



Evaluation of CIRNAC's Northern and Arctic Environmental Sustainability Program

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List of Acronyms

CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
EALUPC	Environmental Assessment, Land Use Planning and Conservation
GBA Plus	Gender-Based Analysis Plus
NAES	Northern & Arctic Environmental Sustainability [Program]
NAO	Northern Affairs Organization
NCP	Northern Contaminants Program
NPFP	Northern Participant Funding Program
RPR	Regional Partnerships and Research
SEA	Strategic Environmental Assessment
QIA	Qikiqtani Inuit Association

Executive Summary

Overview

An evaluation was undertaken by the Evaluation Branch of the Audit and Evaluation Sector of Crown Indigenous Relations and Northern Affairs Canada, of the Northern and Arctic Environmental Sustainability Program (also referred to herein as “the Program” or “NAES”).

The Northern and Arctic Environmental Sustainability Program (NAES) leads Canada’s work in environmental assessment and sustainable management of land and resources in the North and Arctic. The Program, through the Northern Contaminants Program (NCP) initiative, supports research in monitoring contaminants throughout the North and Arctic and, through the Environmental Assessment, Land Use Planning and Conservation (EALUPC) initiative and the Regional Partnerships and Research (RPR) initiative, supports Indigenous communities in engaging in environmental initiatives to inform decision-making in the North. Ultimately, NAES aims to support Northern and Arctic lands and resources being sustainably managed and Northern and Indigenous communities being resilient to a changing environment.

The evaluation examined the Program’s performance over a 10-year period from 2013-14 to 2022-23 and assessed the relevance, design and delivery, performance, and efficiency of the Program’s activities and outcomes. Multiple lines of evidence informed the Evaluation including a literature review, a document review, a program data review, key informant interviews, and seven case studies of projects that receive or have received funding under the Program’s initiatives.

Relevance

The evidence collected indicates that the Program supports the federal government in meeting its current objectives, emerging needs and stated commitments in the North and the Arctic. The Northern and Arctic Environmental Sustainability Program (NAES) remains relevant and responsive to departmental priorities, national commitments to reconciliation and Indigenous sovereignty, as well as international commitments for environmental monitoring. The Program is increasingly relevant as environmental changes occur in the North and Arctic, influenced by climate, contaminants, and human development, which impact Indigenous communities and traditional/country food sources. The environmental research conducted through NAES is considered relevant and important to Northern and Indigenous communities. Further, there is clear alignment between program initiatives and the needs of the groups served. Federal representatives stated that sustainable development in the North and Arctic would not be possible without the support of the Program in engaging Indigenous partners, for integrating Indigenous Knowledge into decision making and for addressing capacity gaps within Indigenous organizations. As the rate of development in the North and Arctic is likely to accelerate, the Program is relevant to Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) now and for the foreseeable future.

Design and Delivery

The Program’s current design and delivery structures are effective in supporting outcomes, but the Evaluation highlighted areas where the processes could be improved, including finding better ways to support researchers through program timelines and funding levels, to support Indigenous organizations wanting to participate, to support Indigenous communities in engaging with research findings, and to engage youth in the research. In general, partners were aware of their

role and responsibilities. Program initiatives successfully integrate scientific research, Indigenous participation and contextual awareness into program design. Funded research contributes to a variety of governance, planning, and international mechanisms. However, NAES's capacity is stretched, leading to delays in delivering funding to recipients. Furthermore, funding for the program has not kept pace with increasing scope of NAES initiatives and the increasing cost of conducting research in the North.

Effectiveness, Efficiency and Economy

The initiatives are producing the expected outputs from their activities. Partners report that contaminants are being effectively monitored, Indigenous Knowledge is improving environmental research and communities are being effectively engaged. From the evidence collected, the Evaluation can reasonably conclude that the Program is contributing to its ultimate outcome of Northern and Arctic lands and resources being sustainably managed and Northern and Indigenous communities being resilient to a changing environment.

The Program has appropriate performance measure systems in place. However, measuring the Program's long-term impacts on Northern and Arctic lands, resources and communities would better help understand the extent that it is meeting its ultimate objectives. The data collected demonstrates that the Program has been successful in engaging Indigenous communities, has been successful in tracking contaminants of concern, and has funded research on environmental sustainability, but more could be done in defining and measuring key performance metrics for the Program as a whole.

The Program is responsive and adaptive to the needs of Indigenous partners. It supports co-development initiatives, Indigenous involvement in research, and the inclusion of Indigenous Knowledge. The research it supports has been held up as a model for Indigenous partnership by Indigenous partners and federal representatives. In the case of environmental assessment, participant funding increases the capacity of Indigenous communities to contribute to assessments relevant to their communities and interests, at least in the short term. All of these activities contribute to informed assessment and decision making that support sustainable management of the North and Arctic and resilient Indigenous communities. Moving forward, program initiatives should consider how best to support Indigenous organizations that lack the resources and the specific in-house skills to be meaningfully engaged. The use of short-term funding allows organizations to engage in specific projects but is limited in supporting Indigenous organizations in developing long-term capacity.

Recommendations

Based on evaluation findings and conclusions, it is recommended that CIRNAC:

1. Address inefficiencies in processes for approval and distribution of funding, including improving communication of funding timelines, and mechanisms to move toward multi-year funding.
2. Improve existing processes and opportunities for supporting Indigenous organizations' long-term capacity to participate in NAES funded research by:
 - a. expanding research advisor and contaminants research positions;
 - b. furthering locally-led engagement on research results; and
 - c. engaging youth, Elders, and other knowledge holders.

3. Consider approaches to address the capacity shortages resulting from a growing list of contaminants of concern that require additional research, monitoring and assessment capacity.
4. Review and update the Program's logic model and performance measurement strategy to better articulate the existing connectivity between initiatives and to better measure shared outcomes.

Management Response / Action Plan

Project Title: Evaluation of the Northern and Arctic Environmental Sustainability Program

1. Management Response

Northern Affairs Organization (“the Sector”) acknowledges the findings of the evaluation report and supports taking action on the recommendations as detailed in the following plan.

While the programs that make up the Northern and Arctic Environmental Sustainability Program (NAES) are somewhat disparate, as a whole they share common goals: to support the sustainable management of Northern and Arctic lands and resources, and to support the resilience of Northern and Indigenous communities in the face of a changing environment. The evaluation report will be used by the Sector in future planning of distribution of funding to Indigenous organizations, and to guide delivery of program elements to better meet the needs of Indigenous organizations and researchers.

Northern and Indigenous Peoples are directly and disproportionately affected by climate and environmental changes. Communities, infrastructure, food sources, and traditional practices are increasingly impacted by climate, contaminants, and human development. The evaluation acknowledges that NAES is becoming increasingly relevant in this context, through its programs that support environmental research as well as national commitments to reconciliation and Indigenous sovereignty.

As the rate of development and change in the North and Arctic is likely to accelerate, it is important for the Program to continue to assess its relevance and level of impact in order to keep pace with the needs of the groups served. The Sector’s ability to achieve desired outcomes can potentially be improved with updated funding models, cross-initiative collaboration, better outreach and engagement, and support for community capacity building. Owing to the relationships established with Indigenous and Northern partners, and ongoing feedback received, the NAES seeks ways to improve how it delivers its programming, looking to ensure it is meeting the needs of partners in the most efficient and effective ways possible. The Sector agrees with the recommendations made in the evaluation report and proposes possible measures to address these recommendations. Some of these actions are already underway and will continue throughout the lifecycle of NAES initiatives, in an effort to continually improve the way the Program’s and the Sector’s work is conducted and supports research, monitoring and Indigenous organizations.

The Sector agrees with the findings that researchers and Indigenous representatives responded positively to the efforts of the Program to pursue multi-year research funding, particularly for the Northern Contaminants Program (NCP). At the same time, we recognize that the move from single-year projects to a multi-year framework, which occurred at the same time as the onset of the global pandemic, increased the workload of the Program and placed a strain on its capacity during periods of staff shortages and other workplace and program delivery transitions. The Sector also agrees that capacity constraints result from program funding levels that are frozen in time, and the absence of mechanisms to adjust to inflationary pressures, despite increasing demands to address a larger number and types of contaminants and their related risks. Further, despite administrative delays being the primary issue highlighted by those involved in NCP research, the report concludes that there is an overall positive relationship with Program officials.

The Sector agrees that processes under NAES can be improved to better enable capacity and participation. The Sector has already made progress towards moving to multi-year funding agreements for Indigenous partners, and continues to explore new and ongoing funds for core work and additional monitoring and research. This offers a measure of stability for both researchers and participants and allows for longer-term planning. Beyond funding structures, the Sector hopes to explore opportunities for cross-initiative collaboration to enable Indigenous organizations to maximize the benefits of research initiatives, while streamlining communications and reducing the burden on Indigenous organizations.

The Sector also recognizes that the structure of the NAES' Performance Information Profile (PIP) is in need of updating. Some initiatives under the NAES rely on Treasury Board funding, which makes the structure of the PIP unstable and subject to periodic changes. The Program is working with Chief Finances, Results and Delivery Officer (CFRDO) toward stabilizing its outcomes, activities and indicators so that changes are required less frequently. The Program will also work with CFRDO to develop indicators for its Ultimate Outcomes. It is important to note that the Sector may look at making changes to NAES structure and governance in the coming years, and will work with CFRDO and Financial Management Advisors (FMAs) to examine how this might be best accomplished.

2. Action Plan

Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
1. Address inefficiencies in processes for approval and distribution of funding, including improving communication of funding timelines, and mechanisms to move toward multi-year funding.	In general, Northern and Arctic Environmental Sustainability Program (NAES) will continue to work with financial administration in Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) on solutions to streamline the funding process, including for multi-year funding.	Director of Northern Science and Contaminants Research (NSCR)	<i>Start Date :</i> Q1 2024-25
		Director of Northern Participant Funding Program (NPFP)	<i>Completion Date:</i> Ongoing
		Director of Petroleum and Mineral Resources Management (PMRM)	NCP End Date: Q4 2024-2025 NPFP End Date: Ongoing as part of continuous improvements to the program RPR End Date: Ongoing as part of continuous improvements to the program
	Northern Contaminated Program (NCP) will shift the timelines of its annual program funding cycle and move projects towards multi-year funding whenever feasible. NCP will also explore the potential for gaining efficiencies through an integrated online application and review management system.		
	Northern Participant Funding Program (NPFP) is currently undertaking community engagement to increase awareness of the funding available so that recipients can be prepared to apply early in the impact assessment process. NPFP also continues to work with the co-management boards to ensure calls for proposals can be made in a timely manner.		

	<p>NPFP and Regional Partnership and Research (RPR) are currently moving towards multi-year funding where it makes sense for projects that span multi years. The length of the agreements is dependent on program funding availability, which for NPFP and RPR has been a max of five years, as well as the timeframe for established contribution agreements.</p>		
<p>2. Improve existing processes and opportunities for supporting Indigenous organizations' long-term capacity to participate in NAES funded research</p> <ul style="list-style-type: none"> a) by expanding research advisor and contaminants research positions; b) by furthering locally-led engagement on research results; and c) in engaging youth, Elders, and other knowledge holders. 	<p>a) NCP will continue to explore additional partnerships with Indigenous organizations, academic institutions, and other government programs and departments in order to enhance capacity in the North. Outcomes of these partnerships may include an expanded network of contaminants research advisors.</p> <p>b and c) NCP will co-develop an action plan with Regional Contaminants Committees, research advisors, and NCP Indigenous Partners to improve engagement with local communities, raise awareness of research results, and promote projects that partner youth with knowledge holders.</p> <p>b) Regional Partnership and Research (RPR) prioritizes funding for projects that are co-developed with communities and Indigenous organizations. This leads to co-interpretation of results and communication back to communities in a way that is best for them. RPR will seek further financial contributions to ensure locally-led engagement on research results can be broadened through participation at conferences or other research-oriented meetings.</p> <p>c) Northern Participant Funding Program (NPFP) will use the results from the recipients' survey it undertakes to identify opportunities for further engaging underrepresented groups in the participants funded through the NPFP.</p> <p>These areas can also be used as themes for capacity building funding to further improve in these areas.</p>	<ul style="list-style-type: none"> a) Director of Northern Science and Contaminants Research (NSCR) b) Director of NSCR; Director of Petroleum and Mineral Resources Management (PMRM) c) Director of NSCR; Director of Northern Participant Funding Program (NPFP) 	<p><i>Start Date:</i> Q1 2024-25</p> <ul style="list-style-type: none"> a) NCP End Date: Q4 2025-2026 b) RPR End Date: Ongoing as part of continuous improvements to the program; NCP End Date: Q4 2025-2026 c) NCP End Date: Q4 2025-2026; NPFP End Date: Ongoing as part of continuous improvements to the program
<p>3. Consider approaches to address the capacity</p>	<p>NCP will continue to work with the Business Management Unit (BMU)</p>		<p><i>Start Date:</i> Q1 2024-25</p>

