section Our evaluation

#6

25% rating

Required information to include

- Describe how you will meet project objectives.
- List all methods, protocols and approaches you will use to collect and access your information or data.
- Describe expected information or data analyses.
- Describe how you will validate your findings with the community before submission of final results.
- Provide the detailed location of your project.

Important things to consider

- Expand upon your Study Plan from your LOI. It should be clear in this section how all project objectives will be met through the study design.
- Projects **must** primarily gather information that furthers the understanding of cumulative impacts and/or environmental trends.
- Projects that directly address cumulative impacts will score highly.
- Projects that include communities and decision-makers will score highly.
- Use the "Designing Your Project" guide <u>Appendix H</u> to help you design a better study.
- Depending on your research focus, we may have standardized methods and protocols you should follow (see <u>Appendix F</u>).
- **For projects that focus on environmental contaminants**, you must describe how you will analyze and provide this information to GNWT Health and Social Services.

Community support and engagement

Form section

#7

Our evaluation

Pass/Fail

Required information to include

- Describe how you will involve the community in planning and implementing your project. You must include a letter of support from communities and/or Indigenous governments and Indigenous organizations.
- Tell us how the project builds long-term capacity, training, or employment opportunities.
- Describe how you will share or give back results to participating communities. This should incorporate a community member presenting the findings.
- Describe how community contributions will be acknowledged.

Important things to consider

Examples of capacity building and training activities:

- sharing knowledge with community members by involving them in monitoring, collecting and summarizing information or data.
- offering hands-on training that should improve skills to help build careers.

Required letters of support

All applicants **must** include at least one letter from the Indigenous government, Indigenous organization, or community that clearly states the reasons for the support and how it will be provided.

Decision-maker support

Form section Our evaluation

#8

10% rating

Required information to include

- Identify the decision-makers most likely to use the project results and describe your engagement with them on the relevance of the project to them.
- Explain how these decision-makers can use the results for *specific* resource-management decisions. Specific decisions need to be clearly described.
- Describe how you will share results with these decision-makers.

Important things to consider

We are more likely to fund projects that provide useful information for key resource management decision-makers. Science projects must focus on the priorities that co-management boards and regulators have identified in our monitoring and research Blueprints.

Required letters of support (NONE)

<u>UPDATED</u>: Letters of support are no longer required from a decision-maker due to revisions made collaboratively in the Blueprints. See the community support section above for letter of support requirements.

Project team

Form section Our evaluation

#9

10% rating

Required information to include

- Identify all members of the team actively working on the project.
- Clearly describe each team member's role, responsibilities, and the experience they contribute to the project.

Important things to consider

To strengthen the proposal:

- Explain if/how experienced traditional knowledge holders or youth are actively participating in the project.
- Your proposed team should include a balance of technical experts and people with northern experience (*like community members and decision-makers*).

For projects that focus on environmental contaminants, your team must include a subject matter expert to analyze findings and provide this information to GNWT Health and Social Services.

Do not pad the project team with members that are not **active** participants. Document these members in the "Supporting Organizations" section.

Supporting organizations

Form section Our evaluation

#10

(not rated)

Required information to include

- List people and organizations that are supporting your project but are **not** actively working on it.
- Describe the reasons they support it.
- Describe how they support it.

Important Considerations

• This is the section to identify current and additional funds or in-kind support provided for this project by other organizations.

Deliverables, communication, and timelines

Form section Our evaluation

#11

25% rating

Required information to include

- Identify all expected deliverables (your products dataset, map, report, information summary, etc.), the target audience for each and how they will be made available.
- All mandatory reporting must be acknowledged, including mandatory reporting for recipients for the special initiative funding.
- Identify all northern meetings and workshops for each year, where you will present results.
- **For projects that focus on contaminants,** identify how you will communicate this information to the GNWT's Health and Social Services and communities (for example, a Risk Communication Plan).

Important things to consider

In the application form, you will need to include a Deliverables and Communication Plan describing **each year** of your project.

Budget

Form section
Our evaluation

#12

5% rating

Required information to

Clearly identify your budget, all other funding sources and in-kind support.

include

- Include the travel costs of presenting your results at a northern meeting.
- If applying for the special initiative funding, include travel costs to the workshops identified for year 1 and 3, in addition to travel costs to a northern meeting to share results.

Important things to consider

Complete the budget for **each year** of funding, using the template provided. If you are requesting an administrative fee (to a maximum of 15%), include it in your budget.

The budget must:

- be appropriate (for example, the charges must be reasonable for the size and complexity of the project and sample analysis). See Appendix I for a list of eligible costs.
- minimize costs for travel from out-of-territory destinations
- maximize benefits to NWT communities

Leveraging of funds from other sources is highly encouraged.

What happens after I submit my proposal?

NWT CIMP staff, our Steering Committee, and subject matter experts will review your proposal. We will contact you in April of the following year to tell you whether we will fund your project.

4.4 PROJECT FUNDING CHECKLIST

Plan and contact the communities and potential partners early to kickstart your project idea together.
Mark all important deadlines in your calendar.
Each template (LOI, proposal, reporting) has instructions . Be sure to <u>follow</u> them! Note the page limits, font sizes and word counts.
Remember to clearly connect project objectives to cumulative impact monitoring.
Clearly connect project results to northern resource management decision-making.
Clearly identify which team members are responsible for what parts of the project and identify their relevant experience.

5. I am approved—what happens next?

Congratulations! This section lays out what you need to do **if and after** we approve your funding. As outlined in your funding notification letter, you have certain requirements that you must meet to continue receiving NWT CIMP support.

You are not alone! We will assign a staff member to you as a project liaison. This person is your direct contact to NWT CIMP. They will answer your questions and review your reports. They will also set up an informal kick-off meeting, along with mid-year check-ins.

5.1 WHAT STEPS DO I NEED TO TAKE?

Apply for licensing

All research in the NWT must be licensed through the Aurora Research Institute. It is your responsibility to receive the necessary permits, licenses and permissions before your project begins or continues.

If your research involves human subjects, you must get approval by an accredited Research Ethics Board or Institutional Review Board **before** you can apply for a licence. For more information on research licensing and ethical research requirements, visit nwtresearch.com.

Submit a Data Management Plan

You **must** submit a Data Management Plan before we release the funding. This plan lays out how you will store, manage, access, and share the information you collect. Here is a sample <u>template</u> to use in creating your plan. See <u>Appendix K</u> for more information on our Data Management Policy.

Submit a Traditional Knowledge Data-Sharing Agreement (if applicable)

If your project also collects Traditional Knowledge, you **must** submit a Traditional Knowledge Data-Sharing Agreement to show everyone involved in the project has agreed on how you will use, store, and share the traditional knowledge you collect. (This may include the researchers, organizations, communities, and public.) See <u>Appendix L</u> for more information.

