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CLEAN AIR AGENDA ADAPTATION THEME: REVIEW OF PROGRAM EVALUATION AND PERFORMANCE MEASUREMENT FINDINGS

Horizontal Evaluation

Final Report

Approved by

Executive Committee

Finance, Evaluation and Accountability (EC-FEA)

Health Canada

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Evaluation Review of the Clean Air Agenda Adaptation Theme: Review of Program Evaluation and Performance Measurement Findings

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Acronyms used in the report

AAFC	Agriculture and Agri-Food Canada
ADM	Assistant Deputy Minister
AQHI	Air Quality Health Index
CAA	Clean Air Agenda
DFAIT	Department of Foreign Affairs and International Trade
DFO	Fisheries and Oceans Canada
DGMC	Directors General Management Committee
DGTLCC	Director General Theme Lead Coordinating Committee
DM	Deputy Minister
EC	Environment Canada
HC	Health Canada
HMARF	Horizontal Management Accountability and Reporting Framework
ICCS	Improved Climate Change Scenarios
INAC	Indian and Northern Affairs Canada
NRCan	Natural Resources Canada
PCA	Parks Canada Agency
PHAC	Public Health Agency of Canada
PIDIRS	Pilot Infectious Disease Impacts and Response System
SCC	Standards Council of Canada
TC	Transport Canada

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EXECUTIVE SUMMARY

Introduction

The purpose of this document is to present a review of the available evaluation findings concerning the Adaptation Theme programs under the Clean Air Agenda (CAA). The Adaptation Theme Evaluation Review is a synthesis of the current findings of individual evaluations and available performance measurement data for the seven programs within the Adaptation Theme. These evaluations were conducted, or are currently being conducted, by their respective responsible departments and agency. The Adaptation Theme Evaluation Review will also be integrated into the overall Clean Air Agenda Horizontal Evaluation Report for the fall of 2010.

All program-level evaluations sought to address program-specific issues of relevance and performance and used a core set of evaluation questions in order to facilitate the review of findings at the theme level.

Methodology

Two methods were used in the Adaptation Evaluation Review:

- *Individual program evaluations* – The majority of the evidence presented in the Adaptation Evaluation Review is based on the available findings, conclusions and recommendations from the individual program evaluations. The individual evaluations generated findings based on multiple lines of evidence, such that the evidence reviewed here already represents numerous sources of evidence.
- *Adaptation Theme Evaluation Questions* – eight program managers in participating departments were asked three additional “theme-specific” questions. These questions, developed in consultation with evaluation representatives from all participating departments, collected qualitative evidence to assess the effectiveness and challenges of the Adaptation Theme’s management and accountability approach.

The following two limitations to the Adaptation Theme Evaluation were also noted:

- The programs under the Adaptation Theme were new programs that had been operational for roughly 18 months to two years at the time of the individual program evaluations. As noted in many of the individual evaluations, the Adaptation Theme programs generally did not begin to reach external stakeholders until late 2008-2009 and early 2009-2010. As was anticipated during the evaluation planning phase, the individual evaluations generally provided evidence related to outputs and a limited assessment of early outcomes, given the early stage of program implementation. The findings in the Adaptation Evaluation Review were therefore based on early assessments of program impacts; and,
- Given the short implementation period for Adaptation activities, many of the program evaluations were expected to be completed late in the 2010-2011 fiscal year. The following thematic evaluation findings are, as a result, a combination of early evaluation results and performance information. Only two evaluations were conducted and approved by their respective Departmental Evaluation Committees. Two other evaluations had been completed but were not yet approved; two evaluations were under way and were able to provide preliminary evaluation data; and, one evaluation had not yet begun, though the program was able to provide results from a stakeholder survey. Readers should be cautioned

that findings and conclusions presented in the report represented the evidence available at a specific point in time (spring, 2010).

Findings/Conclusions

Since the evaluation findings are based on evidence from programs early in implementation, the conclusions are limited in scope:

- The Adaptation Theme appears to be a relevant government activity based on the results of the Adaptation Evaluation Review. The programs funded under the Adaptation Theme addressed areas of federal government responsibility and address on-going climate change and air quality issues that would not be otherwise addressed; and
- The evidence, both financial and non-financial, concerning expected implementation, as well as the positive comments made by Theme stakeholders on the overall management and accountability of the Adaptation Theme, appears to indicate that the programs within the Adaptation Theme have taken the appropriate preliminary steps to implement the Theme. The outcome evidence that is available also points to the programs moving towards the achievement of the goals of the Theme, albeit at a very early stage of development. Further, though stakeholders suggested that the Adaptation Theme was less cohesive than other Clean Air Agenda Themes at its outset, the Theme management structure, particularly the Directors General Management Committee, appears to be operating effectively. Evidence on early best practices noted the importance of engaging with external stakeholders and recognizing that adaptation is one of many competing priorities and will take sustained effort on the part of all partners to address the issues. Given the early indicators of success, and the statements made by Adaptation Theme stakeholders regarding the uncertain future of the Theme beyond March 2011, there is a need for additional formal planning as a Theme to decide how to move forward based on the preliminary evidence of success.

Recommendation

The following recommendation was made to responsible departmental Assistant Deputy Ministers. Given the early evidence that the Adaptation Theme is a relevant issue for government, and that the Theme's activities appear to be on track toward achieving the desired outcome, balanced against the uncertain future of adaptation funding and the fact that the Theme was developed quickly and was less cohesive than desired, **it is recommended that the responsible Adaptation Theme Assistant Deputy Ministers and other Assistant Deputy Ministers, as appropriate, articulate a plan for possible future adaptation programming and communicate this plan to the responsible Deputy Ministers.**

Management Response

Statement of Agreement/Disagreement with the Recommendation
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The ADMs responsible for the adaptation programs that received funding for the 2007-2011 period agree with the recommendation. These ADMs include: Strategic Policy Branch, EC; Science and Technology Branch, EC; Meteorological Service of Canada, EC; Earth Sciences Sector, NRCAN; Northern Affairs, INAC; Healthy Environments and Consumer Safety Branch, HC; First Nations and Inuit Health Branch, HC; and Infectious Disease and Emergency Preparedness Branch, PHAC.

Management Action

All existing adaptation programs will sunset on March 31, 2011. As such, the relevant ADMs are currently undertaking work to address this recommendation as part of the broader Clean Air Agenda renewal.

The ADMs responsible for adaptation policy and programming are developing a consensus-based interdepartmental plan to inform future government decisions for the Adaptation Theme. This plan will be presented to departments participating in the Adaptation Theme renewal.

The responsible ADMs include: Strategic Policy Branch, EC; Science and Technology Branch, EC; Meteorological Service of Canada, EC; Science and Policy Integration, NRCAN; Earth Sciences Sector, NRCAN; Northern Affairs, INAC; Healthy Environments and Consumer Safety Branch, HC; First Nations and Inuit Health Branch, HC; Infectious Disease and Emergency Preparedness Branch, PHAC; Policy Development, TC; Agri-Environmental Policy and Strategic Priorities Directorate, AAFC; Strategic Policy, DFO; Policy and Stakeholder Relations Branch, SCC; the National Parks Directorate, PCA; and Global Issues Branch, DFAIT.

