



Evaluation At A Glance

Evaluation of the National Hydrological Services

About the program

The objective of the National Hydrological Services (NHS) is to support water management decisions that protect the health and safety of Canadians and ecosystems. In partnership with the provinces and territories, the NHS is responsible for delivering the National Hydrometric Program (NHP), which involves monitoring water quantity and flow across Canada. NHP stations are co-managed with provincial and territorial partners through the National Administrator's Table, established under the 1975 bilateral agreements and subsequently updated, and comprises representatives from federal, provincial, and territorial governments.

The NHS also contributes water resources science and engineering expertise to the management of international and domestic transboundary water by carrying out the orders of the International Joint Commission under the *International Boundary Waters Treaty Act* and participation in domestic water boards in partnership with the provinces and territories.

Budget 2018 announced a \$89.7M investment to transform the NHS, which until then had not benefited from any significant investment in over 25 years. Funding targeted four specific streams: 1) Develop capacity to predict water quantity; 2) Address critical failing infrastructure; 3) Strengthen engineering and technical capacity; 4) Evaluate and test innovations in measurement technology and data integrity. The funding was limited to five years, sun setting on March 31st 2023.

About the evaluation

The evaluation was conducted from March 2022 to December 2022. It focused on ECCC's role over the 4-year period from 2018-2019 to 2021-2022 and examined the following themes: relevance and responsiveness; efficiency; capacity to deliver on the mandate; result achieved; and use of performance information. It used multiple methods including: document and file review; analysis of administrative, performance and financial data; 16 interviews with ECCC representatives; a partner and stakeholder survey; two case studies; and two site visits.

What the evaluation found

The NHS continue to be relevant, and respond to a need for management of water in Canada, as demonstrated recently in the ECCC Minister's mandate letter. The program is also essential in providing quality data to allow for better climate change understanding, predictability and mitigation.



Overall, the National Hydrological Services has been responsive to emerging changes since 2018. It has responded well to COVID-19, and pivoted to allow for continuity in its key services. It is currently testing new technologies that could benefit the program. The National Hydrological Services relies on agreements with P-Ts to support the evolution of the hydrometric network and associated services to respond to the needs of Canadian populations. The National Hydrological Services is also trying to adapt its infrastructure to withstand the impacts of climate change in order to allow continued provision of essential hydrometric data and to support the study of climate change.

In addition, there is an opportunity for the Department to learn from the NHS' approach where a forward-looking program component tested new technologies and data management processes to innovate for the future. This represents a good practice in program design and evolution.

Further there are opportunities to strengthen the NHS approach to engagement of Indigenous groups given the current lack of guidance and uniformity.

The domestic and international partnerships in place, through structured agreements, allow for efficiency in operations given required cooperation and transparency of both partners. However, these agreements present challenges such as misalignment with differing budgetary cycles and timeliness of reporting. Overall, the NHS internal organisation and mechanisms are sound, with good governance in place, clear roles and responsibilities, and good coordination. Finally, the NHS has been found to be using its resources efficiently, with challenges identified related to coordination and administration of some resourcing activities.

Over the evaluation period, the NHS went from a period with capacity constraints, identified in part through its Blue Ribbon Panel, to one where it could, with the increased funding under Budget 2018, address issues that had been hampering the program for years.

However, with this funding set to end shortly, there is recognized risk by management for the future of the NHS, as gains in infrastructure, innovation, and increased support to water boards would be halted. There is also a risk that sunseting of the funding would limit future sustainability of the program, and critically reverse the positive results achieved from this funding. This could further result in leadership challenges with provincial and territorial partners.

The NHS adjusted its overall results framework to better align the program's business in serving mainly partners such as P-Ts, and continues to collect a suite of relevant and quality results data. With regard to the Budget 2018 investment, results are being achieved. Prediction efforts are nearing completion with both integrated water predictions in five water basins and prototype for storm surge and inundation warnings for the Atlantic. Infrastructure is also well advanced, with over 400 projects completed or nearing completion, thus significantly reducing its infrastructure deficit. Enhanced capacity has allowed the NHS to increase engineering support to infrastructure projects, water boards, and hydrological analysis. Finally, innovation

technologies are currently being tested at over 30 field sites, with completion planned by Spring 2024.

The NHS has a rich suite of quality performance information, including performance dashboards to support the delivery of its Budget 2018 funding, annual reports for its agreements with P-Ts as well as for its inter-jurisdictional boards. Senior management noted performance information was a strength of the program. Minor challenges reside with the Departmental Results Indicator that is not as aligned to the program as it could be. There could be benefits to Canadians to have centralized hydrometric information, and new products.

Recommendation and management response

The following recommendation is directed to ECCC's Assistant Deputy Minister of the Meteorological Service of Canada (MSC), as the senior departmental official responsible for the National Hydrological Services (NHS) Program.

Recommendation 1: The Assistant Deputy Minister of the Meteorological Service of Canada should consider opportunities for the NHS to improve engagement and collaboration with Indigenous groups in the context of reconciliation.

The Assistant Deputy Minister of the MSC agrees with the recommendation.

Management response: MSC will address the recommendation to improve engagement and collaboration with Indigenous groups in the management of the NHS program. MSC will review its hydrometric network and services and identify gaps in data and services for Indigenous communities. Once the Canada Water Agency (CWA) is established, the NHS will engage the CWA on how they can support the MSC with Indigenous engagement.