5.2 HOW ARE FUNDS PROVIDED?

We will provide you with a Contribution Agreement with ENR, for you to sign. The GNWT policy is to release 90% of the total amount at the beginning of each fiscal year. We release the other 10% after receiving and approving your financial statement and project deliverables. The deadline to submit your financial statement is $June~30^{th}$ of the following year.

Upon request, we can distribute a minimum of \$10,000 directly to partnering organizations through contribution agreements. Funds under \$10,000 can be distributed to Indigenous governments and organizations **only**. We cannot give funds to private businesses.

5.3 HOW DOES NWT CIMP SHARE MY PROJECT RESULTS?

We make all information public on the <u>NWT Discovery Portal</u>, which we administer. This online Portal includes a wide range of NWT environmental monitoring information, including NWT CIMP-funded

project results. We post scientific journal articles, community presentations, reports, data, and maps. Please continue to send us your publications and products as you release them!

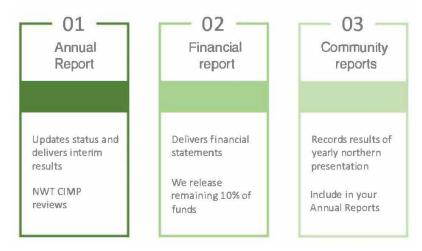
6. What reports do I need to submit?

We ask you to report on your project progress and results as the project unfolds. As part of your project, you must:

- **Send reports to NWT CIMP**—We use these reports to communicate regularly with communities, northern decision-makers, and the public about key results.
- **Report your results to communities**—You must send your results to the communities you are working with and keep them up to date.

6.1 PROJECT REPORTING AT A GLANCE

First and middle-year projects—mandatory reports



Final year of funding



6.2 WHEN DO I SUBMIT MY PROJECT REPORTS? (KEY DATES)

For 2023-24 funding



6.3 REPORTING DESCRIPTIONS

The list below describes the mandatory and optional reporting requirements (all reports are public, unless we state otherwise).

1. Annual Report (mandatory)—This report summarizes the year's activities, provides a status update, and includes an updated budget (we will give you a template).

How we use it—The Annual Report helps us assess if a project is on track. NWT CIMP staff review the report, identify any issues it raises, and make recommendations on whether to continue funding the project. Our Steering Committee is updated on project progress. (Projects that can document progress usually continue to receive funding for the full term.) We **do not** share this report publicly.

Reporting requirements—Annual Reports **must** show how you are addressing each of the criteria in Table 3. **You only need to address the current reporting year in your report.**

Table 3—Annual Report Criteria

Tem Crite	plate section and eria	Description
2	Abstract	Briefly outline the project purpose, preliminary results and next steps.
3	Key messages	List at least 3 key messages or preliminary results for the year in concise bullets.
4	Project objectives	Summarize the project objectives and/or your research and monitoring questions in concise bullets.
5	Relevance to cumulative impact monitoring and research	 Identify the contribution(s) to understanding cumulative impacts and/or environmental trends.

Project progress	Compare your project progress to the timeline we approved in your proposal. Is it on track?	
Changes to the project	Identify whether anything changed after we approved your proposal. This includes key activities, timelines (completion dates), and funding arrangements. Explain any delays in the project timelines.	
Deliverables	Update us on each deliverable you outlined in the Deliverables and Communication Plan in your proposal, including community reporting. Explain any changes or delays.	
Key project tasks for the next year	Concisely list key activities planned for the next funding year.	
Budget (template spreadsheet)	 Eligible costs are listed in Appendix I. Complete the provided budget spreadsheet that includes: 1. Confirmed funding sources for the year you are reporting on (tab <i>LAST YEAR</i>) 2. Detailed financial requirements for the next fiscal years. 3. All the funding you requested for the next year. List all the sources with detail. 	
	Changes to the project Deliverables Key project tasks for the next year Budget	

- 2. Financial report (mandatory)—This report summarizes how you spent your funds. The organization's financial division usually writes this report. Upon request, a template can be provided. We do not share financial reports publicly.
- **3.** Community reporting (mandatory)—This is an ongoing requirement throughout your project. You must present key results to at least one relevant northern meeting **every** year.

Here are some tips and options for involving the community and generating reporting:

- **Present at NWT CIMP's yearly regional results workshop.** We bring together researchers, community members and decision-makers to discuss results and collaborate on projects. You will be invited to the workshop **if** your project is taking place in the selected region. It is a good opportunity to present results, get feedback on the project, and form connections.
- **Arrange your own community meeting.** This is a good opportunity to communicate results, collaborate, and attract a wider audience. Seek it out! Some tips:
 - meetings should not charge a registration fee.
 - use plain-language presentations, handouts, and posters to communicate your deliverables.
 - consider using translation when you report your results back to communities.
 - decide what format works best for communicating report results to northern partners (video conference, pre-recorded video, conference call, poster).
- **4. Final Report (mandatory)**—The Final Report summarizes the findings of the entire project. You must account for all the funds you spent (we will give you templates).

How we use it—The Final Report helps us provide a summary of your project to decision-makers and the public. It is shared publicly on the NWT Discovery Portal.

Reporting requirements—Final Reports **must** describe how you addressed each of the review criteria in Table 4. NWT CIMP staff use these criteria to review and evaluate project Final Reports.

Table 4—Final Report Criteria

Template section and criteria		Description	
3	Abstract	Briefly outline the purpose (copied from your Annual Report), final results, and the impacts of the project.	
4	Key messages	Write 3-5 key messages in concise bullets. These are high-level summaries of your results.	
5	Project objectives and relevance to cumulative impact monitoring	 Summarize the project objectives and relevance to cumulative impact monitoring. Include the monitoring and research questions you investigated. 	
6	Methods	Identify the study area and methods you used to collect and analyze the data.	
7	Results	Identify the project results.Include figures, tables and maps, where appropriate.	
8	Discussion and contribution to understanding	 Explain how the project results addressed the project objectives and their importance to understanding of cumulative impacts. If applicable, identify how the project has contributed to better understanding environmental trends. 	
9	Resource management implications	Describe how the results will apply to northerners, particularly environmental regulators, Indigenous governments and Indigenous organizations, and community members.	
10	Project linkages	 State how you included decision-makers and communities in the project. Identify any new connections that emerged during the project and their value. 	
11	Deliverables	 Summarize each deliverable you outlined in Deliverables and Communication Plan in your proposal, by reporting year. Include community reporting. 	
12	Budget (template spreadsheet)	 Complete the provided budget spreadsheet that includes: Confirmed funding sources for the year you are reporting on (tab LAST YEAR) Confirmed funding sources for all years combined (tab FINAL YEAR). 	