A Directors General Management Committee (DGMC) coordinates all Theme activities on behalf of the Adaptation Theme ADMs, and is crucial to the overall functioning of the Theme. While the program lead of the DGMC rotates between departments, Environment Canada is the policy lead for climate change adaptation and is therefore responsible for the policy authority of the theme, including the implementation of management actions.

Timeline	Deliverable(s)	Responsible Party
April 2011	Plan to renew the Adaptation Theme	Director General, Strategic Policy Directorate, Environment Canada

1.0 INTRODUCTION

The purpose of this document is to present a review of the available evaluation findings and performance data of the Adaptation Theme programs, under the umbrella of the Clean Air Agenda (CAA). The Adaptation Theme is one of eight themes under the CAA architecture¹ and consists of seven programs.

Individual evaluations of the programs within the Adaptation Theme were conducted, or are in the process of being conducted, by their respective responsible departments and agency. Each of the individual program-level evaluations sought to address program-specific issues of relevance and performance, in addition to using a core set of thematic evaluation questions in order to facilitate the review of findings at the thematic level.

This document presents a review of the current findings of the individual evaluations and performance data for the seven programs within the Adaptation Theme. The findings of this review will also be integrated into the overall Clean Air Agenda horizontal evaluation in the fall of 2010. Environment Canada (EC) was responsible for the completion of this review, in consultation with the following partners: Indian and Northern Affairs Canada (INAC), Natural Resources Canada (NRCan), Health Canada (HC) and the Public Health Agency of Canada (PHAC).

It is still early in the implementation of the programs within the Adaptation Theme, and many of the individual program evaluation reports were only at the draft stage at the time of this Adaptation Theme evaluation review. A need was identified, however, to provide the most up-to-date evaluation findings available to the senior management involved in developing a renewed approach to the Theme. It was determined that the preferred approach would be to develop this evaluation review based on the program evaluation findings or performance data available at the time (Spring 2010).

It was recognized during the Adaptation Theme Evaluation Review planning phase in winter 2009 that the programs would only be in early implementation at the time of the evaluation review and an assessment of the Theme's collective performance would be challenging, given that the majority of program evaluations would likely be either incomplete or would provide only preliminary findings.² Further, it was evident that the programs are varied in scope and design and would require sufficient program-level evaluation evidence to support program management decision-making. This would not have been feasible had the evaluation evidence been exclusively thematic. As a result, the focus of evaluation activity for the Adaptation Theme was on the evaluation of individual programs. While providing a high-level review of program status and early indications of performance where available to assist horizontal decision-making, this

¹ The CAA architecture includes 44 programs and nine federal departments and agencies.

² There were only four completed evaluations at the time of the Adaptation Theme Evaluation Review, of which only two had been approved by their respective Departmental Evaluation Committees. Evaluation Review findings also were derived from the preliminary findings of two other ongoing program evaluations and a stakeholder survey used for performance measurement purposes. More details on the status of the individual evaluations are available in Table 2 of this report.

evaluation review is supplemental to the individual program evaluations and does not represent the level of detail that is available in those reports.

This document presents the findings and recommendations of the Adaptation Theme Evaluation Review and is organized in the following way:

- Program Profile;
- Methodology;
- Findings;
- Conclusions;
- Recommendations; and
- Management Response.

2.0 PROGRAM PROFILE

2.1 Overview of the Adaptation Theme Within the Clean Air Agenda (CAA)

The Adaptation Theme focuses on two long-term outcomes: 1) improving Canada's capacity to reduce health risks arising from air pollution and a changing climate; and 2) improving Canada's capacity to adapt and respond to a changing climate and air pollution. The outcomes of the Adaptation Theme address, therefore, risks not only to the health of Canadians but also to the environment, communities and infrastructure.

The Adaptation Theme consists of seven programs. These programs are intended to help all Canadians build their capacity to adapt by developing knowledge, information, tools and/or collaborative arrangements required to successfully reduce risks. These initiatives differ from many of the programs within the Clean Air Agenda, as they do not directly contribute to reductions of greenhouse gases but rather support the critical complementary activity of adaptation to climate change impacts.

Approximately half of the total funding of the Adaptation Theme was intended to build capacity to respond to diverse risks across the country and to remain relevant to many economic sectors and regions. The other half was targeted to address three urgent risk areas: (i) the North, where impacts of a changing climate are already being felt, vulnerability of communities and infrastructure is high, and the federal government has unique constitutional and land claims responsibilities toward Aboriginal people and northerners; (ii) human health, which faces particular risks through changing climate conditions and extremes, and the spread of infectious diseases; and (iii) infrastructure, in which governments and industry will invest hundreds of billions of dollars over the next decade and that must be designed to endure climate conditions that will differ from those of the past.

The following section briefly describes each of the programs grouped under the CAA Adaptation Theme.³

³ For *Financial Administration Act* evaluation requirements (<http://laws.justice.gc.ca/eng/F-11/index.html>), please refer to the individual program evaluations.

2.1.1 Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities (INAC)

This program builds on previous work to advance risk assessment and planning by supporting community-based adaptation projects that assess and identify risks and opportunities related to the impacts of climate change, and increase the capacity of Aboriginal and northern communities to address the impacts of a changing climate. Contribution funding was allocated to support community-based projects aimed at working with Aboriginal and Northern organizations, institutions and communities to assess and develop management strategies, adapt to the impacts of a changing climate, and develop future courses of action on adaptation.

2.1.2 Air Quality Health Index (AQHI) (EC, HC)

The Air Quality Health Index translates the science of the health risk of air pollution into a format and set of health messages intended to be used by all Canadians. The current program was put in place to apply the Air Quality Health Index to the forecast system, develop a health-based program to help Canadians protect their health, and promote action to reduce air emissions and build support for the government's Clean Air Agenda. Contribution funding was allocated to EC to support community organizations in developing or linking existing programs directed at air pollution reduction to the AQHI. Contributions were also designated for funding non-governmental organizations to support provincial transition between existing local air quality information programs and the AQHI.

2.1.3 Climate Change and Health Adaptation in Northern/Inuit Communities (HC)

Aboriginal and northern communities and organizations have unique vulnerabilities to climate change in the North including the impacts on health and well-being of rising sea levels, melting ice and permafrost, violent storms, community location, sanitation, food safety, water quality, vector-borne diseases, and impacts on wildlife and plants used in the traditional diet. This program has established a community-based research initiative to enable northern First Nations and Inuit communities to identify and assess key vulnerabilities and health impacts related to climate change, and develop innovative and culturally sensitive human health risk management plans and tools for adapting to climate change. Partnerships with INAC and Aboriginal and northern organizations and communities are being established to deal with vulnerabilities associated with climate change in the North. Contribution funding was allocated to support research to engage local communities and organizations in addressing the linkages between climate change and health, including methodologies that combine traditional knowledge with formal science.