<p>shortages resulting from a growing list of contaminants of concern that require additional research, monitoring and assessment capacity.</p>	<p>to identify available sources of the required mix of Vote 1 and Vote 10 to implement NCP's approved projects, and work with partner organizations to explore new (additional and/or in-kind) budget sources for NCP's core work, as well as ongoing funds for plastics monitoring and research. NCP will also evaluate the sampling and analysis schedule of its core monitoring activities, to identify possible cost savings while maintaining the program's ability to detect trends in contaminant levels. This would be carried out in accordance with the 6-yr schedule for the review of its strategic guiding documents ('NCP blueprints'), as approved by the NCP Management Committee.</p>	<p>Director of Northern Science and Contaminants Research (NSCR)</p>	<p><i>Completion:</i></p> <p>End Dates: NCP Q4 2026-2027</p>
<p>4. Review and update the Program's logic model and performance measurement strategy to better articulate the existing connectivity between initiatives and to better measure shared outcomes.</p>	<p>The Performance Information Profile (PIP) is being updated to reflect new TB sub outcomes and indicators, and will have updated sections on Risks, Evaluation, Gender Based Analysis Plus (GBA Plus). Further updates will look at restructuring the NAES PIP with the cooperation of Chief Finances, Results and Delivery Officer (CFRDO) and Financial Management Advisors (FMAs).</p>	<p>Director of Northern Science and Contaminants Research (NSC) Director of Resource Policy and Program Directorate (RPPD) Director of Environment and Renewable Resources Directorate (ERRD); Director of Petroleum and Mineral Resources Management (PMRMD)</p>	<p><i>Start Date:</i> Q1 2024-25</p> <p><i>Completion:</i> Q4 2027-28</p>

1. Introduction

1.1 Program Context

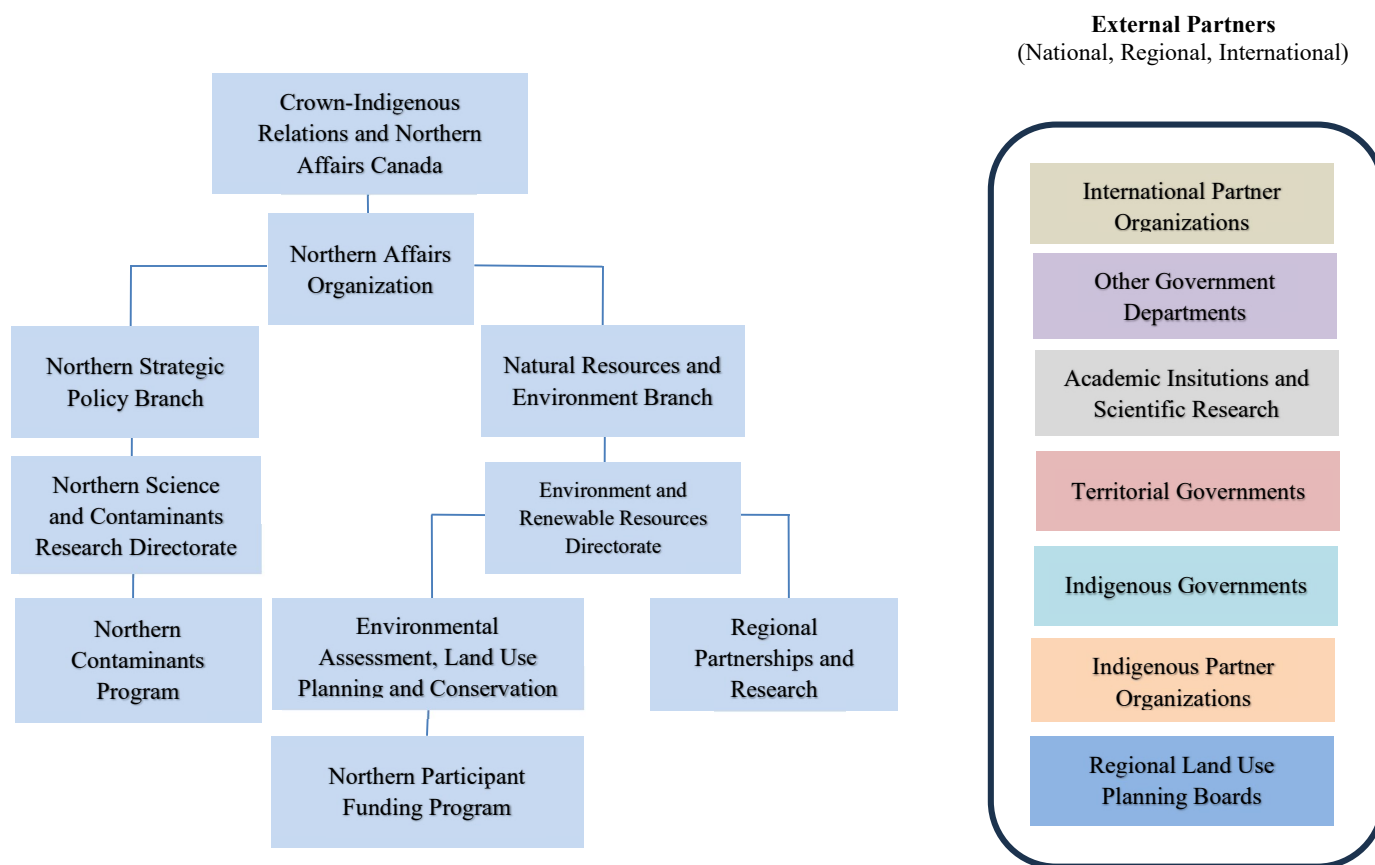
The Northern and Arctic Environmental Sustainability Program (NAES) contributes to Canada's core responsibility of Northern Affairs and is delivered and managed by the Northern Affairs Organization (NAO). It leads Crown-Indigenous Relations and Northern Affairs' (CIRNAC) work in research, monitoring, and sustainable management of land and natural resources in the North and Arctic. Canada's Northern and Arctic regions encompass the territories of Yukon and Northwest Territories, and Inuit Nunangat, containing the four Inuit land claim regions (Nunatsiavut, Nunavut, Nunavik, and the Inuvialuit Settlement Region). It is a vast geographic area of differing environments and communities, home to three distinct Indigenous groups (First Nations, Inuit, and Métis Nation), and with diverse governance structures. NAES works within this complex context to contribute to the ultimate outcomes of the sustainable management of Northern and Arctic lands and resources, and to support Indigenous communities in being resilient to changing environments.

NAES was created in fiscal year 2017-18 following the introduction of the 2016 *Policy on Results*, which grouped several existing initiatives under a single program. NAES has not been previously evaluated, but some initiatives within NAES were evaluated prior to amalgamation. These include the evaluations of Land and Water Management in fiscal year 2016-17 and of the Northern Contaminants Program (NCP) and Northern Scientific Training Program (NSTP) in fiscal year 2012-13. The NCP is also partially within the scope of the Environment and Climate Change Canada (ECCC) led Horizontal Evaluation of the Federal Leadership Towards Zero Plastic Waste in Canada Initiative, which covers the period from fiscal year 2019-20 to 2021-22.

1.2 NAES Ecosystem

NAO supports organizations, individuals, communities, and governments in the pursuit of strong, prosperous, and self-sufficient North and Arctic regions through science leadership, natural resource management, federal coordination and programming, and territorial relations. Within the period of this evaluation, NAES was operated through two branches of NAO: Northern Strategic Policy, which contains the NCP, and Natural Resources and Environment, which contains Environmental Assessment, Land Use Planning and Conservation (EALUPC), and Regional Partnership and Research (RPR).

Figure 1. Organizational Chart and External Partners¹



1.2.1 Program Organization

The Northern Contaminants Program (NCP) was created in 1991 and is one of the federal government's longest running Arctic research programs. It engages Northerners and scientists in research and monitoring of long-range contaminants in Canada's North and Arctic in the interest of addressing environmental and human health concerns at local, national, and international levels. The NCP operates under the direction of the NCP Management Committee, with administration and other support provided by the NCP Secretariat, staffed within the NAO. In 2019, the program's responsibilities were expanded to address the Towards Zero Plastic Waste in Canada Initiative.

Regional Partnerships and Research (RPR) supports research and helps ensure its availability to inform decision-making. Under RPR is Arctic Regional Environmental Studies, established in 2016. Outside the scope of this evaluation, there is also Arctic Marine Studies, introduced in 2021. Strategic Environmental Assessments (SEAs) help integrate environmental, cultural, and socio-

¹ Organizational chart was developed through consultation with CIRNAC's Chief Finances, Results and Delivery Officer Sector and the Government Electronic Directory Services. External partners were identified through consultation with the program and program stakeholders.

economic considerations into decision-making processes at a strategic level. They help to balance risks and benefits, mitigate potential risks, ensure that possible development initiatives are environmentally sound, and contribute to the long-term well-being of both humans and the physical environment. RPR completed two SEAs, one in the Beaufort Sea and one in the Baffin Bay and Davis Strait region. These assessments were completed between 2016 and 2021.

Environmental Assessment, Land-Use Planning, and Conservation (EALUPC) manages the federal government's legislated responsibilities for land use planning and environmental assessment in the North and Arctic. The group works towards Canada's conservation and economic development goals by providing advice and recommendations for Ministerial decisions on environmental assessments and land use planning in the North and Arctic, and ensuring Indigenous perspectives are present in environmental co-management processes. Within the EALUPC group, the Northern Participant Funding Program (NPFP) was established in 2018. It provides funding to Indigenous Peoples and other Northerners to participate meaningfully in impact assessments of major projects and will be evaluated independently of EALUPC. The initiative is distinct from the Impact Assessment Agency of Canada's Participant Funding Program given its Northern and Arctic focus. NPFP works with applicants to strengthen their project specific funding proposals, before they are ultimately reviewed by an independent Application Review Committee. Any surplus NPFP funding in a given year is used to fund Indigenous Governments and Organizations for non-project specific impact assessment capacity building projects tied to a selected theme (e.g., Gender-Based Analysis Plus, community-based monitoring).

1.2.2 Program Partners

NAES works within a network of partners both internal and external to the federal government, to support environmental sustainability and informed decision-making. The program works with several other federal government departments, including Fisheries and Oceans Canada, Environment and Climate Change Canada, Health Canada, Polar Knowledge Canada, Parks Canada, Indigenous Services Canada, Natural Resources Canada, Transport Canada, and the Canadian Northern Economic Development Agency. A core tenet of the program is supporting Indigenous governance and leadership in the management, monitoring and assessment of Northern and Arctic lands and resources.

The NCP works with Indigenous organizations and governments, providing funding support to the Council of Yukon First Nations, Dene Nation, Inuit Tapiriit Kanatami, and the Inuit Circumpolar Council for their role in the management of the NCP as NCP Indigenous Partners. It also engages internationally through the Arctic Monitoring and Assessment Programme, a working group of the Arctic Council, the Stockholm Convention on Persistent Organic Pollutants, and the Minamata Convention on Mercury, the Arctic Athabaskan Council, and the Inuit Circumpolar Council, providing leadership and expertise and sharing research results and data. The NCP Management Committee is chaired by CIRNAC and is composed of representatives from other federal departments, territorial and regional governments, national and regional Indigenous organizations, and academia, working in partnership to make funding, governance, operational and strategic policy decisions for the NCP.

Table 1: NCP Funding to Indigenous Partner Organizations

NCP Funding to Indigenous Partner Organizations within NAES Lifetime²							
Organization	2021-22	2020-21	2019-20	2018-19	2017-18	2016-17	Total
Council of Yukon First Nations	\$38,000	\$37,000	\$37,000	\$37,000	\$55,000	\$372,000	\$576,000
Dene Nation	\$36,000	\$41,000	\$41,000	\$51,000	\$63,000	\$210,000	\$442,000
Inuit Tapiirit Kanatami	\$109,000	\$163,000	\$163,000	\$182,000	\$150,000	\$97,000	\$864,000
Inuit Circumpolar Council Canada	\$145,000	\$178,000	\$178,000	\$179,000	\$158,000	\$156,000	\$994,000
Grand Total							\$2,876,000

*Note: Amounts rounded to nearest \$1,000.

RPR supports strong partnerships between CIRNAC and Indigenous and regional organizations. The initiative developed its Strategic Environmental Assessments with Northern and Arctic partners and supported the leadership of the Nunavut Impact Review Board, the Qikiqtani Inuit Association (QIA), and the Inuvialuit Regional Corporation in conducting the assessments. The assessments were used as part of the 5-year climate and science-based review mentioned in the 2016 United States-Canada Joint Arctic Leaders' Statement.