- 5. NWT Environmental Research Bulletin (NERB) (mandatory)—You must submit a brief project summary using NWT CIMP's guidelines in the final project year. We publish these to communicate with communities and decision-makers. (NWT Environmental Research Bulletin)
- 6. Environmental Trend Report (ETR)(optional) If the project involves tracking an environmental trend, we encourage you to complete this <u>template</u> in the final project year. This is a useful way of communicating environmental trends to communities and regulators. We may publish these in the GNWT <u>State of Environment Report</u>.

E-mail all your reporting to nwtcimp@gov.nt.ca.





Savoir polaire Canada



Appendix A: Collaborative barren-ground caribou initiative: understanding drivers of population trends

Background

Migratory barren-ground caribou are very important in the NWT, both culturally and ecologically. These herds are known to alternate between periods of high and low population numbers on a time scale of decades. In the last 20 years, most herds found partially or entirely in the NWT have gone through large declines. This includes the 99% decline of the Bathurst barren-ground herd between 1986 and 2021. In contrast, the Porcupine herd reached an all-time population high in 2017.

Territorial government monitoring has documented many declines. However, understanding the main drivers of population trends remain incomplete. For several herds, harvest has either been closed for all hunters or very limited. This creates significant hardships and affects cultural harvest learning. Despite various studies, government agencies, Indigenous governments and Indigenous organizations, comanagement partners and communities have many unanswered questions about what is driving the changes in caribou abundance and what the future holds.

To address these knowledge gaps, Polar Knowledge Canada (POLAR) and the Government of the Northwest Territories Department of Environment and Natural Resources (GNWT ENR) are working together to provide a **special one-time funding opportunity**. This opportunity is available for projects that are traditional knowledge-based, science-based and/or projects that combine approaches, including community-led monitoring projects. This call focuses on combining existing research, data, and knowledge, supporting key monitoring activities, and developing new projects aimed at specific gaps. Participants in the three-year funding initiative will work together to publish a special report comparing the barren-ground caribou herds to support decision-making in the NWT and pan-arctic.

Funding opportunity description:

This one-time funding call extends targeted funding to barren-ground caribou research and monitoring, through NWT CIMP. Approximately \$850K project funding (\$650K from POLAR and \$200K from NWT CIMP) is available each year for the duration of this three-year special initiative.

The partnership funds research and monitoring to address key questions influencing the health and population of barren-ground caribou. Science-focused projects must address NWT CIMP's barren-ground caribou Blueprint, addressing a minimum of one of the following questions:

- 1. What drives barren-ground caribou herd numbers up and down? (population, abundance and trend metrics)
- 2. Why does the extent and severity of population cycles differ among herds?

3. What are the climate change implications to caribou demographics and migrations?

NWT CIMP and POLAR place a high priority on environmental monitoring and research that uses traditional knowledge. The goal is to apply what is learned from traditional knowledge to inform northern decision-making. For traditional knowledge-focused projects, communities choose the focus of the project to help understand barren-ground caribou population trends and to answer important community questions. See *Traditional Knowledge Monitoring Ideas* for more information.

Guiding principles

- This initiative promotes and supports contributions from traditional knowledge, science and community-based monitoring programs.
- Collaborative teams develop funding proposals that share perspectives and information, enhance community-led and science-based monitoring and research to address barren-ground caribou knowledge gaps.
- Project teams put knowledge into action, in part, by working together to plan and write a knowledge synthesis report based on the results across projects.

How is this different from the regular NWT CIMP funding call?

- The additional funds from POLAR, administered through NWT CIMP, support project teams in working together to combine research and knowledge (data analysis, workshops, retreats, publishing a special report and communications products).
- Traditional knowledge and science perspectives will be reflected in a collaborative report (Knowledge Synthesis) to describe drivers of barren-ground caribou abundance and to predict future conditions.
- To develop this collaborative report, in-person attendance in year 1 and year 3 of the project is required to plan chapter outlines (year 1) and to write the synthesis report (year 3).

How to apply

Please visit NWT CIMP's "How to Apply" for all instructions, key dates and Funding Guides. The first deadline is **October 7**th, **2022**, at **4:00 pm MST**.

Requirements for successful applicants

- 1. All applicants with a science-based proposal *must* address the NWT CIMP barren-ground caribou Blueprint question(s). For traditional knowledge-based proposals, communities choose the focus of the project to help understand barren-ground caribou population trends and to answer important community questions.
- 2. All applicants *must* meet NWT CIMP's evaluation criteria, reporting and all other requirements as outlined in the program's Funding Guides.
- 3. Putting knowledge into action (knowledge mobilization) is a key outcome of this initiative. All projects must participate in co-developing a final synthesis report of the main factors affecting barren-ground caribou abundance.
- 4. Program participants must complete POLAR's annual survey.
- 5. Program participants must follow sound data management practices as described by NWT CIMP's Funding Guides and POLAR.

Scope

- 1. The main focus is on herds found partially or entirely in the NWT (Porcupine, Cape Bathurst, Tuktoyaktuk Peninsula, Bluenose-East, Bluenose-West, Bathurst, Beverly and Qamanirjuaq). Comparative studies may include other migratory herds in Nunavut, Yukon, Alaska or northern Quebec/Labrador.
- 2. Methods rooted in traditional knowledge, science and/or community-led research and monitoring are encouraged. Approaches and methods may include:
 - monitoring;
 - research, modeling, and prediction;
 - knowledge synthesis and mobilization;
- 3. Applicants are strongly encouraged to demonstrate how community capacity building and engagement will occur through the project. Education and outreach can be outcomes of successfully funded projects.

Budget

This funding opportunity provides approximately \$850,000 a year for three years. Typically, **\$100,000 for each of the three years is available** for most projects. However, larger projects may be considered where the applicant clearly justifies a larger budget. Proposals and budgets *must* clearly demonstrate:

- 1. Participation in an in-person NWT workshop in year 1 (likely in Yellowknife, NT) and in a writing retreat in year 3 (possibly in Inuvik, NT) to plan and write a synthesis report;
- 2. Participation in a minimum of one northern meeting with communities each year (as per NWT CIMP's Funding Guides); and
- 3. Enhanced community capacity and involvement.

Appendix B: Traditional Knowledge Monitoring Ideas

NWT CIMP collects cumulative impact monitoring and research information to inform northern decision-making. The program focuses on three valued components: caribou, water and fish. Please see the monitoring and research Blueprints for each valued component's priorities. Many of NWT CIMP's funded projects are successful because they value both scientific data and traditional knowledge. For more information, visit our Action Plan and Funding Guides at www.nwtcimp.ca.

NWT CIMP places a high priority on the use of traditional knowledge in environmental monitoring and research. The goal is to apply what we learn from traditional knowledge to inform northern decision-making. For traditional knowledge funded projects, communities choose the focus of projects they propose.

NWT CIMP's Definition

Traditional knowledge - Facts, information, skills, values, and beliefs which have been acquired through experience, observations or by oral means from the land or from spiritual teachings and handed down through generations. Where possible, knowledge will be referred to using the preferred terminology of the knowledge holder or community.