2.1.4 Improved Climate Change Scenarios (EC)

Improved Climate Change Scenarios activities focus on three key components: the enhancement and operation of global and regional climate models; the development of climate scenarios for climate, weather extremes and hazards; and the development of specialized information on hazards and climate extremes for infrastructure design. Climate models are computer generated projections that allow scientists to estimate climate conditions globally and regionally as well as simulate climate change. Using these climate models, climate change scenarios define a range of possible future climate conditions to assess future hazards and extreme climate conditions that could develop as a result of climate change. This information feeds into the development of tools and information related to climate extremes that assist in disaster management

planning and updating Canada's infrastructure codes and standards to include impacts of climate change.

2.1.5 Innovative Risk Management Tools for Adaptation (NRCan)

Decision-makers can more strategically use new knowledge about climate change when guided by tools (e.g., guidelines, methodologies) for risk assessment and management, economic analysis and adaptation planning. The goal of NRCan's program is to produce a basic suite of such tools in collaboration with industry, practitioners and government partners that will work towards ensuring the safety and competitiveness of communities and economic sectors. For the Innovative Risk Management Tools Program, contribution funds were allocated to draw on expertise outside the federal government, such as in the private sector, to support work related to tool development, testing, training and dissemination.

2.1.6 Regional Adaptation Action Partnerships (NRCan)

Collaboration is required among governments, provinces, communities, businesses and other stakeholders to take effective adaptation action on some issues. To catalyze this type of work, NRCan will establish collaborative mechanisms customized to reflect regional needs and expertise and will focus on applying information and tools to assess adaptation options and on sharing information. Contribution funds were allocated to support the development and implementation of project activities (such as research, stakeholder consultations, outreach and knowledge transfer, risk assessment, tailoring of tools, capacity development) to address adaptation priorities as specified in detailed agreements on programs of work.

2.1.7 Climate and Infectious Disease Alert and Response Systems to Protect the Health of Canadians (HC, PHAC)

This initiative consists of two independent programs, one piloting a heat alert response system (HC) and another piloting an alert response system on infectious diseases (PHAC). The two programs currently being implemented at Health Canada and the Public Health Agency of Canada⁴ respectively were put in place to work with partners on alert systems for weather extremes and infectious diseases, guidelines for health professionals, research, surveillance and modelling of infectious diseases, and prevention and control strategies. Health Canada will pilot heat alert and response systems (HARS) in four communities, develop a HARS best practices guidebook and guidelines for healthcare during extreme heat events. PHAC's Pilot Infectious Disease Impact and Response Systems (PIDARS) portion of the Climate Change and Infectious Disease Alert and Response Systems to Protect the Health of Canadians was allocated contribution funding designated to acquire existing national expertise related to mapping, risk assessments and modelling. It was anticipated that this funding would result in the development of new knowledge and research to be applied by PHAC employees in the development of identification and decision-making matrices and tools.

2.2 Stakeholders and Beneficiaries

⁴ This program consists of two separate initiatives under the Adaptation Theme that are being implemented separately by HC and PHAC and are not jointly undertaking any projects listed in the logic model above. The alert response systems for heat and for infectious diseases are independent initiatives. The activities and outputs of both are completely separate from each other.

The reach of the programs within the Adaptation Theme extends to a broad range of stakeholders and beneficiaries that include:

- Aboriginal and northern communities and community groups;⁵
- National Aboriginal and northern organizations;
- Aboriginal businesses and industries;
- Non-governmental organizations and stakeholder partners;
- Professional organizations, code and standards committees and commissions;
- Climate science, adaptation and impact research communities (including technical experts and research institutions);
- Experts, practitioners and decision-makers in governments and the private sector;
- Health care providers and health professionals;
- Public health and environmental agencies and emergency measures organizations in provinces, regions and municipalities;
- Broadcast media, dissemination partners and the general public;
- Provinces, territories and municipalities; and
- Other federal departments.

2.3 Governance

The CAA Horizontal Management Accountability and Reporting Framework (HMARF) is a management framework that is intended to provide strategic direction, coordination and managerial oversight of the CAA. According to the HMARF, each theme under the CAA is required to establish a Directors General Management Committee (DGMC) to assume collective responsibilities for the theme. Comprised of the DGs responsible for the seven programs within its theme, the Adaptation Theme DGMC is responsible for reporting information at the program level, providing coordination and operational support for management issues, and ensuring that overall program management is consistent with the HMARF. The chair and secretariat of the DGMC for the Adaptation Theme rotate through the membership on an annual basis, and meetings are held quarterly. At the thematic level, the DGMC provides information on planned and actual expenditures, results and performance, and identifies risks and mitigation strategies, ensuring that issues are resolved prior to going to the Director General Theme Lead Coordinating Committee (DGTLC).

Comprised of the lead DG from each theme, the DGTLC is intended to be the primary operational-level committee responsible for ensuring the consistency and complementarity of work across CAA themes. The Adaptation Theme DGMC is expected to ensure that the DGTLC has sufficient information on issues related to the Adaptation Theme to oversee the implementation of the horizontal initiative and to report appropriately to the Assistant Deputy Minister (ADM) Steering Committee, which provides collective management direction for theme areas and the CAA overall and reports to the Deputy Minister (DM) Committee. The DM Committee provides strategic direction on the management of the CAA overall and serves as the interlocutor with ministers and Cabinet.

2.4 Adaptation Resource Allocations

⁵ Some programs define these northern communities based on their location within specific geographic regions.

Table 1 details the allocation of funds for each program within the Adaptation Theme. Amounts were originally allocated for each of the various components for a total investment by the Government of Canada of \$115.9 million over four years in Adaptation programming across the five participating departments and agency.⁶ Funds were not released until August 2008 (with the exception of AQHI, which had been approved separately). **Table 1** reflects this change in anticipated funding and program implementation. A detailed analysis of planned versus actual spending is presented in **Section 4.0** (under evaluation question 7). It should be noted, however, that, as **Table 1** indicates, all programs except the AQHI began implementation of planned activities one year later than anticipated.

Table 1. Adaptation Theme Spending: Planned vs. Actual (2007-2009) and Planned Only (2009-2011) (in thousands)^a

Program Initiatives	Dept.	Planned 07-08	Actual 07-08	Planned 08-09	Actual 08-09	Planned 09-10	Planned 10-11
1. Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities	INAC	\$0	\$338	\$2,550	\$2,237	\$4,800	\$4,500
2. National Air Quality Health Index and Forecast Program	EC & HC	\$6,000	\$5,028	\$8,000	\$6,774	\$8,000	\$8,000
3. Climate Change and Health Adaptation in Northern/Inuit Communities	HC	\$0	\$0	\$2,405	\$1,823	\$2,150	\$2,150
4. Improved Climate Change Scenarios	EC	\$0	\$0	\$5,211	\$3,568	\$4,900	\$4,890
5. Innovative Risk Management Tools / 6. Regional Adaptation Action Partnerships	NRCan ^b	\$0	\$0	\$3,955	\$2,859	\$14,200	\$9,200
7. Climate and Infectious Disease Alert and Response Systems to Protect the Health of Canadians	HC	\$0	\$0	\$2,450	\$1,848	\$2,150	\$2,750
	PHAC	\$494	\$252 ⁷	\$1,474	\$1,239	\$1,938	\$2,174
Total		\$6,494	\$5,618	\$26,045	\$20,348	\$38,138	\$33,664

Source for Planned and Actual 07-08 & 08-09: Environment Canada Departmental Performance Reports: 2008 and 2009 and program documentation.