Through EALUPC, NAO supports the conservation initiatives of other line departments, including Environment and Climate Change Canada, Fisheries and Oceans Canada, and Parks Canada, by providing policy advice on regulatory systems in the North and Arctic. In addition to regulatory approvals (e.g., land use plan or impact assessment decisions), the initiative also works with co-management boards, territorial and Indigenous governments, and land claim organizations to provide related policy advice and analysis. The NPFP provides funding to Indigenous governments, non-governmental organizations, individuals and eligible local governments for participation in environmental assessments.

1.3 Program Profile

NAES aims to use a collaborative approach to engage with Northern and Indigenous communities and organizations to guide research and assessment. It seeks to ensure informed decision-making based on scientific and Indigenous Knowledge, and to co-develop strategic plans to address environmental concerns. Its activities, outputs, and intended outcomes have been drawn from the program's 2021 Performance Information Profile (PIP).

Intended Outcomes of NAES

Immediate Outcomes:

- Regional initiatives, land use planning and environmental assessment decision-making are well informed by science and Indigenous Knowledge, monitoring, and stakeholder input;

² [NCP Funded Projects \(science.gc.ca\)](https://science.gc.ca)

- A significant proportion of those supported to participate in an environmental assessment in the territories report that their participation improved the completed assessment;
- Levels and trends of contaminants, wildlife and people in Northern and Arctic environments are detected, measured and assessed; and
- Information on the geographic and ecological distribution of plastic pollution in the North and Arctic is available through monitoring and research.

Intermediate Outcome:

- Environmental governance, regional planning, public health, and national and international chemicals regulatory mechanisms are informed by Indigenous Knowledge, science, and environmental and socio-economic considerations.

Ultimate Outcome:

- Northern and Arctic lands and resources are sustainably managed (EALUPC, RPR); and
- Northern and Indigenous communities are resilient to changing environments (NCP).

This is accomplished through the following activities:

- Provide capacity and support to regional and Indigenous organizations (RPR);
- Provide research project-based funding (RPR);
- Participate in environmental assessment initiatives, and contribute to the review and analysis of impact assessment recommendations; and contribute to the production, review and analysis of land use plans, and participate in conservation initiatives (EALUPC);
- Provide capacity and support to Indigenous governments and rights holders to participate meaningfully in major project impact assessments (NPFP);
- Support the coordinated generation, collection and management of data, information and Indigenous Knowledge in relation to contaminants in the environment and traditional/country food (NCP); and
- Lead and/or contribute to the co-development, review, assessment and communication of contaminants data and information products at local, regional, national and international levels (NCP).

These activities serve to achieve the following five outputs:

- Funding agreements and interdepartmental letters of agreement for research, for gathering of Indigenous Knowledge and for monitoring work, and in support of regional and Indigenous organizations;
- Recommendations on environmental assessments, land-use planning, and conservation initiatives that are informed by both Indigenous Knowledge and science;
- Contribution agreements for Indigenous governments and rights holders to participate meaningfully in major project impact assessments in the Territories;
- Efficient and effective monitoring, including and human biomonitoring, to address environmental health issues in the North and Arctic; and
- Publication of data models, reports and advice.

1.4 Program Resources

Table 2 provides actual spending for NAES for fiscal years 2012-13 through 2022-23. The Program's funding authority is *Contributions for promoting the safe use, development, conservation and protection of the North's natural resources, and promoting scientific development for Indigenous Peoples and the North*. Given the federal reorganization and reformation of initiatives under the single program of NAES in 2017, Actual Spending for NAES as a whole is only available from fiscal year 2018-19 to fiscal year 2022-23.

Table 2: NAES Actual Spending within Period of Evaluation

Program's Actual Spending					
Fiscal Year	2018-19	2019-20	2020-21	2021-22	2022-23
Salary	1,797,000	1,761,000	2,131,000	2,249,000	2,283,000
O&M	4,705,000	4,668,000	3,303,000	2,263,000	2,814,000
Employee Benefit Plan	290,000	234,000	318,000	321,000	321,000
Total contributions for promoting the safe use, development, conservation and protection of the North's natural resources, and promoting scientific development for Indigenous Peoples and the North	6,035,000	7,488,000	6,428,000	6,881,000	9,301,000
Total	12,842,950	14,150,488	12,218,192	11,747,837	14,730,240

*Note: Amounts rounded to nearest \$1,000. Source: Consultation with the Chief Finances, Results and Delivery Officer Sector

Table 3: Disaggregated Contribution Funding

Disaggregated Contribution Funding					
Fiscal Year	2018-19	2019-20	2020-21	2021-22	2022-23
Program Management	71,200	1,447,200	2,107,000	137,100	85,100
Program Administration					28,500
Policy Development	108,700				
NCP: Northern Contaminants Program	2,939,500	3,016,400	2,830,000	2,595,600	2,546,000
NCP: Zero Plastic Waste in Canada		50,000	511,300	809,300	174,700
RPR: Marine Conservation Target West ³					543,300
RPR: Marine Conservation Target East					1,390,600
RPR: Arctic Regional Environmental Studies (ARES) Beaufort Sea	1,148,700	1,453,000	369,000	400,000	400,000

³ Marine Conservation is not covered under the scope of this evaluation as it was still in development during the evaluation period.

RPR: ARES Baffin Bay and Davis Strait	1,247,300	816,900	611,000	50,000	609,000
EALUPC: Environmental Assessment	519,900	704,700		803,400	983,600
EALUPC: Northern Participant Funding				2,086,000	2,540,400
Total	6,035,000	7,488,000	6,428,000	6,881,000	9,301,000

*Note: Amounts rounded to nearest \$1,000. Source: Consultation with the Chief Finances, Results and Delivery Officer Sector

The NCP publishes yearly data on its spending across its five subprograms: Human Health; Community-Based Monitoring and Research; Environmental Monitoring and Research; Communications, Capacity and Outreach; and Program Coordination and Indigenous Partnerships. The total NCP funding across this period is as follows:

Table 4: NCP Project Funding from FY2013-14 to FY2021-22

NCP Project Funding by Year ⁴	
Year	Funding
2021-22	\$4,762,000
2020-21	\$4,612,000 ⁵
2019-20	\$4,194,000
2018-19	\$4,280,000
2017-18	\$4,248,000
2016-17	\$4,146,000
2015-16 ⁶	\$4,550,000
2014-15	\$3,890,000
2013-14	\$4,120,000

*Note: Amounts rounded to nearest \$1,000.

2. Evaluation Description

2.1 Evaluation Purpose

In accordance with the Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) Five-Year Evaluation Plan 2020-21 to 2024-25, an evaluation of Northern & Arctic Environmental Sustainability Program (NAES) was undertaken by CIRNAC's Evaluation Branch in compliance with Section 42.1 of the *Financial Administration Act* and the Treasury Board's 2016 *Policy on Results*. NAES is one of eight programs under CIRNAC's Core Responsibility of Northern Affairs.

The evaluation scope covers fiscal years 2013-14 to 2022-23. It assesses the relevance, design and delivery, performance, and efficiency of the activities and outcomes of the following NAES initiatives: Northern Contaminants Program (NCP), Regional Partnerships and Research (RPR), and Environmental Assessment, Land Use Planning and Conservation (EALUPC), which contains the Northern Participant Funding Program (NPFP). Given its fiscal scope and size, the NCP is the primary focus of this evaluation.

⁴ [NCP Funded Projects \(science.gc.ca\)](https://science.gc.ca)

⁵ This increase in funding co-responds to the introduction of the Towards Zero Plastic Waste in Canada Initiative as identified in Table 2.

⁶ Funding data from prior to fiscal year 2016-17 was provided by the NCP.

2.2 Approach and Methods

An Evaluation Working Group was established to inform the Evaluation Branch through the evaluation process and to reflect the diverse perspectives of the groups engaged with NAES. It provided feedback to the Evaluation Branch on all key deliverables, including the Terms of Reference, Methodology, Preliminary Findings and Final Report, and assisted in facilitating data collection.

The working group consisted of CIRNAC officials representing each of the NAES initiatives, together with representatives from Dene Nation, Inuit Tapiriit Kanatami, Nunavut Tunngavik Inc., Inuit Circumpolar Council and the Kativik Environmental Advisory Committee.

The Evaluation reviewed the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the Federal Sustainable Development Strategy, the Arctic and Northern Policy Framework, and the Scientific and Indigenous Knowledge Integrity Policy to inform the evaluation.

Multiple lines of evidence informed the Evaluation. As detailed below, lines of evidence consisted of a literature review, a document review, a program data review, key informant interviews, and case studies. Findings were triangulated across lines of evidence to enhance validity.

Table 5: Summary of Evaluation Data Collection Methods

Method	Description*
Literature Review	<p>A review of relevant published literature was conducted with a focus on Indigenous Knowledge and its role in NAES. This informed the evaluation's assessment of the extent to which NAES initiatives were informed by Indigenous Knowledge, scientific, environmental, and socio-economic considerations.</p> <p>Literature was sought from a variety of sources, including publications from academic, Indigenous, and community-based groups.</p>
Document Review	<p>Over 150 public and internal program documents were reviewed to answer evaluation questions.</p> <p>Examples of key documents include policy documents, previous audits and evaluations, management plans, progress reports, presentations, government completed studies and reports.</p>
Data Review	<p>NAES initiatives collect a wide range of data from their daily operations. For this evaluation, the Program provided data to inform 2021 performance indicators and evaluation questions.</p>
Key Informant Interviews	<p>31 key informant interviews were conducted with</p> <ul style="list-style-type: none">• CIRNAC Officials;• First Nations and Inuit Parties• Territorial Governments; and• Other Partners. <p>Interviewees were asked about their experience with each initiative, with follow-up questions targeted to specific initiatives. Interview notes were coded and reviewed with qualitative analysis software to identify key themes. Findings were then contextualized and used to answer the relevant research questions.</p>

Case Studies	<p>Seven cases studies were developed based on a review of project documents and 27 interviews with key parties and program officials. Efforts were made to ensure representation of a broad range of program activities.</p> <p>Case studies under each initiative were:</p> <p>NCP</p> <ul style="list-style-type: none"> • Arctic Caribou Contaminant Monitoring Program project; • Exposure to Food Chain Contaminants in Nunavik: Evaluating Spatial and Time Trends Among Pregnant Women & Implementing Effective Health Communication for Healthy Pregnancies and Children project; • Northwest Territories Regional Contaminants Committee; and • Community-Based Monitoring of Plastic Pollution in Nunatsiavut project. <p>RPR</p> <ul style="list-style-type: none"> • Strategic Environmental Assessment for Baffin Bay and Davis Strait. <p>EALUPC</p> <ul style="list-style-type: none"> • Participant Funding in the Meliadine Gold Mine Project consultation process (NPFP); and • Participant Funding in the Diavik Diamond Mine consultation process (NPFP).
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Given the reorganization of these initiatives under the umbrella of NAES during the evaluation period and the siloed operation of initiatives, the Evaluation has generated findings both for specific initiatives, and across NAES as a whole. The report will indicate when findings speak to specific initiatives. As it has the greatest fiscal scope and size, NCP was the primary focus of this evaluation.

Table 6: Evaluation Period by Initiative

Initiative	Evaluation Period
Northern Contaminants Program (NCP)	2013-23
Environmental Assessment, Land Use Planning and Conservation (EALUPC)	2013-23
Northern Participant Funding Program (NPFP)	2018-23
Regional Partnerships and Research (RPR) [Arctic Regional Environmental Studies]	2016-21

2.3 Gender-Based Analysis Plus

The Government of Canada describes Gender-Based Analysis Plus (GBA Plus) as an “analytical process used to assess how diverse groups [...] may experience policies, programs and initiatives”, with consideration given to intersections of identity factors such as race, ethnicity, and age.⁷ Serving Indigenous communities is central to NAES objectives and with that consideration, this evaluation has applied a GBA Plus lens throughout the collection of data and analysis of findings.

2.4 Limitations and Mitigations

⁷ [Gender-based analysis plus \(GBA Plus\) - Canada.ca](https://www.canada.ca/en/government/public/gender-based-analysis-plus.html)

The Evaluation faced some difficulties in reaching individuals to participate in key informant interviews and case studies, and the data collection process was extended until the appropriate number of interviews across partner groups was achieved.

Factors impacting participation included inability to participate due to workload, inadequate familiarity with NAES as a program, and contextual factors such as poor bandwidth and connection in remote areas.

Interview contacts were provided by NAES officials, and through referrals from interviewees. The evaluation team conducted outreach to contacts over an extended period, reaching out a maximum of 5 times through email and twice over the phone when no response was solicited. When contacts were removed from active recruitments, additional contacts were added. The evaluation team also engaged support from NAES officials to connect with key individuals.

In the end, several interviews with Indigenous representatives were completed, the majority of whom represented Inuit organizations, and a minority First Nations organizations. The emphasis on Inuit representation is partly due to the proportion of NCP-funded projects pertaining to Inuit Nunangat. As NCP was the primary focus of this evaluation, many of the interviewees focused on their experiences with this initiative and fewer spoke about their experiences with EALUPC and RPR.