NWT CIMP's Key Principles

NWT CIMP's principles guide us in meeting our mandate and inform project funding allocation. Important principles for applicants to consider are:

- Traditional knowledge and scientific knowledge are equally important sources of monitoring information and data.
- Community-based monitoring and capacity-building are supported in monitoring cumulative impacts.
- Monitoring cumulative impacts that are relevant to land and water use decisions is a strong focus

We encourage projects to work with communities, Indigenous organizations, Elders, and youth to:

- · engage and build community-capacity
- promote strong and self-sustaining communities
- involve Elders and Indigenous knowledge holders in decision-making
- help preserve and pass down traditional knowledge to future generations
- encourage young people to build careers related to the environment where their work will contribute to long-term monitoring.

How: Approach(es)

NWT CIMP supports several monitoring and research approaches including:

- Gathering and reviewing *existing* monitoring or research information;
- Collecting and analyzing *new* information and data, especially where a knowledge gap has been identified; and,
- Community-led collection, review and documentation of traditional knowledge, including people-environment relationships.

Ideas may include:

- Connections between caribou, water and fish and other parts of the environment.
- How large-scale human activities such as mining, affect caribou, water and fish and peoples' connections to the land.
- How relationships are affected between areas of the environment.
- Ways to incorporate traditional knowledge in resource development decision-making.

Caribou

- o Caribou-people relationships and how they are changing.
- Health, range, habitat, vegetation, predation, behaviours, how climate change is impacting these, and how they interact.
- o Information on hunting activity, camp and trail locations.
- Establishing and expanding winter track monitoring programs.

Water

- Water-people relationships and how they are changing.
- Cultural indicators of water, identification of important water bodies, how climate change is impacting these, and how these interact

Fish

- o Fish-people relationships and how they are changing.
- Fish health, habitat use, distribution patterns and changes in fish species over time and with climate change, and how these interact.

Appendix C: NWT CIMP Caribou Monitoring and Research Blueprint

NWT CIMP focuses on three valued components: caribou, water and fish. Please see the other Blueprints if your project has the potential to overlap. For more information, visit our Action Plan and Funding Guides at www.nwtcimp.ca.

Background

What is the Caribou Monitoring and Research Blueprint and how is it to be used?

The Caribou Blueprint informs NWT CIMP funding applicants of key caribou-related cumulative impact monitoring and research priorities of key decision-makers and subject-matter experts. It describes information that is necessary to better understand cumulative impacts to caribou and the relationships between people and caribou.

For science projects to be considered for NWT CIMP funding, project submissions <u>must</u> demonstrate that they meet Blueprint priorities. The Blueprint guides the NWT CIMP Steering Committee and staff on the allocation of funds. See the NWT CIMP Science Project Funding Guide for more information on the funding process.

Who informs the Blueprint?

NWT CIMP engaged subject-matter experts with direct involvement in caribou monitoring, research and management to update specific and high monitoring and research priorities. These are NWT CIMP's funding priorities for the duration of the current Action Plan (2021-2025). Experts engaged included comanagement boards, government scientists and regulators, and the NWT CIMP Steering Committee.

NWT CIMP's Key Principles

NWT CIMP's principles guide us in meeting our mandate and inform project funding allocation. Funding applicants should be aware of these principles, and, where possible, align their proposals with them. Important principles for applicants to consider are:

- Monitoring cumulative impacts that are relevant to land and water use decisions is a strong focus.
- Traditional knowledge and scientific knowledge are equally important sources of monitoring information and data.
- Community-based monitoring and capacity-building are supported in monitoring cumulative impacts.
- Effects- and stressor-based approaches are encouraged.
- Use of common and standardized data collection and analysis protocols are encouraged.

The Caribou Monitoring and Research Blueprint

This section details the locations, methods and topics of focus that are high priorities for NWT CIMP for both barren-ground and boreal caribou.

Where: Geographic locations of study

NWT CIMP prioritizes monitoring and research in areas impacted by disturbances, or vulnerable to disturbances. These include:

- Areas of past, current or future development interest;
- Areas impacted by climate change related disturbances;
- Areas vulnerable to impacts by climate change;
- Areas that support resilience to climate change (e.g., refugia); and
- Temporal (e.g., seasonal and annual variability, long term trends) and spatial (range, regional) scales.

How: Approach(es)

NWT CIMP supports several monitoring and research approaches including:

- Comparative studies across barren-ground herds
- Synthesis and analysis of existing monitoring or research data;
- Collection and analysis of new data, using standardized methods where possible;
- Model development and/or implementation (e.g. empirical or physically-based models); and
- Community-led collection and synthesis of Traditional Knowledge, including people-caribou relationships.

Priorities for Barren-ground Caribou

NWT CIMP's priorities are summarized in the table below and include disturbances from human activities (e.g., roads, oil and gas, forestry, mining, municipal infrastructure) and climate change (e.g., vegetation changes; fire dynamics; permafrost thaw).

NWT CIMP places a high priority on the use of traditional knowledge in environmental monitoring and research. Traditional knowledge is an important source of knowledge to better understand each of the following priority questions. Identifying cultural indictors and methods, changing people-caribou relationships and traditional use mapping are monitoring and research approaches that could be considered. For additional information, refer to <u>Traditional Knowledge Monitoring Ideas</u>.

To be considered for funding, the project proposal <u>must</u> **clearly** address one or more priority questions

1. What drives barren-ground caribou herd numbers up and down? (population, abundance and trend metrics)

- a. What are the predator-prey relationships, implications to caribou recovery and variation with herd size?
 - i. how wolves affect caribou calf and adult survival rates;
 - ii. ecology of tundra wolves and caribou; and
 - iii. how grizzly bears affect early caribou calf mortality
 - iv. how climate change may alter predator-prey relationships (e.g., changes in overlap of predator and prey ranges, and/or prey switching).
- b. What are the drivers of mortality/survival, pregnancy rates and calf survival/recruitment rates?
- c. Why are the patterns and trends so different among barren-ground herds?
- d. modeling that integrates demographic data, predation, harvest, environmental data, and assesses cumulative impacts on population trends
- e. other factors that affect caribou demographics and health

2. Why does the extent and severity of population cycles differ among herds?

a. Comparative studies of migratory herds considering habitat/vegetation diversity, variation in demographics, and predator/prey relationships.

3. What are the climate change implications to caribou demographics and migrations?

Traditional knowledge and understanding is central to answering these questions.

- a. What are the key migratory routes, water body crossings, and climate refugia, and how do we prioritize them to maintain connectivity and free migratory passage among them?
- b. Considering dynamic range use, where are the key areas and how will these change with climate change?
- c. What are the changes in vegetation and impacts of those changes to caribou demographics, comparing across migratory herds?
- d. What are the key climatic drivers of herd demographics?
- e. How can climate change and caribou demographics be used to predict future trends?