Source for Planned 09-10 & 10-11: Annex A to Horizontal Evaluation Plan for the Clean Air Agenda

^a Figures for planned spending presented in this report for 2009-2010 and 2010-2011 may differ from those published in Environment Canada's DPRs due to differences in reporting periods. As well, some allocated resources were reprofiled. As a result, the total for planned spending does not add to \$115.9 million.

^b Natural Resources Canada reprofiled allocated resources to include an additional year of program activity in 2011-2012

⁶ The five participating departments and agency are: Health Canada, Indian and Northern Affairs Canada, Natural Resources Canada, Environment Canada and the Public Health Agency of Canada.

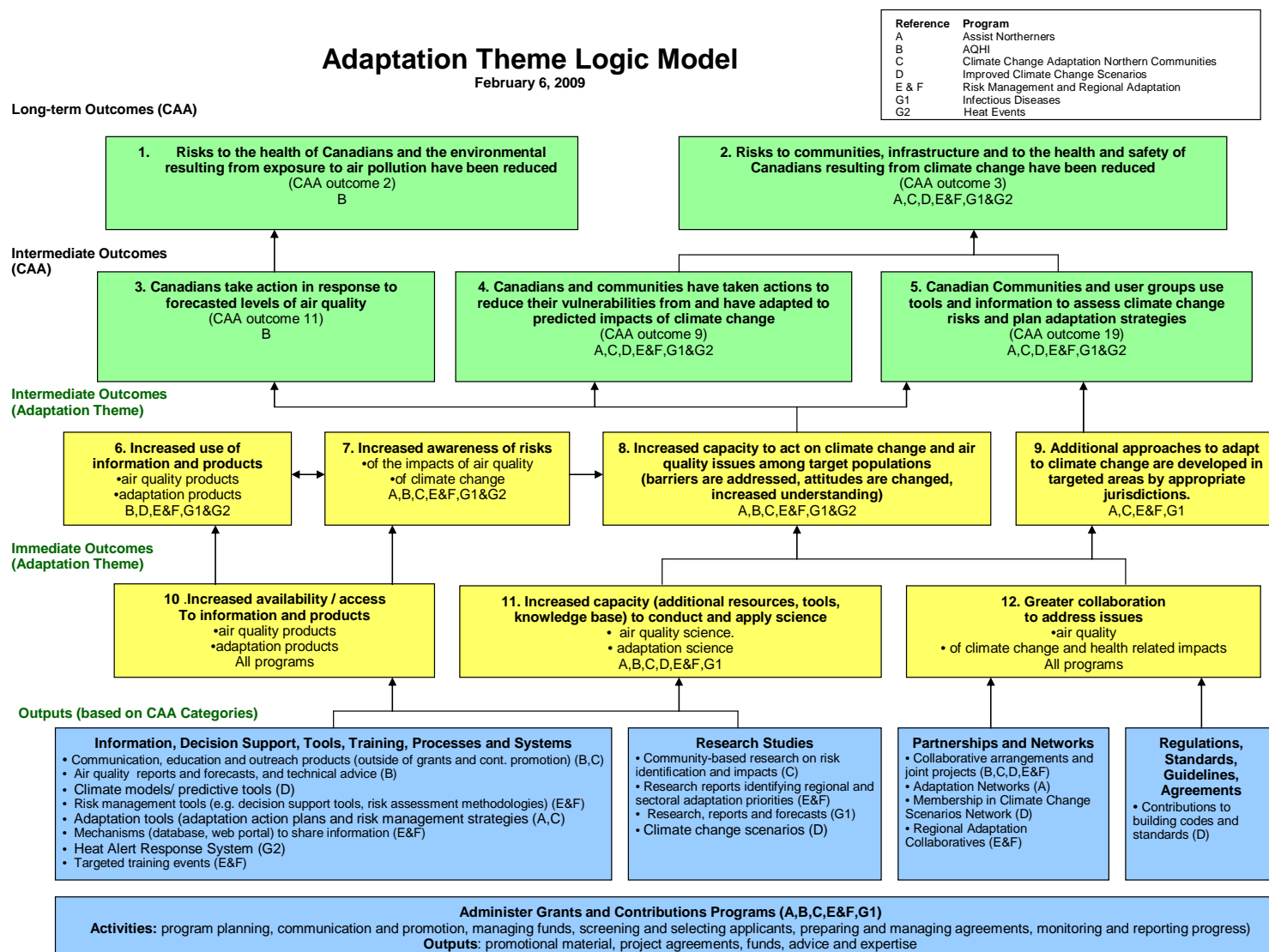
⁷ Senior management at PHAC were able to cash manage funds for the 2007-2008 fiscal year, and the program was thus able to report spending in that year.

2.5 Logic Model⁸

A logic model is a visual representation of a program/initiative which identifies the linkages between an initiative's activities and the achievement of its outcomes. The Adaptation Theme Logic Model (Figure 1) shows how the seven Adaptation program initiatives are expected to lead to the higher-level outcomes expected of the Adaptation Theme as a whole. The Adaptation Theme Logic Model was developed collectively, with the active participation of program management and evaluation representatives from all programs, the Clean Air Agenda Results Management Secretariat (CAA-RMS) staff, and Government Consulting Services (GCS).

⁸ The logic model used in this report is a revised version of the model that was submitted in the inception documents. The revised model, developed by an interdepartmental committee in February 2009, includes minor revisions to the Theme's outputs and outcomes.

FIGURE 1. ADAPTATION LOGIC MODEL – Schematic



3.0 PURPOSE, SCOPE AND METHODOLOGY

The following section provides information on the purpose of and intended audiences for the Adaptation Theme Evaluation Review, the scope of the evaluation, key evaluation issues and questions, methodology and limitations.

3.1 Purpose and Intended Audience

The purpose of this document is to present a review of the available Adaptation Theme program evaluation findings, examine Theme-level issues and findings and help guide discussion on further climate change adaptation policy developments. The thematic evaluation is intended to meet the information requirements of senior management at EC, HC, INAC, NRCan and PHAC, as well Treasury Board, on the relevance and performance of the Adaptation Theme as a whole. The Thematic Evaluation also supports the Evaluation of the Clean Air Agenda.

3.2 Scope

The scope of the Adaptation Theme Evaluation Review is from 2007-2008 to the present (June 2010). Since these Adaptation programs are in the early stages of implementation (in effect, the programs are halfway through their originally planned implementation), the evaluation findings are preliminary in nature and typically focused on the outputs and immediate results that were measurable during the timeframe of the evaluations.