In total, 27 case study interviews were completed. While an initial goal of three to five interviews per case study with balanced representation across partner groups was established, challenges in reaching participants in certain cases led to a range of one to seven interviews for each case study. The length and depth of case studies were adapted when adequate interview participation could not be achieved, with supplementary information drawn from document review. Case studies had a broad geographic distribution. Of the seven projects selected as case studies, two were Nunavut-based projects, one was based in Nunatsiavut, one in Nunavik, one in the Yukon, and two in the Northwest Territories.

While conducting data collection, the Evaluation team categorized all Indigenous organization representatives as a singular group. However, as this did not consider a distinctions-based approach, the Evaluation data was retroactively reviewed to provide distinction between Inuit and First Nations organizations. Where there is consensus in findings between Indigenous groups, the broad label of “Indigenous” is used in the report. If there is variation in findings, then the specific group is identified.

2.5 Reading this Report

This evaluation report summarizes the findings for each evaluation issue in Sections 3 through 5. In these sections, blue-shaded boxes allow the reader to quickly access a summary of the findings on that issue. Opportunities for consideration highlight small ways in which NAES may be enhanced to meet its objectives. Finally in Section 6, a series of recommendations are presented that respond to more salient findings of the Evaluation and suggest ways to react to those challenges.

3. Evaluation Findings – Relevance

The evidence collected indicates a consensus that the Northern & Arctic Environmental Sustainability Program (NAES) is supporting the federal government in meeting its current

objectives, emerging needs and stated commitments in the North and the Arctic. The Program remains responsive to partner needs and is aligned with federal priorities and mandates for the region. With these findings in mind, it is clear that NAES is relevant to Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC's) needs now and for the foreseeable future.

3.1 Contextual Factors that Contribute to the Need for NAES

As a program that serves Northern and Arctic regions, the context for NAES is evolving. The relevance for NAES is being strengthened by environmental changes and their impact on traditional/country food sources as the Program is a mechanism to monitor these changes over time. The environmental research conducted through NAES is considered relevant and important to Northern and Indigenous communities.

3.1.1 Changing Northern and Arctic environment

As a program that serves Northern and Arctic regions, NAES operates in a changing context. As changes impact the Arctic environment, the relevance of environmental monitoring and assessment is strengthened, as it allows decision makers to understand changes over time and make informed choices for the future with environmental sustainability and local communities in mind.

NAES responds to evolving needs in the North and Arctic by collecting and maintaining data and by funding research that provides critical insight into the current and potential impact of environmental changes. One way the Northern and Arctic environment is changing is with the accumulation of and fluctuation in the rate of contaminants from industrial and consumer pollutants. Some contaminants have been known and monitored for decades, such as persistent organic pollutants and mercury, and others are emerging as contaminants of concern, such as plastics. Projects funded under Northern Contaminants Program (NCP) maintain longitudinal data that monitor these changes, which informs national and international bodies.

Additionally, with the changing climate, the North and Arctic are opening to increased shipping and resource extraction. As development in the North and Arctic increases, environmental assessment and research regarding the potential impacts of human activity will become more relevant. NAES funds work that examines the environmental risks of these efforts and empowers Northern and Indigenous communities to become active voices in environmental assessment. These projects help prepare decision makers with relevant and accurate information informed by science, Indigenous Knowledge, and socio-economic considerations.

3.1.2 Monitoring human health and food security in the North and Arctic

Food security is of critical importance in Northern and Arctic regions and is impacted by a multitude of factors, including the cost of shipped food from Southern regions. Access to and consumption of traditional/country foods is both culturally significant, and an essential contributor to food security in Northern and Indigenous communities. Contaminant monitoring and environmental research through NAES helps ensure the continued viability of these food sources. It also contributes to trust in traditional/country foods and peace of mind for Northerners.

Traditional/country foods cannot be monitored by the regulatory bodies that monitor commercial foods. An important role of NCP's contaminant monitoring is informing health guidelines for the consumption of traditional/country foods. NCP data also informs Health Canada's biomedical monitoring and human health research. As traditional/country foods and environmental sustainability are deeply connected, and core to Indigenous culture, NAES also supports cultural continuity.

3.2 Meeting Diverse Needs of Partners

There is a clear alignment between NAES initiatives and the needs of the groups served. Sustainable development in the North and Arctic is not possible without the support provided through NAES to engage Indigenous parties, to bring Indigenous Knowledge of the land into decision making and to fill gaps in capacity among Indigenous organization.

3.2.1 Engaging with Indigenous communities

As environmental changes continue and development in the North and Arctic expands, the most direct impact will be felt by the region's Indigenous communities. NAES facilitates the active participation of these communities in research and development that impacts them. The Program's efforts towards meaningfully engaging Indigenous communities supports the aims of developing strong relationships and in bridging communication.

NAES has committed to engaging responsibly and respectfully with communities across all initiatives. Research funded by NAES required community approval and community engagement. NAES also funds Indigenous organizations in conducting and facilitating research and is respectful of Indigenous data sovereignty. For example, the NCP's Community-Based Monitoring of Plastic Pollution in Nunatsiavut project continued to receive funding through a 5-year embargo on the release of project data by the Indigenous government, which researchers noted is not common practice by all funders.

In the case of environmental assessment, NAES actively supports Indigenous communities in engaging in processes that impact their economic development and environmental sustainability with participant funding provided by Northern Participant Funding Program (NPFP). NPFP participant funding addresses an ongoing demand for partnership support from Indigenous parties that other government agencies and industry partners cannot meet. It and other supports for involvement facilitate the Indigenous voice in development decisions, leading to a more nuanced and thorough assessment process with the inclusion of Indigenous Knowledge and with consideration for socio-economic factors.

3.2.2 Respecting Indigenous Knowledge

There is consensus among all parties that Indigenous Knowledge benefits research and decision making. By considering Indigenous Knowledge alongside Western science in the research process, a more fulsome assessment of environmental and sociocultural impacts may be possible. Establishing development plans informed by Indigenous Knowledge emphasizes harm-mitigation, contributing to sustainability in the North and Arctic. NAES initiatives are considered by many stakeholders to be at the forefront of developing effective and empowering Indigenous partnerships. While strategies and best practices for research that balances Western science with

Indigenous Knowledge are still being refined, Indigenous Knowledge is sought across NAES initiatives to inform resource planning and research design. NAES projects such as the Strategic Environmental Assessment in Baffin Bay and Davis Strait, demonstrate best practices for research and assessment being co-developed with Western science and Indigenous Knowledge.

3.2.3 Addressing limited organizational capacity

Many Indigenous organizations and governments must manage a high volume of work across a vast geographic area with limited resources and staff. While Indigenous participation in NAES activities is considered essential, the ability of some Indigenous organizations to participate meaningfully is often impacted by these capacity constraints. Partner feedback indicated that often, challenges that have arisen in NAES projects are often connected to capacity issues, which can limit the ability of organizations to engage efficiently and to the extent desired.

The participant funding provided by NAES helps address this acute need and enables greater meaningful and informed Indigenous participation in environmental assessments. NAES funding was considered responsive in providing support to address these issues and facilitating participation in the short term, which will be necessary for the foreseeable future until long-term capacity can be established.

3.3 Alignment with Government Priorities

NAES remains relevant and responsive to departmental objectives, national commitments to reconciliation and Indigenous sovereignty, as well as international commitments to data collection for environmental monitoring.

3.3.1 Achieving departmental objectives

NAES work aligns well with the Minister of Northern Affairs' stated mandate to:

- Coordinate the operations of the Government of Canada in the Territories;
- Promote social, economic, and political development in the Territories through policies and programs; and
- Use scientific research to grow knowledge of the Canadian North and Arctic; and to inform decision making on its development.⁸

Specifically, NAES supports:

- CIRNAC's goals of promoting respect, cooperation, and partnership by supporting the participation of Indigenous parties in environmental assessment, conducting research relevant to or led by Indigenous priorities, and engaging with Indigenous communities in that research;
- Northern Affairs Organization's goals of supporting greater Arctic leadership to address regional priorities;

⁸ From the *Department of Crown-Indigenous Relations and Northern Affairs Act*, 2019. See <https://laws-lois.justice.gc.ca/eng/acts/C-49.8/>.

- The federal government's land claims agreement and legislative commitments to protect the water and land resources of Indigenous Nations;
- Northern Affairs Organization's goals for community resilience and wellbeing by supporting food security, promoting the sustainability of traditional lifestyles, and by supporting Indigenous Knowledge collection and sharing;
- The Arctic and Northern Policy Framework by helping preserve biodiversity, promoting sustainable Arctic economies, supporting Arctic communities, and supporting the preservation and utilization of Indigenous Knowledge; and
- Federal legislation by monitoring environmental contaminants (such as the *Canadian Environmental Protection Act*, the *Canada Consumer Product Safety Act*, the *Food and Drugs Act*, the *Canadian High Arctic Research Station Act*).

3.3.2 National commitments to reconciliation and Indigenous sovereignty

Canada has made commitments to reconciliation with Indigenous communities and recognition of Indigenous sovereignty. The federal government must respond to the evolving responsibilities arising from land claims agreements and modern treaties as well as the duty to consult established in Section 35 of the *Constitution Act*, which affirms "Aboriginal and treaty rights".⁹

NAES initiatives contribute to the federal commitment to reconciliation through their alignment with the Truth and Reconciliation Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples. It specifically supports the call to action regarding "meaningful consultation, building respectful relationships, and obtaining the free, prior, and informed consent of Indigenous Peoples before proceeding with economic development projects".¹⁰ NAES also supports the government's commitments under the United Nations Declaration towards Indigenous Sovereignty over the Environment and Resources by supporting Indigenous communities in determining research and development priorities and participating in related processes. The Program demonstrates a commitment to supporting the right to self-determination of Indigenous communities, recognizing Indigenous right to resources, and the federal government's duty to consult.

It is important to note that some Indigenous parties questioned whether NAES fulfilled the federal government's commitments in these areas. Some indicated that even while programs like NAES are helpful, the current level of investment in Indigenous participation in environmental issues and research is insufficient to represent true reconciliation. While it is recognized that NAES represents progress towards meeting these commitments, it is clear that more needs to be done in this area to ensure there is true representation of Indigenous partners, their knowledge systems, and experience.

3.3.3 International commitments to data collection for environmental monitoring

Canada's North and Arctic are part of an interconnected region spanning several countries, with shared interests in environmental sustainability and human health. As such, Canada has longstanding relationships with international bodies such as the Arctic Council and the Inuit Circumpolar Council through the NCP. The NCP contributes data and expertise to circumpolar and global contaminants monitoring, assessment and regulatory initiatives and agreements

⁹ The Constitution Acts, 1869 to 1982, Part II Section 35(1) (1982). [The Constitution Acts, 1867 to 1982 \(justice.gc.ca\)](https://www.justice.gc.ca/).

¹⁰ Truth and Reconciliation Commission of Canada. (2015). *Calls to Action*. [Calls to Action English2.pdf \(exactdn.com\)](https://www.exactdn.com/)

including under the Arctic Council's Arctic Monitoring and Assessment Programme and the United Nations Environment Programme, notably the Minamata Convention on Mercury, the Stockholm Convention on Persistent Organic Pollutants, and the Intergovernmental Negotiating Committee on Plastic Pollution.

In addition to meeting these commitments with ongoing efforts, the projects funded through NAES also meet other international commitments. For example, the Strategic Environmental Assessment in Baffin Bay and Davis Strait contributed to CIRNAC's five-year (2016-17 to 2020-21) Arctic Regional Studies initiative created to provide science-based information on offshore oil and gas in accordance with the 2016 United States-Canada Joint Arctic Leaders' Statement.

4. Evaluation Findings – Design and Delivery

The current Northern & Arctic Environmental Sustainability Program (NAES) design and delivery structures are effective in supporting outcomes, but the Evaluation highlighted areas where the processes could be improved. Areas for improvement of delivery centre on finding better ways to support:

- Researchers through program timelines and funding levels;
- Indigenous organizations wanting to participate;
- Communities in digesting research findings; and
- Engaging youth, Elders, and other knowledge holders in the research process.

4.1 Roles and Responsibilities are Supportive of Meeting Objectives

In general, Program partners were aware of their roles and responsibilities under NAES. NAES Program officials were accessible and responsive to partner questions and feedback. As the initiatives within the Program have remained siloed, there may be missed opportunity for collaboration between initiatives.

4.1.1 Collaboration among stakeholders and partners

NAES requires a wide array of organizations to work together to promote environmental sustainability in the North and Arctic. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and other federal government departments, such as Environment and Climate Change Canada and Fisheries and Oceans Canada, collaborate with territorial partners, Indigenous organizations, academia, industry, and non-governmental organizations, among others. Success requires that each of these organizations understand their relationship to the program and are willing to work collaboratively to achieve shared aims.