Priorities for Boreal Caribou

NWT CIMP places a high priority on the use of traditional knowledge in environmental monitoring and research. Traditional knowledge is an important source of knowledge to better understanding each of the following priority areas. Identifying cultural indictors and methods, changing people-caribou relationships and traditional use mapping are monitoring and research approaches that could to be considered. For additional information, refer to *Traditional Knowledge Monitoring Ideas*.

NWT CIMP's priorities are summarized in table 1 below and include disturbances from human activities and climate change. To be considered for funding, the project proposal <u>must</u> **clearly** address one or more priority areas.

Table 1: Boreal caribou priority areas related to disturbances, factors of interest, and scales of study

	ities can be grouped according to the statement: disturbance(s)] on [caribou-related factor(s)], at the s	scale of [scale(s) of study]."
Disturbances (identify one or more)	Related factors (identify one or more)	Scales of study (identify one or more)
 Human activities (e.g. roads, oil and gas, forestry, mining, municipal infrastructure) Climate change- related and/or natural disturbances (e.g. vegetation changes; fire dynamics; permafrost thaw; refugia) 	Population abundance and health: modeling that integrates demographic data and assesses cumulative impacts on population trends drivers of mortality/survival, pregnancy rates and calf survival/recruitment rates predator-prey dynamics (influence on caribou mortality/survival rates) Caribou distribution and behaviour: habitat selection, foraging and movement diets, feeding rates, activity budgets, energetics key indicators of change Zone of Influence Range condition: habitat/forage quality (vegetation distribution, productivity and phenology) habitat supply/availability (fragmentation/connectivity, rates of habitat regeneration, etc.) changes in important/preferred habitat People-caribou relationships: identification of cultural indicators and methods that can be shared widely traditional use mapping understanding how relationships with caribou are changing 	Temporal scale:

Appendix D: NWT CIMP Water Monitoring and Research Blueprint

NWT CIMP focuses on three valued components: caribou, water and fish. Please see the other Blueprints if your project has the potential to overlap. For more information, visit our Action Plan and Funding Guides at www.nwtcimp.ca.

Background

What is the Water Monitoring and Research Blueprint and how is it to be used?

The Water Blueprint informs NWT CIMP funding applicants of water-related cumulative impact monitoring and research priorities of key land and water decision-makers and subject-matter experts. It describes information that is necessary to better understand cumulative impacts to water, and the relationships between people and water.

For science projects to be considered for NWT CIMP funding, project submissions <u>must</u> demonstrate that they meet Blueprint priorities. The Blueprint guides the NWT CIMP Steering Committee and staff on the allocation of funds. See the NWT CIMP Science Project Funding Guide for more information on the funding process.

Who informs the Blueprint?

NWT CIMP engaged subject-matter experts with direct involvement in water monitoring, research and management to update specific and high monitoring and research priorities. These are NWT CIMP's funding priorities for the duration of the current Action Plan (2021-2025). Experts engaged included comanagement boards, government scientists and regulators, and the NWT CIMP Steering Committee.

NWT CIMP's Key Principles

NWT CIMP's principles guide us in meeting our mandate and inform project funding allocation. Funding applicants should be aware of these principles, and, where possible, align their proposals with them. Important principles for applicants to consider are:

- Monitoring cumulative impacts that are relevant to land and water use decisions is a strong focus.
- Traditional knowledge and scientific knowledge are equally important sources of monitoring information and data.
- Community-based monitoring and capacity-building are supported in monitoring cumulative impacts.
- Effects and stressor-based approaches are encouraged.
- Use of common and standardized data collection and analysis protocols is encouraged.

The Water Monitoring and Research Blueprint

This section details the locations, methods and topics of focus that are high priorities for NWT CIMP.

Where: Geographic locations of study

NWT CIMP prioritizes monitoring and research in areas impacted by disturbances, or vulnerable to disturbances. These include:

- Areas of past, current or future development interest;
- Areas impacted by climate change related disturbances;
- Areas vulnerable to impacts by climate change.
- Areas that support resilience to climate change; and
- Temporal (e.g., seasonal and annual variability, long term trends) and spatial (range, regional) scales.

How: Approach(es)

NWT CIMP supports several monitoring and research approaches including:

- Synthesis and analysis of existing monitoring or research data;
- Collection and analysis of new data, using standardized methods where possible;
- Model development and/or implementation (e.g. empirical or physically-based models); and
- Community-led collection and synthesis of Traditional Knowledge, including people-water relationships.

What: Priorities

NWT CIMP places a high priority on the use of traditional knowledge in environmental monitoring and research. Traditional knowledge is an important source of knowledge to better understand the following priorities. Identifying cultural indictors and methods, changing people-water relationships and traditional use mapping are monitoring and research approaches that could be considered. For additional information, refer to *Traditional Knowledge Monitoring Ideas*.

NWT CIMP's priorities are summarized in the **table 1** below and include disturbances from human activities and climate change. To be considered for funding, the project proposal <u>must</u> identify one or more priority areas <u>from each column</u>.

Table 1: Water priority areas related to disturbances, water related factors of interest, and scales of study

Many of NWT CIMP priorities can be grouped according to the statement:

"The impact(s) of [disturbance(s)] on [water-related factor(s)], at the scale of [scale(s) of study]."		
Disturbances (identify one or more)	Related factors (identify one or more)	Spatial scale(s) of study (identify one or more)
 Human activities (e.g. roads, oil and gas, forestry, mining, municipal infrastructure) Climate change-related and/or natural disturbances (e.g. permafrost thaw, precipitation change, forest fires, flooding) 	Of lakes, rivers/streams, or wetlands (baseline conditions, seasonal variability, and/or long-term trends): Water balance (surface and groundwater) • Modeling tools to help anticipate future changes • Hydrological studies to develop long-term trends Water quality • Understanding permafrost thaw slump contributions to sediment load and associated river chemistry • Existing and projected vulnerabilities on lakes from climate change and land use impacts • Impacts to lake ice, water temperature and nutrient dynamics Biotic elements of aquatic ecosystem health: (except fish -please see Fish Blueprint) • Key indicators of change • Impacts of DOM, nutrients and sediment load People-water relationships: • Identification of cultural indicators and methods that can be shared widely • Traditional use mapping • Understanding how relationships with water are changing Ecosystem-based: • Identifying key aquatic ecosystem indicators of stress susceptible to change • Identifying key aquatic ecosystem indicators of stress susceptible to change • Identifying predominant drivers of variability, and their relative importance • Understanding processes governing disturbance-impact relationships • Understanding resilience and ecological thresholds	Regional-scale (e.g. Dehcho, Mackenzie Delta, Ts'udé Niliné Tuyeta, Taiga Plains) Catchment-scale (e.g. Marian Watershed, Baker Creek catchment, community catchments) Local/point-scale (e.g. a landslide, greater area around a mine, a specific lake) Temporal scale: seasonal and annual variability long-term trends temporal comparisons within watersheds (e.g. Upper Peel)

Appendix E: NWT CIMP Fish Monitoring and Research Blueprint

NWT CIMP focuses on three valued components: caribou, water and fish. Please see the other Blueprints if your project has the potential to overlap. For more information, visit our Action Plan and Funding Guides at www.nwtcimp.ca.