3.2.1 Key issues and evaluation questions

The focus of the review of available program evaluation findings was on relevance, outputs and early outcomes, appropriate use of resources, efficiency and economy, and design and delivery. The thematic evaluation addressed all questions required under the 2009 Treasury Board Evaluation Policy.

Relevance

As per the 2009 Treasury Board Evaluation Policy, relevance examines the extent to which the program addresses a continued need, is aligned with government priorities, and is aligned with federal roles and responsibilities. The following questions address these issues:

- Are the activities within the Adaptation Theme aligned with federal government priorities?
- Are the activities within the Adaptation Theme aligned with the priorities of participating departments?
- Are the activities within the Adaptation Theme connected with key environmental climate change and air quality needs?

Performance

As per the 2009 Treasury Board Evaluation Policy, performance examines the extent to which the program has achieved or is in the process of achieving expected outcomes and demonstrates efficiency and economy. The following questions address these issues:

- To what extent have intended outputs and early outcomes been achieved within the Adaptation Theme?
- Are there more cost-effective, economic and efficient means of achieving objectives under the Adaptation Theme?
- How could efficiency be improved under the Adaptation Theme?
- To what extent have each of the Adaptation Theme activities been implemented or are on track to being implemented as planned?
- Is the management and accountability structure for the Adaptation Theme in place and functioning as anticipated?
- What are the best practices/lessons learned from activities within the Adaptation Theme?

3.3 Methodology

This section describes the two sources of evaluation evidence used to develop the Adaptation Theme Evaluation.

- *Individual program evaluations* – Most of the evidence presented in the Adaptation Theme Evaluation Review is based on the available findings from the individual program evaluations and performance data.⁹ The individual evaluations generated findings based on multiple lines of evidence; therefore the evidence reviewed here already represents numerous sources of evidence. As noted above, the individual evaluations sought to provide evidence on the outcomes articulated in the thematic logic model to the extent possible given the early implementation of Adaptation programs, while allowing enough flexibility in approach to address program-specific accountability issues. **Table 2** below provides a brief description of the status of each of the individual program evaluations at the time of the Adaptation Theme Evaluation Review.
- *Adaptation Theme Evaluation Questions* – eight program managers from participating departments were asked three additional “theme-specific” questions. These questions, developed in consultation with evaluation representatives from all participating departments, collected qualitative evidence to assess the effectiveness and challenges of the Theme’s management and accountability approach. The evidence collected from these questions was not reported in any individual program evaluation as the questions only addressed issues related to the Adaptation Theme as a whole.

⁹ There were only four completed evaluations at the time of the Evaluation Review, of which only two had been approved by their respective Departmental Evaluation Committees. Evaluation Review findings also were derived from the preliminary findings of two other on-going program evaluations and a stakeholder survey used for performance measurement purposes.

Table 2. Evaluation Status at time of Adaptation Theme Evaluation Review (May-June 2010)

Program Initiatives	Dept.	Description of Evaluation Status
<i>Evaluation completed and approved</i>		
1. Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities	INAC	Formative Evaluation was conducted and approved by INAC and was available for analysis in February 2010. Summative evaluation had begun and is scheduled for completion in December 2010.
2. National Air Quality Health Index and Forecast Program	EC & HC	Evaluation was conducted and approved by HC and EC in fiscal 2009-2010 and was available for analysis in March 2010.
<i>Evaluation completed but not approved</i>		
3. Climate Change and Health Adaptation in Northern/Inuit Communities	HC	Evaluation was conducted and awaiting approval by HC's Senior Management Board and was available for analysis in May 2010.
4. Improved Climate Change Scenarios	EC	Evaluation was conducted and awaiting approval by EC's Departmental Evaluation Committee and was available for analysis in May 2010.
<i>Evaluation started but not complete</i>		
5. Climate and Infectious Disease Alert and Response Systems to Protect the Health of Canadians	HC (Heat Resiliency Program) & PHAC (Pilot Infectious Disease Impact and Response Systems)	Both evaluations had begun. Preliminary findings were approved by the program and were provided to EC Evaluation Division staff to support the Adaptation Evaluation Review in May 2010.
<i>Evaluation not yet started</i>		
6. Innovative Risk Management Tools / 7. Regional Adaptation Action Partnerships	NRCan	Evaluation scheduled for fall 2010. However, the program had conducted a National Climate Change Baseline Survey of NRCan stakeholders, which provided preliminary baseline findings on NRCan stakeholder awareness and understanding. The findings were available for analysis in May 2010.

3.4 Limitations

The following are two limitations pertaining to the Adaptation Theme Evaluation.

- The programs under the Adaptation Theme, with the exception of the Air Quality Health Index, which was initiated under the Border Air Quality Strategy, are new programs that had been operational for roughly 18 months to two years at the time of the individual program evaluations. As noted in many of the individual

evaluations, the first year of program activity was focused on early implementation activities such as staffing, and programs generally did not begin to reach external stakeholders until late 2008-2009 and early 2009-2010. As was anticipated during the evaluation planning phase, the individual evaluations generally provided evidence related to outputs and a limited assessment of early outcomes given the early stage of program implementation. The findings in the Adaptation Evaluation Review are therefore based on early assessments of program impacts; further evaluation will be required over the coming years to develop a more comprehensive picture of the impact of the adaptation programs.

- Given the short implementation period for Adaptation activities, many of the program evaluations will be completed late in 2010-2011. The findings in this review are, as a result, a combination of early evaluation results and performance measurement information. Only two evaluations, the formative *Implementation Evaluation of the Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program* (INAC), and the *Evaluation of the Air Quality Health Index Program* (EC and HC) were conducted and approved by their respective Departmental Evaluation Committees (noted in **Table 2**). The timing of approved evaluation reports was anticipated in both the Clean Air Agenda Horizontal Evaluation Plan (in 2008) and the Clean Air Agenda Adaptation Thematic Evaluation Plan (in 2009), given the recognition that many of the programs would be in early implementation and the need to ensure that evaluations were conducted after a reasonable period of implementation. Readers should be cautioned, however, that the findings and conclusions presented here represent the evidence available at a specific point in time (Spring 2010).

Additional discussions of evaluation-specific limitations can be found within each individual program evaluation report.

4.0 FINDINGS

The findings of this evaluation review are presented by evaluation issue (relevance and performance) and by the related evaluation questions. The findings at the overall issue level are presented first, followed by the findings for each evaluation question.

A rating is also provided for each evaluation question. The ratings are based on a judgment of whether the findings from the program-level evaluation and performance data indicate that:

- the intended outcomes or goals have been achieved or met — labelled as **Achieved**;
- considerable progress has been made to meet the intended outcomes or goals, but attention is still needed — labelled as **Progress Made, Attention Needed**; or
- little progress has been made to meet the intended outcomes or goals and attention is needed on a priority basis — labelled as **Little Progress, Priority for Attention**.