Overall feedback from Program partners indicated that roles and responsibilities were well understood across NAES initiatives. For all initiatives, partner feedback indicated that program officials were accessible to ask questions and responsive in providing answers, which provided clarity to partners and facilitated relationship building. The Northern Contaminants Program (NCP's) well-established guidelines and terms of reference also served as a clarifying tool for roles and responsibilities. For initiatives that must engage more closely with complex regional governance structures, such as Environmental Assessment, Land Use Planning and

Conservation (EALUPC), projects benefitted from clarity around Indigenous authority, for instance, through settled land claims. Given the complex authority in areas undergoing devolution, partners related that in cases with settled land claims, working relationships, communication and accommodation between parties was clearer.

NAES has also supported collaboration. Research under NAES requires continuity between scientific research goals and community priorities, encouraging relationship building and community engagement. NAES has also facilitated relationships between federal departments, such as Environment and Climate Change Canada and Fisheries and Oceans Canada, and Indigenous and international organizations.

Some areas needing clarification were raised regarding roles and responsibilities. For instance, Northern Participant Funding Program (NPFP) conducted engagement sessions with regional boards and assessment groups, who noted the need for further clarification on roles. Some territorial government contacts also indicated friction regarding the assignment of responsibilities between federal, territorial, and Indigenous governments, with confusion around responsibilities spurred by devolution of authority from the federal government to the territories and Indigenous Nations. Furthermore, for transboundary projects which involve multiple jurisdictions and projects where transboundary groups may potentially have impacts to rights, delays and uncertainty have arisen in identifying and communicating with relevant groups and organizations.

4.1.2 NAES activities and objectives are not clearly understood

Some Indigenous respondents expressed difficulties in distinguishing government programs from one another and understanding what and from where funds are available. They noted that the siloed nature of government work, divided by department and program, does not reflect the ways programs interact at multiple levels. In the case of NAES, following its creation in 2017, the Program has remained largely siloed. Feedback from some program officials indicated that the amalgamation of initiatives under NAES shows no clear benefit. Others pointed to modest benefits, such as encouraging initiatives to link their scientific outputs to broader outcomes. They identified an opportunity to forge closer links to create a spectrum of sustainable development initiatives. Given the importance of relationship building and the investment of time and money in the process, each program developing relationships in parallel misses opportunities to collaborate and build relationships efficiently using existing connections. For example, networking and information sharing among researchers could help identify potential opportunities for collaboration or community engagement, particularly for researchers in the same region. Additionally, coordinating across initiatives and programs could also increase community awareness of existing programs and available resources.

Opportunities for consideration: By identifying areas for cross-initiative collaboration and capacity sharing, NAES may be able to manage initiatives more holistically so that Indigenous organizations could share capacity and maximize the benefit of each initiative. Further, within NAES, areas could be identified for cross-initiative collaboration to support streamlining of communications, and to reduce burden on Indigenous organizations.

4.2 Program Delivery

NAES initiatives are successful in integrating scientific research goals with Indigenous participation and socioeconomic concerns in program design. The data collected contributes to a variety of regulatory, governance, planning, and international mechanisms. Project success is highly dependant on the development of local networks. There is a strong preference by Indigenous parties for researchers to be present in communities. Involving community members in leadership positions, such as the NCP's Inuit Research Advisors and contaminants researchers, was noted to have a significant impact on research success. There is a strong desire to use investment in research to bring the greatest possible benefit to the local community. Research practices that are adaptable and responsive to community feedback and engage youth and elders have been successful.

4.2.1 Supporting engagement with Indigenous parties

NAES initiatives are well-regarded for their Indigenous engagement practices. Indigenous respondents are generally positive about NAES protocols for capacity building, communication, training, and communication of research results, indicating improvement from past research practices in the North and Arctic. Feedback indicates an improvement over time; an enhanced understanding and value among researchers about communication and collaboration with communities, improved conduct of researchers in engaging with Indigenous communities, positive attitudes, and increased dedication to building relationships and co-development with communities.

Researchers and Indigenous representatives responded positively to the efforts of the Program to pursue multi-year research funding, particularly for the NCP. A multi-year framework supports the building of capacity and skills over time and provides a reliable source of funding that supports long-term planning. However, it was noted by Program officials that multi-year proposals can be administratively complex, and that the transfer of projects from single-year to multi-year funding increased the workload of the Program and placed a strain on its capacity during periods of staff shortages.

The context of Northern and Arctic work has shifted, and a new standard has been set, cementing expectations for engagement with Indigenous communities and respect for Indigenous Knowledge that are expected to grow moving forward. Areas for improvement include supporting broader adoption of best practices, engaging youth in research activities and promoting greater clarity in communicating research results back to communities.

4.2.2 Supporting research in Northern and Indigenous communities

Research success can depend critically on the relationship between researchers and communities. There are many potential factors that can impact engagement, such as a limited capacity for participation, challenges generating awareness of ongoing research, or external factors that impact individuals' abilities to conduct sampling or attend meetings, such as health concerns, weather conditions and economic circumstances. For example, one NCP project leader credited the project's successful sample collection largely to a strong relationship with one local

hunter; when that hunter passed away, the researcher faced challenges in collecting the adequate number of samples. In supporting the research being conducted in their communities, Indigenous organizations expressed a strong preference for face-to-face communication and for researcher presence. They related that closer engagement with communities supports a better flow of information and develops foundations to create deeper mutual understanding, mitigating challenges that can arise from a lack of cultural awareness.

Understanding this, NCP project proposals require community approval, and an engagement strategy, which helps ensure research serves local interests. It's important to note that projects with activities on the land or in the communities require a greater level of community consultation and engagement than laboratory and modelling projects, and that certain streams of research, such as Community-Based Monitoring, require northern community leadership of the project. A project such as Community-Based Monitoring of Plastic Pollution in Nunatsiavut presents a clear example of a high-level of community engagement; for this project, community members select samples that correspond with their concerns, and collaborate with researchers to identify sources of plastics pollution in the food they eat. Researchers note that funding from NAES has helped leverage funding from other sources, such as other federal departments, enabling research that is desired by communities and may not have been viable otherwise.

There are limitations to the amount of engagement that can practically occur. The development of strong relationships is often dependent on a researcher's funding, schedule, and ability to travel. Relationship building is an extended process, which has been limited in recent years by COVID-19, and over time from turnover among researchers, government representatives and within Indigenous organizations. As well, the nature of the research is another factor. Research that requires expensive equipment or technical knowledge to operate equipment can be more difficult to operationalize at the community level.

Some research projects have demonstrated best practices that have helped overcome these challenges. Projects that closely involve community members in leadership roles have been identified as highly effective. Such individuals can mobilize local networks, liaise and co-ordinate with community members, and support effective communication of research. For example, the co-leadership of the locally-based Northern Contaminants Researcher was praised as critical to the success of the Community-Based Monitoring of Plastic Pollution in Nunatsiavut project, particularly in mobilizing community engagement. The NCP's Inuit Research Advisors also provide a local presence to support research. Researchers that live in the North or Arctic were able to engage in similar work, and others were able to count on the support of territorial governments officials to liaise with the communities. Developing local networks is a strong strategy to support the research process.

Timelines and budget limitations have also created challenges for environmental assessment, limiting the extent of the Indigenous consultation process and straining the capacity of smaller organizations. Given the expense of travel in the North and Arctic, Indigenous organizations' ability to conduct interviews and share collective learning was sometimes limited. Organizations also faced difficulties in reviewing and responding to information within set timelines. In fields that require a high degree of technical knowledge, partners shared that they would have benefitted from more time to confer with external consultants. For others, advance notification of environmental assessment start dates would help improve planning for funding applications. Smaller Indigenous organizations report being unaware of NPFP funding in the early stages of the assessment, and having difficulty catching up in later stages, which placed them at a disadvantage in the review process. Other Indigenous parties expressed some concern that

NAES operations did not always take certain local realities into consideration. For example, that complex questions in NPFP funding applications hindered the application process.

4.2.3 Supporting sharing knowledge

Ensuring research results are accessible to Indigenous communities is a priority for NAES and supports relationship building. Results are communicated using a variety of delivery methods, including workshops, town halls, pamphlets, radio, and tv slots, among other strategies. However, researchers indicated that the actual level of community engagement and understanding is difficult to quantify. As such, while efforts are made to ensure information is accessible, there is uncertainty on the most effective communication methods to reach a broad audience.

The success of communication varies at the project level. In cases where research results can be shared by local institutions, researchers stated that communication was more effective. For example, in research that implicates human health, working with local health authorities to disseminate information. Some researchers believe findings would be more effectively communicated if consolidated and led by communication specialists rather than researchers themselves. Within the scientific community, data from NAES research is effectively shared and published.

Overall, there is recognition that the communication of results and relationships with researchers have improved over time. Some Indigenous organizations noted that communities support research but are more interested in results that impact them, and not technical data. Adapting the Western-science research process to identify and share findings that are meaningful to communities is an important part of developing a collaborative research process. Engaging in research processes that bring value to communities, such as engaging youth in research, sharing Indigenous Knowledge, and engaging in collective verification of research results with communities are other best practices to ensure communities themselves experience a meaningful benefit from research conducted on their lands. Communication benefits from local engagement and leadership to utilize existing networks to share information. Looking forward, a shift towards using the investment in research and the research process to bring the greatest benefit to communities is supported. Some partners suggested establishing a minimum of research funding that must be used in the North and Arctic, to ensure benefits are concentrated in the region. For example, the NCP's Community Based Monitoring and Research subprogram criteria states that the majority of project funds are to be allocated to activities and services in North. However, Northern project leaders in the NCP have often requested exceptions to these funding rules, indicating that implementing such criteria can face challenges.

4.2.4 Reflecting GBA Plus principles

NAES directives inherently incorporate Gender-Based Analysis Plus (GBA Plus) considerations in their structure through their emphasis on engaging with Indigenous perspectives through an intersectional lens, taking into consideration geographic isolation and accessibility, language barriers, health disparities, food and housing insecurity, environmental change due to a changing climate, and economic inequities. Intersectionality is explicitly incorporated in documents for NCP, EALUCP, and Regional Partnership and Research (RPR). However, many key informants were not confident in their ability to comment on GBA Plus, or clear on its relevance to NAES. Based on these findings, a clearly articulated strategy to implement GBA Plus within NAES is not apparent.

Some Indigenous parties expressed interest on using NAES presence in-community to increase interest and engagement with science for local youth. Some NAES projects have sought youth engagement by conducting school visits and workshops, as well as by engaging youth in active research through sampling and collective verification of research results. Additionally, as the scientific community continues to engage with Indigenous Knowledge, projects can collect and share Indigenous Knowledge back into communities for the benefit of youth. Qikiqtani Inuit Association (QIA)'s approach of partnering youth with Elders to collect Indigenous Knowledge during the Baffin Bay and Davis Strait Strategic Environmental Assessment is one such example.

4.2.5 Challenges with funding delays and levels

Program delivery is consistently hindered by delays in the funding process, including in communications of funding approvals and delivery of project funding. This places significant challenges on researchers and can make certain projects infeasible. These delays are linked to the Program's limited capacity relative to its growing area of focus. While funding levels have remained largely static, the scope of the Program's responsibilities has increased as new contaminants of concern are identified year over year.

Delays in the timeline for project approval and stagnant funding levels emerged as consistent challenges in program delivery. Significant delays at every stage of the funding process hinders effective planning and conduct of research, particularly in the North and Arctic, where the summer months are critical for field work and community engagement. For example, researchers noted that funding decisions are often not communicated within an appropriate timeline in advance of start dates, and release of funds is often retroactive. As a result, research projects may miss important deadlines.