Background

What is the Fish Monitoring and Research Blueprint and how is it to be used?

The Fish Blueprint informs NWT CIMP funding applicants of key fish-related cumulative impact monitoring and research priorities of key land and water regulators and subject-matter experts. It describes information that is necessary to better understand cumulative impacts to fish and the relationships between people and fish.

For science projects to be considered for NWT CIMP funding, project submissions <u>must</u> demonstrate that they meet Blueprint priorities. The Blueprint guides the NWT CIMP Steering Committee and staff on the allocation of funds. See the NWT CIMP Science Project Funding Guide for more information on the funding process.

Who informs the Blueprint?

NWT CIMP engaged subject-matter experts with direct involvement in fish monitoring, research and management to update specific and high monitoring and research priorities. These are NWT CIMP's funding priorities for the duration of the current Action Plan (2021-2025). Experts engaged included comanagement boards, government scientists and regulators, and the NWT CIMP Steering Committee.

NWT CIMP's Key Principles

NWT CIMP's principles guide us in meeting our mandate and inform project funding allocations. Applicants should be aware of these principles, and, where possible, align their proposals with them. Important principles that applicants should consider are:

- Monitoring cumulative impacts that are relevant to land and water use decisions is a strong focus
- Traditional knowledge and scientific knowledge are equally important sources of monitoring information and data.
- Community-based monitoring and capacity-building are supported in monitoring cumulative impacts.
- Effects- and stressor-based approaches are encouraged.
- Use of common and standardized data collection and analysis protocols are encouraged.

The Fish Monitoring and Research Blueprint

This section details the locations, methods and topics of focus that are high priorities for NWT CIMP.

Where: Geographic locations of study

NWT CIMP prioritizes research and monitoring in areas impacted by disturbances, or vulnerable to disturbances. These include:

- Areas of past, current or future development interest;
- Areas impacted by climate change related disturbances; and
- Areas vulnerable to impact by climate change.

How: Approach(es)

NWT CIMP supports several monitoring and research approaches including:

- Synthesis and analysis of existing research or monitoring data;
- Collection and analysis of new data, using standardized methodology when possible;
- Model development and/or implementation (e.g. empirical or physically-based models); and
- Community-led collection and synthesis of Traditional Knowledge, including people-fish relationships.

NWT CIMP places a high priority on the use of traditional knowledge in environmental monitoring and research. Traditional knowledge is an important source of knowledge to better understand each of the following priorities. Identifying cultural indictors and methods, changing people-fish relationships and traditional use mapping are monitoring and research approaches that could be considered. For additional information, refer to *Traditional Knowledge Monitoring Ideas*.

What: Priorities

NWT CIMP's priorities are summarized in table 1 below and include disturbances from human activities and climate change. To be considered for funding, the project proposal <u>must</u> identify one or more priority areas <u>from each column.</u>

Table 1: Fish priority areas related to disturbances, fish related factors of interest, and scales of study

Many of NWT CIMP priorities can be grouped according to the statement:

"The impact(s) of [disturbance(s)] on [fish-related factor(s)], at the scale of [scale(s) of study]."

Disturbances (identify one or more)	Related factors (identify one or more)	Spatial scale(s) of study (identify one or more)
 Human activities (e.g. roads, oil & gas, forestry, mining, municipal infrastructure) Climate change-related and/or natural disturbances (e.g. permafrost thaw, precipitation change, forest fires, flooding) 	Ecosystem-based: identifying key indicators of stress that are susceptible to change identifying predominant drivers of variability, and their relative importance understanding processes driving disturbance-impact relationships understanding resilience and ecological thresholds thresholds limiting abundance, distribution, or habitat use establishing baseline conditions, seasonal variability, and/or long-term trends Fish health Contaminants in fish* identifying mechanisms of contaminant movement through the food web and ecosystem Fish habitat People-fish relationships: identifying cultural indicators and methods that can be shared widely. traditional use mapping understanding how relationships with fish are changing	Regional-scale (e.g. Dehcho, Mackenzie Delta Ts'udé Niliné Tuyeta, Taiga Plains) Catchment-scale (e.g. Marian Watershed, Bake Creek catchment, community catchments) Local/point-scale (e.g. a landslide, greater area around a mine, a specific lake

*Note: When studying heavy metals in fish tissue, if it is determined that total arsenic concentration exceeds 3.5 ppm or the total mercury exceeds 0.5 ppm in fish tissue, NWT CIMP requires that the waterbody be identified to NWT CIMP and GNWT Health and Social Services. Researchers who are interested in establishing the relationship between total arsenic and the various species of arsenic within fish tissue should contact NWT CIMP for more information.

Appendix F: Data Collection Protocols and Guidance

We highly recommend the use of the following protocols and guidance for your project:

CARIBOU

Boreal:

• <u>National Boreal Caribou Knowledge Consortium</u> monitoring methods (type in "Factsheet" in the search bar)

Caribou behaviour:

• Contact nwtcimp@gov.nt.ca for a draft monitoring protocol.

WATER QUALITY AND AQUATIC HEALTH

Community-based monitoring data collection:

- <u>Community-Based Water Monitoring Protocol</u> developed by GNWT-ENR. It is currently being used to collect water quality data in 22 NWT communities mainly along the Mackenzie River.
- NWT CIMP Community-Based Water Monitoring Guidance developed by GNWT-ENR.
- <u>Standardized Water Sampling Instructions</u> developed by GNWT Taiga laboratory.
- <u>Mackenzie DataStream</u> (accessible through Chrome) has several water quality data collection templates: grab samples and sondes.

Northern water quality study design:

- Northern waters: a guide to designing and conducting water quality monitoring in northern Canada developed by Northern Ecological Monitoring and Assessment Network (Environment and Climate Change Canada)
- <u>Protocols Manual for Water Quality Sampling in Canada</u> developed by the Canadian Council of Ministers of the Environment (CCME).

Benthic invertebrates as a measure of stream health:

• <u>Canadian Aquatic Biomonitoring Network (CABIN) Protocol</u> developed by Environment and Climate Change Canada.

FISH

Detection of salmonids in northern mountain streams:

• Native Stream Occupancy Monitoring Protocol.