The N/A symbol identifies items where a rating is not applicable, and the ~ symbol identifies outcomes achievement ratings that are based solely on subjective evidence.

Given the limitations noted in this report, the ratings should be considered tentative. In some cases (e.g., evaluation question 3), no rating is given as the evaluation questions could not be assessed based solely on findings from program evaluations.

4.1 Relevance

As part of the Clean Air Agenda, the Adaptation Theme represents a federal investment in research, tools, partnerships and standards to help reduce risks to Canadians, communities and infrastructure resulting from climate change and air pollution. The evidence demonstrating the relevance of this Theme, based on data collected during the individual program evaluations, indicates clear alignment with both federal and departmental priorities, and demonstrates program coverage of a range of identified environmental climate change and air quality needs.

Evaluation Issue: Relevance	Data Source(s)	Rating
1. Are the activities within the Adaptation Theme aligned with federal government priorities?	Evidence from Program Evaluations	Achieved

The alignment with federal government priorities was examined in each of the individual program evaluations, typically through a document review and interviews to assess the extent to which the program's individual rationale was linked to specific federal priorities. As noted in the introductory section, the Adaptation Theme was developed with the intent of addressing climate change adaptation issues in three federal priority areas: the North, human health, and infrastructure. The evidence from the evaluation reports indicates that the Adaptation Theme is aligned with these three federal priority areas. For example,

- evidence presented in the evaluations of the Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program and the Climate Change and Health Adaptation in Northern and Inuit Communities Program found that the programs were aligned with the priorities of the federal government with respect to northern development and such commitments as the International Polar Year, the United Nations Framework Convention on Climate Change, and the Intergovernmental Panel on Climate Change;
- evidence presented in the Air Quality Health Index Program (AQHI) evaluation, the draft Heat Resiliency Program evaluation and the draft Pilot Infectious Disease Impacts and Response System (PIDIRS) evaluation pointed to alignment with federal priorities with respect to human health through the development of tools, such as a nationally-consistent air quality index based on health-related information, the development of pilot projects to provide alert and response

information to the public during extreme heat events, and research on the public health risks associated with infectious diseases and climate change; and

- evidence presented in the draft Improved Climate Change Scenarios (ICCS) program evaluation noted alignment with the federal priority with respect to protecting infrastructure through research and related activities on hazards and climate extremes that upgrades existing Canadian building codes and standards to include the impacts of climate change on existing infrastructure.

Furthermore, there was a lack of significant evidence of duplication of other programs or overlap with other jurisdictions in any of the program evaluations.

Evaluation Issue: Relevance	Data Source(s)	Rating
2. Are programs within the Adaptation Theme aligned with the priorities of their respective departments?	Evidence from Program Evaluations	Achieved

Alignment with specific departmental priorities was also explored in each individual evaluation. The individual evaluations contain details on the specific departmental priorities that are not reproduced here as they refer to program-specific details. All Adaptation programs were found to be aligned with priorities within each of their participating departments. For example:

- the Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program is aligned with The North, The People and The Land INAC priorities;
- the AQHI and the ICCS are aligned with EC priorities related to weather and environmental predictions and services to reduce risks and contribute to the well-being of Canadians;
- the AQHI, Climate Change and Health Adaptation in Northern and Inuit Communities and the Heat Resiliency programs are aligned with HC's priorities with respect to providing health-related information on air and other environmental pollutants and with HC's Sustainable Development Strategy; and
- the PIDIRS program is aligned with the Public Health Agency of Canada's priorities on Environment Issues.

Evaluation Issue:	Data Source(s)	Rating
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Relevance		
3. Are the activities within the Adaptation Theme connected with key environmental climate change and air quality needs?	Evidence from Program Evaluations	N/A

A rating of N/A (not applicable) was given for question 3 as it was not feasible to assess the extent to which the Theme is connected to key environmental climate change and air quality needs based solely on program evaluation findings. An assessment of the extent to which the current Theme is connected with these key needs requires information on the full range of potential climate change and air quality needs that might be addressed through adaptation policy and programs. At this point, the evidence contained in the individual evaluations provides a description of the programs' connections to key climate change and air quality needs, such as:

- data and information on global and regional climate models, hazards and climate change scenarios to facilitate research activities in the larger climate science community, both in Canada and internationally;
- alert and response information as a result of extreme heat events, given the deaths associated with recent heat events in the American midwest and Europe;
- climate change information and adaptation tools for communities in the North, given the significant potential impacts of climate change on northern communities;
- tools to address the impact of air quality on human health, given the growing scientific consensus that air quality can impact a range of human health issues;
- findings from NRCan's Baseline Survey, directed at that department's target audiences, indicating that seven in ten business respondents felt climate change would have a mainly negative impact on their organization and that the impacts identified by these respondents were those areas addressed by the current NRCan programming; and
- research designed to understand the public health implications related to infectious disease arising from climate change, given the growing body of research linking infectious diseases and climate change.

4.2 Performance

It is very early in the implementation of the programs within the Adaptation Theme to provide a valid assessment of thematic performance. A frequent limitation noted in individual program evaluations was that these new programs were too early in their implementation to demonstrate evidence of impact and achievement of outcomes. While the programs within the Adaptation Theme appear to be progressing toward their intended outcomes, the program evaluations provided limited evidence of the achievement of outcomes.

Evaluation Issue: Performance	Data Source(s)	Rating
4. To what extent have intended outcomes been achieved within the Adaptation Theme?	Evidence from Program Evaluations	Some progress/ attention needed

The evidence presented in this section refers to the extent to which the Adaptation Theme has met the outcomes identified in the thematic logic model. Each individual evaluation addressed a specific set of thematic outcomes based on alignment with the program's goals and objectives. It was assumed at the outset of the thematic evaluation process that no individual program evaluation would address every element in the logic model, as some outcomes were not relevant or applicable to each individual program. Taken together, and provided with enough time to implement expected activities and outputs, the programs should address all outcomes articulated in the thematic logic model.

A common limitation in conducting program evaluations was the recent implementation of the programs. As such, there was limited evidence to assess the evaluation of outcomes, since programs had only begun to implement intended activities and reach external stakeholders. Furthermore, this review is based on evaluations at varying stages of completion.¹⁰

Immediate Outcomes

There was initial evidence to indicate that the expected immediate outcomes related to increasing availability and access to products, increasing capacity and greater collaboration had occurred in cases where the program had begun to implement program activities.