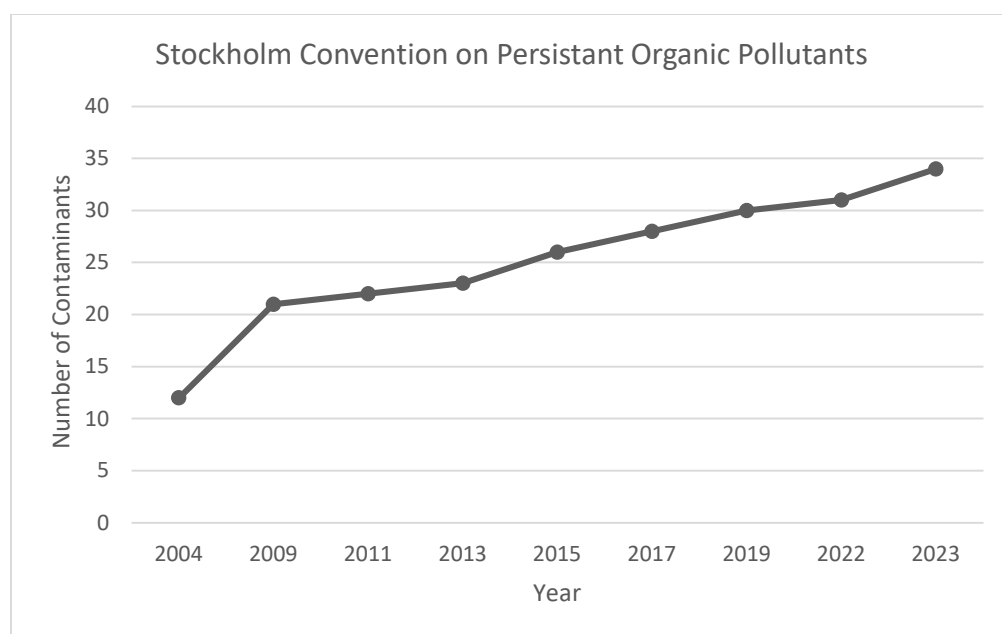
Researchers and Indigenous parties reported positive relationships with all NAES program officials, citing open lines of communication and high levels of engagement. With that in mind, and as NCP funding is well-established and considered reliable, researchers often risk-manage and front funding until NCP funding can flow. However, these practices are feasible only if confidence in funding is strong, and only for larger organizations and individuals with the finances to do so. Therefore, a similar situation for research conducted by smaller organizations or independent contractors may put the project at risk. One long-term independent researcher funded by the initiative reported having to pay out of pocket for salary, fieldwork, travel, and reimbursement for samples and lab analysis before receiving project funding. They report that "this delay impacts operations, the deliverables, and what opportunities can be pursued". Some researchers shared that certain projects were ultimately cancelled due to not receiving confirmation of funding in a timely manner.

Many researchers and federal stakeholders have observed that the NCP Secretariat has experienced extended staff shortages, and that the NCP Management Committee has faced further strain on its capacity as the scope of the initiative's focus has expanded over time. The production of reports, project summaries, and website updates were slowed to reduce the workload on NCP officials, impacting the Program's ability to meet the expected outputs identified in the NAES Performance Information Profile (PIP). Even with these accommodations, the NCP Secretariat was unable to review applications, communicate that decision back to applicants and release funds in a reasonable time. NAES officials also highlighted the impact of departmental

decision-making timelines on the Program's ability to communicate funding decisions. They stated that in recent years, the NCP has faced delays in receiving confirmation of O&M funding from CIRNAC, which prevents the initiative from providing timely notices of funding approval for co-developed projects. These two factors are identified as the source of severe delays in funding communications and distribution experienced by recipients.

Other stakeholders experienced challenges arising from the levels of funding not increasing over time. Across the initiative's years of operation, the context of Northern scientific research has changed significantly. The cost of travel in the North and Arctic and of conducting research has increased, as has the scope of the NCP's work, which has expanded as new contaminants of concern have emerged. Figure 2 presents the number of contaminants of concern identified by the Stockholm Convention on Persistent Organic Pollutants, to which Canada is a signatory. As contaminants are identified, they are added to the NCP's scope, and the monitoring of these contaminants becomes eligible for project funding.

Figure 2: Number of contaminants monitored over time, 2004-2023¹¹



However, the initiative's core (A-base) budget has remained static over the period of this evaluation. The increase in project funding awarded since 2020 (Table 4) is owing to NCP's responsibilities as part of the Towards Zero Plastic Waste Horizontal Initiative, under which NCP delivers on new commitments for monitoring and research of plastics and microplastics across the North and Arctic. This increase was not intended to address the rising costs of conducting Northern scientific research nor the expanded list of organic contaminants of concern that require additional attention through research, monitoring and assessment.

¹¹ Figure provided by the Inuit Circumpolar Council.

4.3 Performance Measurement

The Evaluation has found that NAES is successful in meeting its existing performance measurement targets, but that its performance measurement system could better represent the scope of Program activities and the collective work that is conducted towards the initiatives' shared objectives. Additionally, it is unclear how some indicators, such as those that implicate Indigenous Knowledge, can be measured. Finally, the Program's ultimate intended outcome was not measurable within the Performance Information Profile through the duration of the evaluation, which limited the ability of the evaluation to determine whether NAES is meeting its higher-level objectives.

4.3.1 Efficiency of NAES initiatives

The NCP has undertaken efforts to conduct work with an emphasis on efficiency and economy, demonstrating a clear attention to resource prudence. However, the strain on its capacity has limited its overall efficiency. Within an overall positive assessment of the NCP, administrative delays are the primary issue highlighted by those involved in NCP research.

Clear reporting on budget was not consistent across NAES initiatives, which limited the Evaluation's ability to effectively determine efficiency of program administration. NPFP lacks some per-project spending data, reporting on use of funds, and unused budget. RPR lacked documentation justifying some budget information.

4.3.2 Appropriate performance measurement systems

The Evaluation has found NAES to be efficient in its implementation and in meeting existing performance measurement targets. However, some indicators are not representative of the Program's actual performance, and some work is unrecognized by the performance measurement framework. Additionally, it is unclear if certain indicators can be meaningfully measured. As the initiatives themselves do not work collaboratively, the Program's performance measurement is siloed. However, there is significant alignment across initiatives in their broad goals, such as their work in collaborating with and empowering Indigenous communities, their engagement of Indigenous Knowledge, and their work in improving capacity. Consideration of the Program holistically will be relevant when developing indicators that best reflect its work in those fields.

Existing performance measures could be adjusted or revised to better represent program achievement. For example, the Program's indicators do not track or quantify the varied efforts of researchers to distribute accessible, plain-language findings to communities. Under the current performance measurement framework, NCP data reports a major discrepancy between the publishing of plain-language summaries of research and results, relative to peer-reviewed data. However, this indicator does not reflect the Program's ability or efforts to communicate with partners, which is a critical element of the Program's relationship with its Indigenous parties.

Additionally, it is unclear if some indicators are effectively measured. For example, its not clearly indicated how different knowledge streams are quantified and weighted in decision making, making it difficult to measure the impact of Indigenous Knowledge to the Program's intended outcomes. Greater depth of measurement in collecting data to evaluate the extent that different

ways of knowing impact decision making would be beneficial given the priority of co-management. For initiatives such as EALUPC, the current quantitative measures do not reflect the extent of the initiative's engagement in reconciliation.

As well, by keeping indicators siloed, initiatives' shared goals are not clearly represented. This is particularly evident in the Intermediate Outcome, "Environmental governance, regional planning, public health, and national and international chemicals regulatory mechanisms are informed by Indigenous Knowledge, science, and environmental and socio-economic considerations", which applies across initiatives but can only be measured with data from EALUPC. This misrepresents the breadth of work conducted by NAES as a whole.

The Program currently has two ultimate outcomes. For EALUPC and RPR, the ultimate outcome is for the initiatives to contribute to Northern and Arctic lands and resources being sustainably managed. For NCP, the ultimate outcome is for Northern and Indigenous communities to be resilient to a changing environment. Within the scope of this evaluation, the Program had not yet identified indicators to measure its ultimate outcomes, so its success at this level cannot be measured.

5. Evaluation Findings – Effectiveness, Efficiency and Economy

Northern & Arctic Environmental Sustainability Program (NAES) is producing the expected outputs from its activities. Partners report that contaminants are being effectively monitored, Indigenous Knowledge is improving environmental research and communities are being effectively engaged. From the evidence collected, the Evaluation can reasonably conclude that NAES is contributing to its ultimate outcome of Northern and Arctic lands and resources being sustainably managed and Northern and Indigenous communities being resilient to a changing environment.

Moving forward, NAES initiatives should consider how best to support Indigenous organizations that lack the resources and the specific in-house skills to be meaningfully engaged. The current structure of NAES is focused on short-term funding, which allows organizations to engage in specific projects, but has some limitations.

5.1 Producing Expected Activities, Outputs and Immediate Objectives

Given these three overlapping but unique outputs, each has committed to measuring its own set of performance indicators in the NAES Performance Information Profile (PIP). The program's official performance indicators are profiled and associated findings are discussed in the subsections and tables below.

5.1.1 EALUPC and NPFP: Supporting engagement with Indigenous communities and informed decision-making

EALUPC and NPFP have been successful in engaging Indigenous communities and informing decision making in regard to land-use planning and environmental assessment. However, the Program's case-by-case funding structure can limit its ability to support long-term capacity development for Indigenous parties, which hinders forward planning and limits cumulative benefits from funding, such as skills development. Additionally, program officials have noted a need to continue developing and improving consultation practices.

The data reviewed for the Evaluation suggest that Environmental Assessment, Land Use Planning and Conservation (EALUPC) and Northern Participant Funding Program (NPFP) are successful in engaging with Indigenous organizations and communities. Environmental assessments, land use plans and conservation initiatives are well-informed by both Indigenous Knowledge and Western science.

In the case of EALUPC, the initiative received positive feedback regarding program relations, reliability, and open communication. A challenge raised for NPFP is that as funding is assigned case-by-case, Indigenous organizations gain the capacity to engage in the short-term but return to reduced capacity once the project is complete. Partners note that this limits the benefit of funding from accumulating and prevents forward planning, as organizations must start every project from the same base level. Another contextual factor is that, as groups with settled land claims receive land claims implementation funding that can support their participation in natural resources co-management processes, there is an uneven playing field between groups currently engaging in land claim negotiations and those with settled claims. Communication between EALUPC and Indigenous organizations is similarly case-by-case, and some feedback indicated that continuous engagement might support the initiative in being proactive and anticipating potential issues.

Another issue raised is uncertainty at the initiative level on how best to engage consultation with Indigenous parties. Program officials note that while successful consultation practices have been established in some regions, in others it is still being developed from the ground up with little support. There is a sense that more guidance on consultation is needed, and progress is further challenged by the complexities of devolution and the limited capacity of land use planning boards. In areas with active land claim negotiations, roles and responsibilities regarding land management, planning, and assessment are uncertain. While consultation is accepted as a necessary process, it is difficult to achieve within legislated timelines.

Indigenous organizations report having favourable experiences in the NPFP engagement processes and feel that participant funding is meeting an acute need in the North and Arctic for support to engage meaningfully in assessment. The intended outcome for NPFP is to provide capacity support to organizations for which it is successful in the short-term, with funding typically used to hire external consultants for the duration of the assessment. However, like the broader EALUPC, it cannot address the whole of the capacity deficit, and cannot support accumulative benefit to organizations towards their long-term capacity.

Finally, a key consideration raised by Indigenous and territorial partners is that during the evaluation period, NPFP funding focused on environmental assessment, and therefore did not encompass the whole life cycle of assessment for which participant funding is needed. Feedback was particularly targeted towards a desire for NPFP to address regulatory processes following environmental assessment. This has since been addressed in the 2023 renewal and expansion of NPFP.

Table 7: EALUPC Performance Measurement

Program outputs and/or outcomes	Indicator	Evaluation
Output 1 (EALUPC) Recommendations on environmental assessments, land-use planning, and conservation initiatives are informed by both Indigenous Knowledge and science.	The percentage of new or amended Land Use Plans that are approved in legislated or agreed timeframes.	EALUPC indicated 100% of plans were approved within reasonable timeframes, meeting the annual target. However, the timelines are not defined by any independent service standard, making the effectiveness of this indicator unclear.
Output 2 (NPFP) Indigenous governments have the capacity and capability to participate meaningfully in major impact assessments outcome statements.	Percentage of Indigenous governments and rights-holders that are meaningfully engaged in major impact assessments of projects that could affect them.	In FY2020-21 NPFP achieved 70% favourable and 20% moderate responses, with 10% withholding comment pending completion of their assessment, not meeting the target of 100% favourable responses. In FY2021-22 NPFP achieved 100% favourable responses. The indicator implies an overall assessment of Indigenous governments and rights holders, but only those involved in NPFP are consulted. This does not capture the overall data on whether Indigenous groups are meaningfully engaged in impact assessment.
Immediate Outcome 1 (EALUPC) Land use planning and environmental assessment decision making are well informed by science and Indigenous Knowledge.	Percentage of decision making / recommendations on environmental issues based on advice.	EALUPC met their target of 100% through the indicated evaluation period, but more detailed indication of the extent to which advice is applied in each decision or recommendation is unclear.
Immediate Outcome 2 (NPFP) Indigenous government and rightsholders believe participation improved environmental assessments processes.	Percentage of those supported to participate in an environmental assessment in the territories who report that their participation improved the completed assessment.	100% of respondents indicated that the Program improved their capacity to meaningfully participate in FY 2020-21 and 2021-22, exceeding the target of 90%.

5.1.2 NCP: Monitoring Northern and Arctic contaminants

NCP has been successful in monitoring and reporting on contaminants of concern and environmental health issues. However, the initiative's staffing shortages and stretched capacity impacted its ability to produce accessible summaries of research, although this performance indicator is not representative of the extensive public communication work that is undertaken by each NCP funded project.