Fish species and fish communities, physical and chemical water characteristics, aquatic invasive species, and fishing effort for lakes:

• Broad Scale Fish Community Monitoring Protocol.

VEGETATION

Natural variability in the vegetation of different site types:

• NWT CIMP Community-Based Vegetation Monitoring Protocol and data templates. Once this baseline has been established, it can be used as a means to assess the effects of disturbance and other environmental changes. Template data sheets are available for active layer, berries, community composition, functional groups, sample collection, site description and tree measurements.

Natural variability in time and space in berry productivity across the Canadian Arctic and Sub-Arctic:

• <u>Berry Monitoring Protocol</u> developed by the Universities of Quebec, Montreal and British Columbia.

Seismic Line Recovery:

• <u>Data Collection Manual & Methods</u> developed by GNWT Forest Management.

NWT CIMP adds additional recommended protocols and standards to this list annually as they are adopted.

Appendix G: Influential decision-makers in the NWT

The organizations below shape northern resource management decisions. In particular, they help set the monitoring priorities for NWT CIMP. We also communicate results from projects back to these organizations to help them make evidence-based decisions.

We encourage applicants to learn about influential organizations in northern resource management in their project area.

Indigenous Governments/Indigenous Organizations

Akaitcho Territory Government Gwich'in Tribal Council
Dehcho First Nations North Slave Métis Alliance

Inuvialuit Joint Secretariat Northwest Territory Métis Nation
Inuvialuit Regional Corporation Sahtu Secretariat Incorporated

Tłįcho Government

Northern Resource Management Boards

Environmental Impact Review Board Mackenzie Valley Review Board

Inuvialuit Water Board Mackenzie Valley Land and Water Board

Gwich'in Land and Water Board

Gwich'in Renewable Resources Board

Sahtu Land Use Planning Board

Sahtu Renewable Resources Board

Wek'èezhìi Land and Water Board Wek'èezhìi Renewable Resources Board

Government of the Northwest Territories

Environment and Natural Resources Executive and Indigenous Affairs

Infrastructure Lands

Industry, Tourism and Investment (NWT Municipal and Community Affairs

Geological Survey)

Education, Culture and Employment (Prince of

Wales Northern Heritage Centre;
Aurora Research Institute)

Government of Canada

Crown-Indigenous Relations and Northern Affairs Canada Fisheries and Oceans Canada Environment and Climate Change Canada Parks Canada Natural Resources Canada

Appendix H: "Designing Your Project" Guide

A well-designed monitoring or research project is key! Below is a step-by-step guide to help design your project. You are more likely to receive NWT CIMP funding if you follow these steps.

Step 1: Define a purpose. Why is monitoring needed?

The first and most important step is to clearly define the study's purpose. This may be broad— We want to know if water is changing. Or it may be specific—We want to know if climate change is causing higher water levels. A clear understanding of the objectives and rationale will help shape all other steps in your study design.

Step 2: Identify important connections. How do things connect, and what should we monitor?

A clear purpose to your project will help you identify exactly what you should monitor. Also, identifying important connections between different parts of the environment—for example, the connections between climate change, permafrost thaw, groundwater and water levels—will help you to figure out if you should monitor additional aspects. You could bring in other partners and subject-matter experts to discuss possible connections.

Step 3: Review current information. What is already known?

This step involves reviewing traditional knowledge and scientific reports about the issue you want to study. It will help you identify similar studies, existing information sources, and appropriate methods to collect and analyze data. It may also help you sharpen the project's purpose and refine your ideas about how things connect (steps 1 and 2).

Step 4: Ask the right questions. What needs to be answered?

At this point, you will have a clear purpose, know what you want to monitor, and have a good sense of available information. You can now define specific monitoring or research questions that will guide the collection and analysis of information. For example: *How is permafrost thaw changing groundwater flow?* What impact is changing groundwater flow having on water levels in lakes and rivers?

Step 5: Make a plan. How will we find answers?

This step is all about finding ways to answer the questions posed in step 4. You will need to create a detailed plan that spells out how, where, and when you will collect, store, analyze, and report information, and who will do these tasks. This step includes figuring out logistics for transportation, equipment, safety, and environmental protection.

Step 6: Collect information. How do we gather the observations?

Data collection is typically the most expensive step in northern monitoring. This means it is important that you clearly define, understand, and have a well-trained team carry out your observations—whether through field work or interviews.

Step 7: Analyze information. How can we turn observations into useful knowledge?

Analysis *how you unlock* the knowledge you gathered in the information you collected in step 6. Traditional stories and observations from communities provide valuable insights into what's happening on the land. Such insights can go a long way towards answering key monitoring questions.

Step 8: Report findings. How should we tell our story?

The "story" your study reveals needs to be told in the *right way to the right people*. Know your target audience. Decide what key messages you should deliver and *how* to deliver them. It is very important to report how the results teach us better ways to manage the land.

Step 9: Adapt to changes. What has changed? Should we adjust the project?

If a project is designed to take place over a long period, important things might change as time goes on. It is important to keep an eye on and track these changes. They include the environment itself and the original project partners, team leaders, funding levels, community values, or government priorities. You may need to adjust the study design to stay relevant and effective.

If you would like more details on these steps to designing a project, check out this resource.

Appendix I: What costs can I include in my budget?

Below are the costs that you may include in your budget.

IMPORTANT: We look for budgets that maximize the benefits to northern communities.

Professional fees and services

- Wages for people you hire for this specific project.
 - o This does not include salaried employees.
 - Indigenous or community organizations may request a salary replacement for employees participating in the project.

Equipment and facilities

- Equipment you need specifically for the project (whether you buy, lease or rent it).
- Maintenance of currently owned equipment (we consider this in-kind support).
- Hall and meeting-room rental and laboratory use.

Travel

- Travel, meals, and accommodation (including costs to report project results to communities).
- Expenses for field camps, vehicle and aircraft rental, gas purchase, and shipping charges.

Other costs

 Miscellaneous costs, such as office supplies and operating expenses (like office space, phone, printing).

Administration fee (excluding federal and territorial governments)

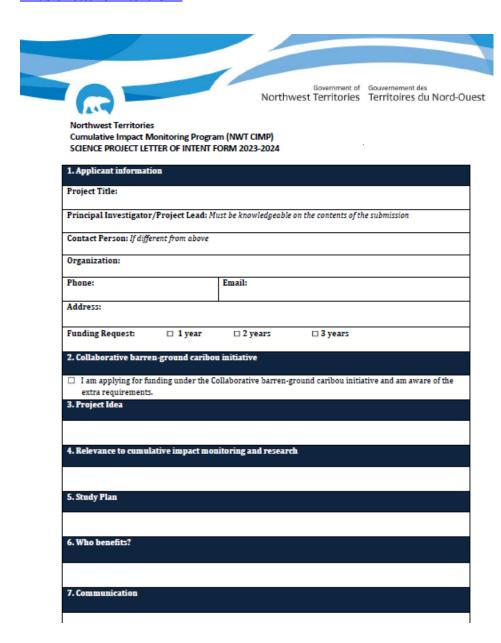
• Maximum of 15% administration fee applies to organizations that receive funding. This must be identified in your budget.