Increased availability of / access to information and products

Evidence on access to websites and website usage, in addition to other qualitative information on the increased availability of products and technical expertise, appears to indicate that the programs within the Adaptation Theme have begun to increase the availability of and access to adaptation information and products. The following points provide more detailed information:

- the draft ICCS evaluation found that data downloads and data requests from the program's websites have been generally increasing since 2007. Furthermore, evidence demonstrates that awareness and availability of and access to climate change information and research among target audiences have increased thanks to the availability on program websites of publications by program scientists as

¹⁰ As noted earlier, there were only four completed evaluations at the time of the Evaluation Review, of which only two had been approved by their respective Departmental Evaluation Committees. Evaluation Review findings also were derived from the preliminary findings of two other ongoing program evaluations and a stakeholder survey used for performance measurement purposes.

well as training sessions on how to use climate change scenarios data and hazards and climate extremes information;

- the AQHI evaluation noted that the federal AQHI website is operational and is available to all members of the public. In addition, website hit analysis of the Toronto pilot of the AQHI revealed increasing interest in seeking out AQHI information;
- the formative Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program Evaluation found early evidence that the program had brought technical expertise into northern communities and that projects were developing climate change adaptation information that was accessible and relevant to these communities;
- the evaluation of Climate Change and Health Adaptation in Northern/Inuit Communities found early evidence of increased access to tools and information through program-developed information materials and publications, videos and other information materials designed to increase awareness of climate change risks developed by northern communities and organizations; and
- the Heat Resiliency Program evaluation noted that information on the program has been presented at various conferences across Canada, and that the program has worked with the Weather Network to prepare heat-related vignettes. In addition, the program disseminated heat-health information to the program pilots and developed an outreach strategy for dissemination after 2011, in consultation with two external program advisory committees.

Increased capacity to conduct and apply science

Evidence on increased capacity to conduct and apply science presented in the evaluation reports indicates that the programs within the Adaptation Theme had generated both new science and tools and techniques to apply climate change adaptation science, such as those noted in the following examples:

- evidence in the formative Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program evaluation indicates that northern communities are assessing climate change risks and opportunities and defining adaptation priorities; and
- evidence from the ICCS evaluation indicates increased use of program websites and target models, although the evaluation also noted that increased capacity for target populations to conduct climate change impact and adaptation research largely depended on the target group. Interviewees reported that availability of climate change models and training sessions provided by the program contributed to increased capacity among scientists to conduct their own climate change impacts and adaptation research. Documentation, however, demonstrated that community leaders still require the expertise of program officers to use and apply specialized climate information, as well as to understand this information in a broader context when developing strategies to reduce vulnerability to climate change.

Greater collaboration to address the issue of climate change

The evidence presented in the individual evaluations appears to indicate that the programs within the Adaptation Theme have been successful in generating initial collaborative approaches to address climate change adaptation issues. For example:

- the creation of two external advisory committees to the Heat Resiliency Program to provide strategic direction on the main components of the Heat Project and identify information gaps and research topics, in addition to the set-up of four advisory committees in each pilot community to support the collaboration of local/regional stakeholders and partners implementing the HARS pilot project;
- provincial agreements to implement the AQHI in nine of ten provinces, including partnerships with NGOs within these provinces, and a partnership agreement with the Weather Network to roll out the AQHI across the majority of metropolitan regions in Canada;
- collaboration with various Aboriginal groups (e.g., Assembly of First Nations Canada) and the INAC to support work under the Climate Change and Health Adaptation in Northern/Inuit Communities Program; and
- research collaboration with other government departments, provincial organizations, research organizations and universities, non-governmental organizations, international partners and industry was noted in the draft ICCS evaluation.

In addition, evidence presented in the Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program formative evaluation indicates that a wide range of stakeholders such as scientists, consultants, experts and communities are collaborating on climate change adaptation projects. These collaborations were noted to have helped create a strong network of researchers and communities interested in climate change adaptation.

Intermediate Outcomes

Evidence of intermediate outcomes was not widely reported in individual program evaluations, given the limitations related to early program implementation noted previously. The evidence that was presented was generally speculative and based on indirect lines of evidence (e.g., program staff commenting on the use of adaptation tools by other groups). This limited information should not be interpreted as limited or poor performance; rather, there has simply not been sufficient program implementation to achieve anticipated impacts related to complex issues such as behavioural change or community capacity.¹¹ Finally, as noted elsewhere in the report, the findings of the

¹¹ Annemoon et al. noted in the article "Evaluating the Effectiveness of Air Quality Interventions" (Journal of Toxicology and Environmental Health, Part A, 71: 583–587, 2008) "considerable challenges in assessing the health impact of air quality regulations can be anticipated. For example, regulations take effect at different times and are implemented at multiple levels of government, asking for evaluations at different time scales and at the national, regional, or local level. In addition, other changes may take place as well, for example, in economic activity or at the personal behavior level, such as people staying indoors when pollution levels are high. Finally, other causes of air pollution-related adverse health effects need to be taken into account. These

Adaptation Theme Evaluation Review are based on evaluations at varying stages of completion.¹² The following findings are therefore presented at a general level and are based on an assessment of what is currently available.

Increased use of information and products

At present, the evidence on increased use of information and products points to increased use among groups with a clear interest in using or incentive to use adaptation products and information.

- For example, the draft ICCS evaluation found that, while the program's websites have been increasingly accessed over the last two years, it was difficult to determine how they were being used. While scientific researchers reportedly accessed and made use of the climate change data and information, other target groups with less technical or scientific capacity (e.g., engineers, municipalities, resource management and risk planning agencies) may not be able to use this information without consultation with climate experts.
- Communities identified in the formative Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program evaluation were assessing climate change risks and opportunities and defining adaptation priorities. While projects were developing adaptation tools, there were no processes in place to track how they were being used. The evaluation did not find evidence to support whether planning decisions were being based on identified risks and opportunities, or if climate change information or adaptation information was being integrated into planning and decision-making processes. These issues will be investigated further in the summative evaluation of the program.
- Respondents in the National Climate Change Adaptation Baseline Survey, such as non-federal government or business people who are part of NRCan's program stakeholders, also indicated that a lack of organizational climate change expertise was one of the main barriers to integrating climate change adaptation issues into decision-making.
- Finally, interviewees in the AQHI evaluation indicated that increased use of the AQHI was particularly notable for at-risk groups that were using the information to guide their actions with respect to outdoor activity.

Taken together, the results appear to indicate that the current use of adaptation information and products is limited to groups who have an immediate interest in climate change impacts (e.g., scientists or individuals who are at risk of adverse health impacts) , and that there are still opportunities to broaden the use of

challenges become more prominent when regulations are implemented over a long time period and improvements in air quality and adverse health effects are not seen immediately, increasing the chance for confounding by other risk factors."

¹² As noted earlier, there were only four completed evaluations at the time of the Evaluation Review, of which only two had been approved by their respective Departmental Evaluation Committees. Evaluation Review findings also were derived from the preliminary findings of two other ongoing program evaluations and a stakeholder survey used for performance measurement purposes.

information and products. Additional evaluative work will be required to fully and reliably assess this outcome.

Increased awareness of risks

Evidence from the program evaluations suggests that there has been increased awareness of risks associated with the impacts of poor air quality and climate change; as with the increased use intermediate outcome, however, this is mainly limited to specific target populations (e.g., climate scientists, individuals at-risk to air pollution).

Results of the National Climate Change Adaptation Benchmark Survey, however, did reveal an area associated with risk not explored in the individual evaluations. The survey results suggested that many non-federal government and business partners do not distinguish between the federal approach to climate change adaptation (i.e., policies to reduce risks to Canadians as a result of climate change) and the federal approach to climate change mitigation (i.e., policies to reduce GHG emissions and/or air pollution). As a result, external stakeholders may still expect federal adaptation policies will address climate change mitigation issues rather than issues associated with risk management, such as planning for extreme weather events or potential changes to building codes.