Across Canada and internationally, the Northern Contaminants Program (NCP) is valued for its production of continuous, long-term Arctic research data. It can also identify emerging issues and new contaminants of concern and track their presence in the environment over time. NCP maintains longitudinal data for 40 datasets across 16 different projects that monitor contaminants of concern over the long-term, with these datasets often connecting to broader monitoring systems nationally and internationally.

The capacity of the NCP to provide accessible summaries of research is limited relative to its ability to publish peer-reviewed data. While all peer-reviewed NCP data and articles are available through the Arctic Science and Technology Information System, the availability of recent project summaries and synopsis reports (i.e., 2019-2023) is delayed on the portal. Delays result from a lack of staff to complete the review, editing and publishing of these reports and the process of updating these publications is now ongoing. While these indicators suggest the NCP may appear limited in its provision of accessible findings to the public, it does not reflect the NCP's efforts to reach the public through researcher-led communication strategies and broader knowledge mobilization initiatives, such as Wildlife Contaminants Workshops with Nunavut Arctic College and workshops and outreach events with elementary school students across the North and Arctic.

While there is broad support for the NCP's work, there emerged a regional divide among Indigenous parties regarding the initiatives scope and coverage. NCP research, and subsequently NCP funding, is more geographically concentrated among Inuit communities and organizations. This region also has additional research infrastructure through the four Inuit Research Advisor positions in each land claim region of Inuit Nunangat, which are co-funded by external organizations. Inuit partners express a high degree of support for the NCP's focus on long-range contaminants and its international engagement. In contrast, Western First Nations have expressed a desire to direct contaminant research towards locally-sourced pollutants, such as tailings ponds. It should be noted that this is a request to expand the NCP's scope, rather than an indication that long-range monitoring is not relevant to or supported by First Nations communities. There is a sense among some First Nations communities that new contaminants of concern in their region are treated as a lower priority to those monitored to meet international commitments, and a desire for greater equity in research funding and infrastructure in the West.

Table 8: NCP Performance Measurement

Program outputs and/or outcomes	Indicator	Evaluation
Output 3 Efficient and effective monitoring and human biomonitoring systems in place to address environmental health issues in the North.	Percentage of long-term contaminant monitoring datasets maintained.	NCP collects data for 40 datasets. 80% of datasets were maintained in 2020-21, and 90% in 2021-22, missing the target for monitoring is 100%. COVID-19 is a key limiting factor in sample collection during this period.
Output 4 Publications, data models, reports and advice.	Percentage of research, results and information that are made accessible annually.	Information accessibility has fallen short of the annual target of 100% by approximately half, 52% in FY2020-21 and 46% in 2021-22. Statistics are based on a range of reporting with internal variations. 100% of peer-reviewed data and articles were available through the Arctic Science and Technology Information System but 0/60 current fiscal year project summaries and 0/50 previous year project synopsis reports were posted in FY 2020-21, and similarly 0/61 and 0/66 were posted in FY2021-22 while 100% of peer reviewed data and articles were available.

		Knowledge mobilization initiatives also contribute to this indicator, but were not included in the NCP calculations of accessible results.
Immediate Outcome 3 Levels and trends of contaminants in Arctic and Northern environments, wildlife and people are detected, measured, and assessed.	Percentage of data/information collected that is connected to broader, relevant observation systems.	96% of information was determined to be connected to observation systems, exceeding the target of 80%. Specific data on what data is used by other observation systems is not collected.
Immediate Outcome 4 Information on the geographic and ecological distribution of plastic pollution in the North is available through monitoring and research.	# of datasets established as baselines for long term monitoring of plastic pollution in the North.	NCP has contributed to at least 10 datasets annually, meeting the target of 10. In FY2020-21, 41 datasets were established, and an additional 6 in 2021-22. Plastic monitoring was conducted through 25 projects in 10 environmental compartments to reflect scientific and cultural criteria, as well as a balance between community-based monitoring and scientific research projects.

Opportunities for consideration: Increase flexibility in contaminants research to include locally sourced pollutants of interest to Indigenous communities.

5.1.3 RPR: Producing research on environmental sustainability

RPR has successfully funded research on environmental sustainability. Its project design for the Baffin Bay and Davis Strait Strategic Environmental Assessment received strong support from Indigenous partners and was highlighted as a model for successful engagement.

The performance of Regional Partnerships and Research (RPR) indicates success in supporting scientific research, inclusion of Indigenous Knowledge and supporting regional initiatives and decision making through the two knowledge streams. Further, research funded by RPR was found to be able to address gaps in coverage when contaminant issues fell outside of the NCP's scope and to provide additional routes for engaging in community-led research.

There was a high degree of support shown by partners for RPR's project design in the operation of the Baffin Bay and Davis Strait Strategic Environmental Assessment. The assessment was led by the Nunavut Impact Review Board, with Indigenous Knowledge collection and input led by Qikiqtani Inuit Association (QIA). The assessment was held up by partners as a model for successful engagement.

Table 9: RPR Performance Measurement

Program outputs and/or outcomes	Indicator	Evaluation
Output 5 Funding agreements and interdepartmental letters of agreement for research, gathering of Indigenous Knowledge and monitoring work, and in support of regional and Indigenous organizations.	1. Number of funding agreements and interdepartmental letters of agreement that support science research. 2. Number of funding agreements and interdepartmental letters of agreement that	RPR established 59 agreements to support science research. RPR put in place 26 agreements that supported Indigenous Knowledge, harvest and monitoring studies, and/or the work of Indigenous organizations in conjunction with science-based monitoring programs, including 9 interdepartmental letters of agreement with Fisheries and Oceans Canada, Environment and Climate Change Canada and Natural Resources Canada. Beyond

	support Indigenous Knowledge, harvest and monitoring studies.	government, agreements have been established with QIA, the Inuvialuit Regional Corporation, and the Nunavut Impact Review Board. They also established 18 agreements with regional and Indigenous groups, increasing over time.
Immediate Outcome 5 Regional initiatives are informed by science, Indigenous Knowledge, monitoring and stakeholder input.	Percentage of research, harvest and monitoring studies that will serve to inform regional initiatives.	RPR indicated 100% of studies informed regional initiatives in the indicated evaluation period, however what data is used to calculate percentage is not wholly clear. The Performance Information Profile indicates an ideal research breakdown of 70% to harvest and monitoring studies and 30% related to science from FY2021-22 to FY2025-26. The breakdown of science and Indigenous components in studies are not tracked. If possible, tracking this information could facilitate reporting in the future.

5.2 Meeting Intermediate Objectives and Ultimate Outcomes

The Program is responsive and adaptive to the needs of Indigenous parties. It supports co-development initiatives and Indigenous involvement in research. While the program makes efforts to engage with Indigenous Knowledge alongside Western science when conducting research, the extent to which Indigenous Knowledge is meaningfully considered through the decision making lifecycle is difficult to measure, and best practices are still being developed. Research conducted under NAES has been held up as a model for Indigenous consultation by Indigenous parties and federal representatives. In the case of environmental assessment, NAES funding through NPFP enables engagement by increasing the capacity of Indigenous communities to participate in assessments relevant to their communities and interests. All of these contribute to informed assessment and decision making that support sustainable management of the North and Arctic and resilient Indigenous communities.

5.2.1 Decisions being informed by Indigenous Knowledge

Overall, partners value Indigenous Knowledge as a source of valuable information and a mechanism for relationship building. However, the extent to which Indigenous Knowledge is effectively raised alongside Western science and referred to throughout the lifecycle of the research is still unclear, and best practices are still being developed.

Indigenous parties were unclear on the extent to which Indigenous Knowledge is balanced with Western science throughout a project's duration. Some report it is effectively balanced with Western science; while others stated that more can be done to integrate it into decision making, such as the shaping of recommendations. Indigenous respondents state that while researchers have been generally consistent in engaging with Indigenous Knowledge, and that the process has improved over time, this is not universal. Some Indigenous parties indicated that it is difficult for Indigenous Knowledge to be treated equally with Western science because the research practice and related institutions are fundamentally entrenched in an evidence-based Western system.

The nature of the research project impacts the degree to which Indigenous engagement and Indigenous Knowledge can be engaged by researchers. For some projects, Indigenous

Knowledge of the land is limited to supporting project design and sampling. Fewer bring Indigenous Knowledge into later stages of the project. In the case of the Baffin Bay and Davis Strait Strategic Environmental Assessment (SEA), while Indigenous Knowledge had a significant impact on final recommendations, Indigenous parties and researchers expressed uncertainty as to the extent those recommendations would be implemented.

NCP's Community Based Monitoring Program is referenced as a leading example in generating meaningful and layered community engagement and engaging with local and Indigenous Knowledge. It is managed by a majority-Indigenous committee, requires a high-degree of Indigenous involvement built into proposals, involves communities in sampling and leading research, and prioritizes communication between researchers and communities. Indigenous parties also supported the wholly Indigenous-led approach to Indigenous Knowledge collection that was utilized in the Baffin Bay and Davis Strait Strategic Environmental Assessment.

While progress is being made on this front, Indigenous parties shared that there is a need for more reciprocity to generate mutual understanding and to bring Indigenous Knowledge holders together with scientists. High turnover also affects the sharing of knowledge and the understanding of mutual interests. Further, acknowledging knowledge holders and the contribution of Indigenous communities in research design in the resulting publications is desired by communities.

International organizations and researchers suggest deepening Indigenous engagement on the international stage. By further acknowledging Indigenous sovereignty over research concerning their communities, and the Indigenous contribution to research, on the world stage, NAES would further promote community engagement and bring Indigenous voices beyond the regional level.

There is an overall commitment to engaging with Indigenous Knowledge and knowledge holders at different levels in the NAES research process, concentrated primarily in research design and sampling, but working towards analysis, interpretation, and communication.

Opportunities for consideration: Recognize contributions of Indigenous Knowledge at the project and at the international levels.

5.2.2 Strategic planning informed by NAES activities

NAES-funded initiatives have informed regional and international decision makers working towards the sustainable management of Northern and Arctic lands and resources. However, the exact impact of these initiatives was not clear in all cases. At the ground level, researchers and Indigenous parties were sometimes uncertain on how their work informed planning, public health, and regulatory mechanisms.

Some partners were able to identify specific instances when their research informed regional or international initiatives, but others were unaware of any specific outcomes. For instance, NCP stakeholders were able to point to specific examples of their work informing the Arctic Council, the United Nations Environment Programme, and the United Nations Intergovernmental Negotiating Committee on Plastic Pollution. Some NCP projects also produced direct health guidance, such as consumption guidelines for traditional/country foods, that is relevant to the public. In the case of Community-Based Monitoring of Plastics, through the process of community engagement, the researchers adapted Western scientific practices to address community concerns more directly. This led to researchers expanding their scope to also address some local sources of pollution, enabling the Nunatsiavut Government and local community to better develop

policies and take actions to mitigate and remediate plastic pollution. The Baffin Bay and Davis Strait's Strategic Environmental Assessment funded Indigenous organizations to run the environmental assessment and to collect Indigenous Knowledge, which was positively viewed as a best practice for program implementation.

For other projects, the connection between work and strategic planning was less tangible. Some researchers supported by RPR were removed from the larger project and reported being aware their research contributed to the SEA, but uncertain as to the extent. In environmental assessment, Indigenous parties and federal representatives interviewed regarding NPFP funding for the Meliadine Gold Mine and Diavik Diamond Mine, were uncertain how their participation ultimately impacted governance and planning.

5.2.3 Supporting Indigenous capacity

Capacity concerns are consistently raised by Indigenous and territorial partners as a limitation to their participation in NAES initiatives. While developing capacity is an underlying aim of NAES, each initiative approaches capacity development in its own way. NAES support for capacity building largely provides support in the short-term but has a limited effect on long-term capacity building.

Although the NAES Performance Information Profile directly addresses capacity only under Output 2 for NPFP: "Indigenous governments have the capacity and capability to participate meaningfully in major impact assessments outcome statements", capacity challenges were a key topic raised across all NAES initiatives. There is a clear commitment towards capacity support and engagement shown in program design and funding approvals across initiatives, despite not being outlined in the performance measurement structure.

Two interconnected types of capacity challenges were identified through the Evaluation: resource capacity in the short term and skills capacity over the long term. The lack of resources such as sufficient funding and staff, place limitations on the scope of what Indigenous organizations can engage with. Skills capacity refers to the experience gained by community members and scientists as they participate in the scientific process, share and engage with information across Western science and Indigenous Knowledge, and develop familiarity with the institutions and processes relevant to NAES initiatives. NAES seeks to support these aspects of capacity through a variety of pathways; managing limitations, increasing capacity to work within the existing system, and expanding capacity to address a greater range of issues relevant to communities.