Copyright for publications (public)

• We encourage you to publish project results in an open journal. If this is not possible, up to \$5000 is eligible to allow distribution rights to the paper.

Appendix J: Letter of Intent Submission Form

Fillable Letter of Intent form





Government of Gouvernment des Northwest Territories Territoires du Nord-Ouest

Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP) SCIENCE PROJECT LETTER OF INTENT FORM 2023-2024

8. Funding

Thank you for your submission!

Letter of Intent Submission Checklist

Please ensure your application is complete with the following:

- √ I completed all sections and questions
- I used the correct font style, size and page limit.
- ✓ I sent my full application in PDF format to <u>nwtcimp@gov.nt.ca</u>

Deadline for LOIs is October 7th, 2022, 4:00 pm MST.

Contact Us!

NWT Cumulative Impact Monitoring Program Department of Environment and Natural Resources Government of the Northwest Territories (867) 767-9233 ext. 53084

nwtcimp@gov.nt.ca

The personal information contained on this form is collected under the authority of the Access to Information and Protection of Privacy Act Section 40(c)(i). It is used for the purposes of implementing NWT CIMP activities covered under the NWT CIMP Traditional Knowledge and Science Project Funding Guides. Any questions relating to the collection and use of personal information on this form may be directed to mwtcimp@gov.nt.ca

Appendix K: NWT CIMP Data Management Policy

We want project information and data to be available to other researchers and other people who are interested. We also want to make it available as soon as possible in the project process. To make sure your project shares information in this way, **every project must have a Data Management Plan** (DMP) before we release your funding.

WHAT DOES MY PLAN NEED TO INCLUDE?

Here is a sample template to help create a DMP that:

- will describe how you and your researchers will manage and share the information and data you generate
- is appropriate for the information and data you are collecting
- follows current best practices for managing information and data
- can adapt to your discipline and whether you are gathering traditional knowledge or scientific data
- can evolve if your research becomes more collaborative

The template will guide you to make sure your DMP includes:

- 1. what kind of data, samples, software, presentations, curriculum material, and other products you will produce from the project
- 2. what standards and protocols you will use for data and metadata format and content (for scientific data only)
- 3. where you will store and save the data after the project ends (in hard copy or online)
- 4. your policies about sharing information, including how you will protect people's privacy, confidentiality, security, intellectual property, or other rights and requirements
- 5. your policies and provisions for re-using, re-distributing, and producing information that is derived from the research
- 6. your plans for archiving data, samples, and other research products and preserving access to them.

For scientific research

Water-quality data

Projects with water quality sampling must:

- 1. Create a metadata record on the NWT Discovery Portal using the <u>NWT CIMP Metadata Standards for Reporting Water Quality Information in the NWT</u> template.
- 2. Upload raw water quality data annually to the <u>Mackenzie Datastream</u>, (using Google Chrome), an online platform for sharing information about freshwater.
- 3. Create a record for water quality grab sample data using a template available here.

NWT CIMP encourages using <u>Portage DMP Assistant</u> as an online tool for preparing DMPs. Project leads register to use the site and create their own DMP. The site will:

- ask you a series of guided questions
- create a DMP based on your answers that you can export.

Appendix L: Traditional Knowledge Data-Sharing Agreement

Traditional knowledge gathered from Indigenous communities and people is an important resource. Both communities and individuals are keepers of collective cultural knowledge. Researchers must treat this knowledge with respect and only share it with consent.

All traditional knowledge projects and projects that include both traditional knowledge and science **must** have and submit a Traditional Knowledge Data-Sharing Agreement to receive funding. This agreement will clarify how traditional knowledge will be shared with various parties. The agreement ensures you have:

- explained to each person how you will use their knowledge
- received formal consent from each person to share their knowledge

NWT CIMP has a sample <u>template</u> to help you draft an agreement that meets the needs of everyone involved. Projects can modify this template in collaboration with the community, if necessary.

Every agreement must specify:

- any traditional knowledge you gather from the project remains the property of the people who shared it with you
- the agreement does not override the fact that Indigenous communities have full rights over their own unique traditional knowledge
- what information will be shared and with whom, while protecting the communities' rights to their knowledge
- the project may share summaries of the research in documents, publications, reports, videos, presentations, websites, or posters (NWT CIMP requires summaries we can share publicly)
- the research based on traditional knowledge can be considered in government decisions
- that the project will use, store, and share traditional knowledge in a way that honours its commitments to confidentiality

Traditional knowledge agreements, policies, and guidelines are common in the NWT, and some communities or organizations already have these in place. You should follow or refer to the documents below, depending on which communities you are working with. It is always best to check directly with the community or organization! You can also review these documents as examples to model your agreement on:

- Akaitcho Dene First Nations
 - o Akaitcho Exploration Agreement (2008)
- Aurora Research Institute
 - o Guide to Research in the Northwest Territories (2011)
- Deh Cho First Nation
 - o Deh Cho First Nation Traditional Knowledge Research Protocol (2004)
- Government of the Northwest Territories
 - o <u>Traditional Knowledge Policy 53.03 (2005)</u>
 - o Government of the Northwest Territories Traditional Knowledge Best Practices Summary (2010)
- Gwich'in Tribal Council Gwich'in Social and Cultural Institute
 - o <u>Traditional Knowledge Policy: Working with Gwich'in Traditional Knowledge in the Gwich'in Settlement Region (2004)</u>

- o <u>Conducting Traditional Knowledge Research in the Gwich'in Settlement Area: A guide for</u> researchers
- Inuvialuit Regional Corporation
 - o <u>Inuvialuit Regional Corporation Guidelines for Research in the Inuvialuit Settlement Region</u> (2000)
- Mackenzie Valley Land and Water Board
 - o Mackenzie Valley Land and Water Board Engagement and Consultation Policy (2013)
- Mackenzie Valley Review Board
 - o Guidelines for incorporating Traditional Knowledge in Environmental Impact Assessment (July 2005)
- North Slave Metis Alliance
 - o North Slave Metis Alliance Community Engagement Policy (2009)
- NWT CIMP
 - o NWT CIMP Working Together Towards Relevant Environmental Monitoring and Research in the NWT (2013)
- Sambaa K'e Dene Band
 - Sambaa K'e Dene Band Policy Regarding the Gathering, Use, and Distribution of Yúndíit'õh (Traditional Knowledge) (2003)

Note: A Traditional Knowledge Data-Sharing Agreement as part of a NWT CIMP project is not intended to replace or supersede other agreements or relationships between the GNWT and Indigenous communities and their governments.