The work of NPFP is directly connected to resource capacity building. It enables participation, but because of its project-by-project structure, it is ineffective in progressively increasing capacity. While NPFP strives to support smaller organizations when filling out required administrative documents such as application proposal and reporting to ensure equitable access to funding, larger organizations still report experiencing fewer difficulties when working with NPFP in contrast to smaller organizations with less administrative capacity. NPFP funding enabled increased participation but could not fully mitigate contextual capacity challenges. In the NPFP's 2023 renewal and expansion a dedicated annual funding stream for capacity building projects was introduced, but this fell after the scope of the evaluation.

RPR's support of Indigenous organizations, for instance during the Baffin Bay and Davis Strait SEA, shows a clear strategy of skills capacity building paired with supporting Indigenous leadership and knowledge engagement. The QIA's methods of data gathering also worked to

share knowledge not just with the research community, but within communities, by engaging youth, Elders, and other expert knowledge holders.

NCP's regional boards, Inuit Research Advisors, and Northern Contaminants Research positions also build knowledge throughout the North and Arctic, as well as promote meaningful engagement and better communication with communities in contaminant research. Engaging with individuals in these positions, as well as through local hiring for research, builds skills and familiarity with research that is sought by local leaders who wish to build understanding and interest in science in-community, particularly among youth. It is a form of both resource and skills capacity building. Capacity building in this way also strives to concentrate funding locally to maximize local benefit, although hiring requirements that are difficult to fulfil in Northern and Arctic contexts hinder this process. However, reflective of challenges in the NCP at large, individuals in these positions have reported being overwhelmed by the quantity of the workload relative to their capacity as a single individual.

Researchers have expressed a preference for the term "capacity sharing", when working with Indigenous committees. As co-development and collaboration deepens, this framework better represents the process of working to bring together Indigenous and Western knowledge, which develops skills for both groups, as well as generates new strategies and ways of understanding. This allows the two knowledge streams to collaboratively contribute to the scientific process to develop relevant results for local communities.

At the international level, NCP researchers have been working towards bringing Inuit leaders engaged in research to lead the presentation of research in international fora. However, as previously noted, First Nations communities in other jurisdictions have expressed a sense that the NCP investment in international engagement is to the detriment of their local research and capacity.

Efforts to build long-term skills capacity are often more limited. While some broad familiarity with environmental sustainability can be developed through community engagement, individuals with existing knowledge in the field can provide the greatest level of leadership. The concentration of knowledge and skills in few individuals within a community means that the burden on those individuals to lead participation in NAES initiatives is significant. Often funding for resource capacity is directed outside of community to bring in expertise on technical subjects. For example, the funding provided by NPFP is often directed outside of the community to hire external consultants. This allows for informed participation in the specific environmental assessment but does not enable organizations and governments to develop their internal capacity to participate in future assessments.

The Program engages in best practices to minimize hardships on researchers, but it faces limitations due to the larger context. Researchers report that as they require multiple sources of funding for a single project, the administrative burden can quickly compound and a duplication of effort is produced. Similarly, organizations receiving funding from multiple sources are faced with the same issue. NAES has shown itself to be flexible on deadlines and paperwork. For example, accepting a written confirmation of community approval for research instead of the completed form, which was identified as a best practice by Indigenous parties. However, this cannot fully mitigate the larger issue caused by reduced resource capacity.

Partners indicated that long-term capacity building could be addressed through establishing training and supporting access to education, increasing research capacity through the establishment of labs and research hubs in the North, increasing staffing in Northern institutions

and improving their ability to retain staff over time. These efforts are not aligned with the current scope of NAES. Long-term capacity building is not a goal identified by NAES but is a major impacting factor in the success of NAES initiatives and the perception of the Program.

In summary, the Program has proven successful at addressing short-term resource capacity, and some skills capacity needs of Indigenous communities. However, there are limits to the amount of resource capacity that NAES can support in its current structure. By soliciting greater participation, the Program may place further burdens on the capacity of partner organizations. Increasing strain on organizations limits the extent to which an organization can engage with any one project and manage project load, which may further hinder the long-term development of capacity. Smaller organizations face issues more frequently than larger organizations, and report greater difficulties that could not be completely mitigated by funding. Ultimately, the Program still faces challenges in making capacity efforts result in progressive benefits for communities.

5.2.4 Contributing to sustainable management of Northern and Indigenous communities

NAES is contributing to its ultimate outcomes of Northern and Arctic lands and resources being sustainably managed and Northern and Indigenous communities being resilient to a changing environment. The program has shown a dedication to sustainable management and engaging with Indigenous communities in research and environmental assessments. Continued efforts to integrate best practices and a refinement of operations would improve progress towards empowering Indigenous communities to take leadership roles in this field.

As a whole, EALUPC is facilitating informed decision making in land-use planning and NPFP funding is addressing a long-standing need for participant funding identified by Indigenous communities. In providing this funding, NAES is supporting Indigenous agency in environmental assessment, and meaningfully considering Indigenous feedback and socio-economic concerns. It is also addressing, in part, the capacity gap that is currently the most significant barrier to engagement.

NCP and RPR datasets provide useful baselines that can be used to inform future decision making, as well as real time choices at the community level about nutrition. RPR's Baffin Bay and Davis Strait Strategic Environmental Assessment was highly regarded by federal and Indigenous parties for its project design and operations. QIA's Indigenous Knowledge collection process, funded by RPR for the assessment, had strong support from Indigenous parties and demonstrated the benefits of Indigenous-led research.

NCP's work is well-regarded and respected for addressing regional needs and providing valuable health guidance, as well as contributing to the international scientific community. Dedication to improving Indigenous engagement and supporting Indigenous-led research is clear at the program level and there is an awareness of the need for and benefit of this work among researchers. Efforts in NCP and RPR towards consulting and incorporating Indigenous Knowledge in the research process and engaging communities in sampling, hiring, and verification of data supports Indigenous leadership in research, and works to bring the benefit of research to communities. The NCP's Community-Based Monitoring funding shows a commitment to increasing this capacity in communities and developing best practices for research that engages communities. Pursuing greater engagement of Northern and Indigenous communities, local hiring, and collaborative work will continue to improve the ability of Indigenous communities to be active in sustainable environmental management over time.

Overall NAES initiatives are supporting Indigenous agency in research, providing pathways for more meaningful and holistic information to inform decision making on both environmental and socio-economic issues, and are seeking to improve knowledge sharing between Indigenous communities and Western science.

6. Conclusions and Recommendations

6.1 Conclusions

Overall, Northern & Arctic Environmental Sustainability Program (NAES) is responsive to the priorities of the federal government and its obligations at the national and international levels. Given the realities of climate change, the need for food security in the North and Arctic and a commitment to Indigenous reconciliation, there is a clear and ongoing need for the Program.

By and large, NAES initiatives are fulfilling their responsibilities. Northern Contaminants Program (NCP) is monitoring contaminants of concern and meeting its international requirements, Environmental Assessment, Land Use Planning and Conservation (EALUPC) is effectively informing decision making on land use planning and environmental assessment, Northern Participant Funding Program (NPFP) is facilitating Indigenous engagement in environmental assessments, and Regional Partnership and Research (RPR) is supporting community input and important research on sustainable development in the North and Arctic. These initiatives are committed to engaging with Indigenous communities and empowering Indigenous Knowledge. There are some design elements of NAES that need to be improved to address capacity issues within the program, support more effective performance measurement, and direct initiatives towards a collaborative and holistic approach within NAES.

Although there are some regional disagreements about the program's operations, there is widespread acknowledgement that NAES conducts necessary and impactful work and represents a significant step forward. It provides needed support to allow Indigenous organizations to engage with issues that concern their communities. As project-based funding, NAES helps close resource capacity gaps in the short-term within Indigenous organizations. However, NAES is not currently designed to strategically develop capacity over the long term. Ultimately, it is by gaining long-term capacity, and the skills and expertise required to meaningfully engage in sustainability efforts, that Indigenous Peoples in the North and Arctic will be better equipped to take leadership on issues that impact their communities.

6.2 Recommendations

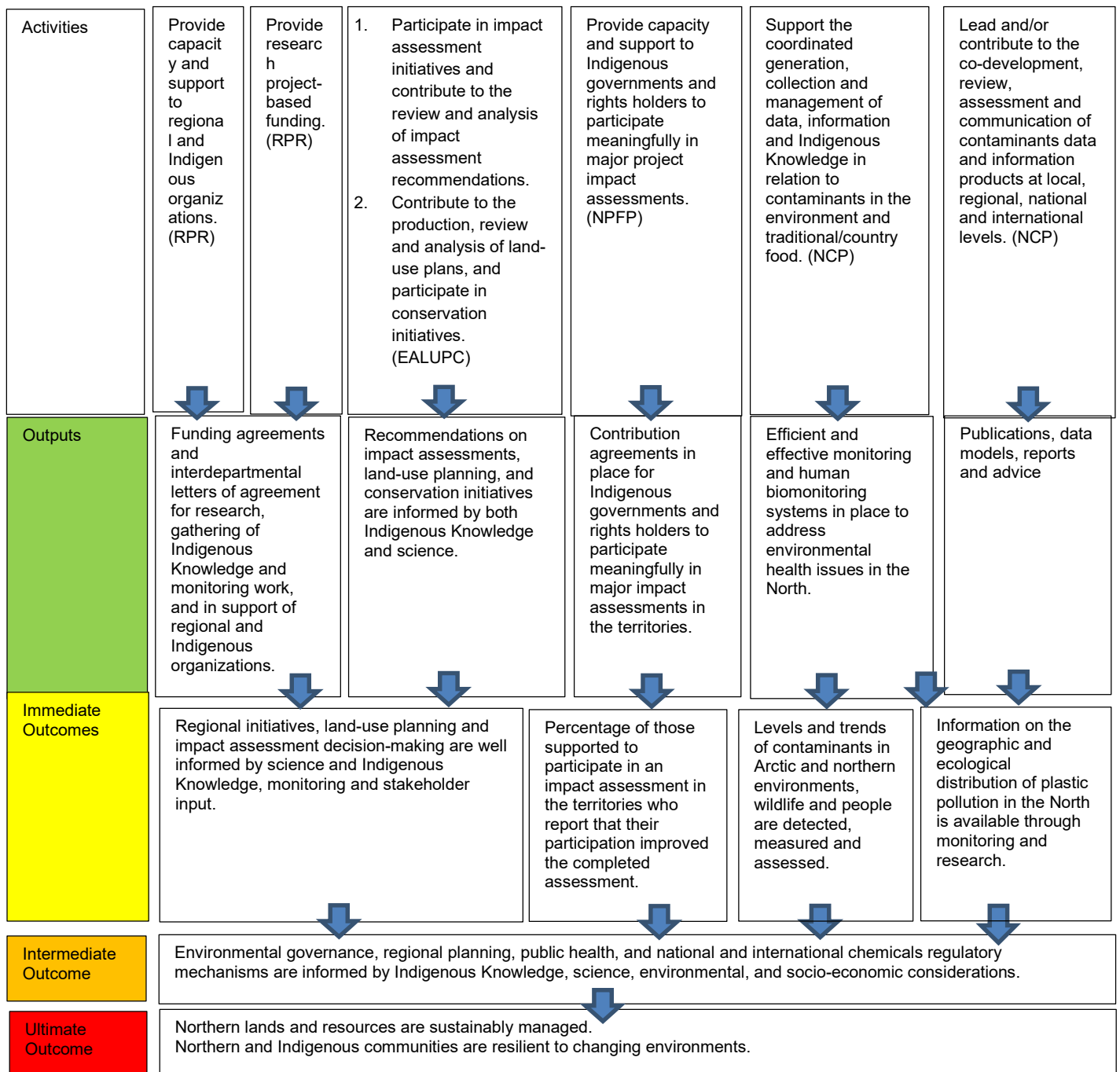
Given these findings, the following recommendations have been put forward. In most cases, these recommendations refer to NAES as a whole, and thus to all of its initiatives. In some cases, the recommendation may refer more directly to some of the initiatives than others. However, given the future of NAES is to become an integrated program pursuing common aims, all initiatives are asked to consider how each recommendation applies to them.

It is recommended that CIRNAC:

1. Address inefficiencies in processes for approval and distribution of funding, including improving communication of funding timelines, and mechanisms to move toward multi-year funding.

2. Improve existing processes and opportunities for supporting Indigenous organizations' long-term capacity to participate in NAES funded research by:
 - a. expanding research advisor and contaminants research positions;
 - b. furthering locally-led engagement on research results; and
 - c. engaging youth, Elders, and other knowledge holders.
3. Consider approaches to address the capacity shortages resulting from a growing list of contaminants of concern that require additional research, monitoring and assessment capacity.
4. Review and update the Program's logic model and performance measurement strategy to better articulate the existing connectivity between initiatives and to better measure shared outcomes.

Appendix A: Northern and Arctic Environmental Sustainability Logic Model



Source: This logic model is from the August 2021 Performance Information Profile. This is the logic model identified for the purpose of the evaluation.