Increased capacity to act on climate change and air quality issues among target populations

Evidence from individual program evaluations suggests that there is a growing capacity to act on climate change issues and air quality issues among target populations, for example:

- communities in the North that are assessing climate change risks and opportunities and defining adaptation priorities;
- individuals at-risk to poor air quality taking action to reduce risk; and
- regional and municipal partners in both government and industry developing adaptation strategies and plans within their own organizations (e.g., reductions in infrastructure vulnerability, development of extreme heat program, changes to regional operations to address increased risk for wildfires).

Capacity, however, may be assessed differently by different target populations. For example, rural community capacity to adapt to decreased precipitation or northern community adaptation to rising sea levels is qualitatively and quantitatively different from the capacity of an individual to change behaviour based on extreme heat or air quality information. As with the other intermediate thematic outcomes, while the early evidence points to positive steps taken towards increased capacity, additional evaluative work will be required to fully and reliably assess this outcome.

Additional approaches to adapt to climate change are developed in targeted areas by appropriate jurisdictions

Evidence from program evaluations indicates that, at present, it is too early to assess this outcome.

Evaluation Issue: Performance	Data Source(s)	Rating
5. Are there more cost-effective, economic and efficient means of achieving objectives under the Adaptation Theme?	Evidence from Program Evaluations	N/A
6. How could efficiency be improved under the Adaptation Theme?	Evidence from Program Evaluations	N/A

There is generally limited information from which to draw thematic conclusions on efficiency and economy at this point. The evidence from evaluations is either not yet collected, or is based on qualitative data due to challenges linking financial information to outputs (efficiency) and outcomes (economy). There is not yet sufficient evidence from program evaluations to draw reliable conclusions.

Evaluation Issue: Performance	Data Source(s)	Rating
7. To what extent have each of the Adaptation Theme activities been implemented or are on track to being implemented as planned?	Evidence from Program Evaluations Evidence from Thematic Financial Reporting	Some progress/ attention needed

Evidence from the individual program evaluations and thematic financial reporting indicates that programs are generally being implemented as planned, although unique challenges were highlighted in each evaluation.

The Adaptation Theme reported planned and actual expenditures through the Clean Air Agenda's Horizontal Management, Accountability and Reporting Framework (HMARF), the results of which were reported in two consecutive Environment Canada Departmental Performance Reports (reported in **Table 3**). The financial data indicate that the first year of implementation was, in most cases, fiscal year 2008-2009, highlighting the late start to implementation noted in a number of the individual program evaluations. The first full year of implementation of the Theme (2008-2009) saw the majority of allocated resources used, from roughly 68% of planned resources used by the Improved Climate Change Scenarios Program¹³ to 88% of planned resources used by the Assistance to Northerners

¹³ Funding for this program was not received until the fall.

in Assessing Key Vulnerabilities and Opportunities Program. These results indicate that the programs within the Adaptation Theme seem to be moving towards planned implementation; however, it is too early to provide a complete assessment, since resource use by all programs for the 2009-2010 fiscal year was not available at the time of the Adaptation Evaluation Review.¹⁴

Table 3. Current Adaptation Approved vs. Actual Spending (in thousands)

Program Initiatives	Dept.	Planned 07-08	Actual 07-08	Percent Spent	Planned 08-09	Actual 08-09	Percent Spent
1. Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities	INAC	\$3,388	\$0	N/A	\$2,550	\$2,237	88%
2. National Air Quality Health Index and Forecast Program	EC & HC	\$6,000	\$5,028	84%	\$8,000	\$6,774	85%
3. Climate Change and Health Adaptation in Northern/Inuit Communities	HC	\$295	\$0	N/A	\$2,405	\$1,823	75%
4. Improved Climate Change Scenarios	EC	\$0	\$0	N/A	\$5,211	\$3,568	68%
5. Innovative Risk Management Tools / 6. Regional Adaptation Action Partnerships	NRCan ¹⁵	\$0	\$0	N/A	\$3,955	\$2,859	73%
7. Climate and Infectious Disease Alert and Response Systems to Protect the Health of Canadians	HC	\$550	\$0	N/A	\$2,450	\$1,848	75%
	PHAC	\$494	\$252	51%	\$1,474	\$1,239	84%

The evidence from program evaluations indicates that programs were generally being implemented as planned, including evidence that

- the AQHI is on track to being implemented as planned, with the important caveat that there are continued risks to implementation in Ontario, Quebec and, in particular, Alberta;
- the Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program and the Climate Change and Health Adaptation in Northern/Inuit Communities Program are generally on track to being implemented as planned, given the funding of projects supporting the program objectives to assess and identify climate change risks and opportunities and to develop climate change adaptation plans;
- the ICCS is generally on track to being implemented as planned, although it is not clear whether or not complete implementation will take place within the program timeframe; and

¹⁴ The FY 2009-2010 financial data will be reported independently during the summer of 2010 and will be incorporated into the CAA Horizontal Evaluation.

¹⁵ The two Adaptation programs administered by NRCan have extended their Terms and Conditions for one year and will expire in 2011-2012.

- the Heat Resiliency Program is on track to being implemented as planned, has established a framework to manage its activities and progress, and has developed a strategic plan, project implementation plan and evaluation plan.

Evaluation Issue: Performance	Data Source(s)	Rating
8. Is the management and accountability structure for the Adaptation Theme in place and functioning as anticipated?	Extent to which program managers indicated that the Theme's management and accountability structure is in place and functioning as anticipated.	Some progress/ attention needed

Generally, interviewees indicated that the anticipated theme governance and accountability structures were in place and were functioning. However, several areas for improvement were noted.

- Interviewees noted that the Adaptation Theme was developed later in the Clean Air Agenda process (i.e., after the other themes were developed) and was not as cohesive as other CAA Themes. The term “cobbled together” was frequently used by Theme stakeholders to describe the Adaptation Theme. Internal stakeholders also noted, however, that these programs must be considered an initial set of adaptation programs as the policy direction to address adaptation has not been finalized. There was also a wide variation in the scope and reach of the individual programs; for example, some programs addressed region-specific issues (e.g., the North) and relied on extensive community participation, while others were traditional science-based programs that collected and reported global climate change data. In addition, one major program under the Adaptation Theme, the AQHI, was not strictly speaking an adaptation program, since its goal was to promote individual health based on meteorological information rather than develop strategies to reduce risk based on climate change information.
- Despite this noted lack of cohesiveness, program managers in all departments were unanimous in their comments regarding the effective functioning of the Theme governance structure, noting the following points:
 - The Theme has a Directors General Theme Management Committee that meets regularly to provide updates on program progress and to discuss CAA reporting and governance issues. The DGMC meetings are attended by all departments, though it was also noted that the meetings are usually attended by program staff rather than senior managers.
 - The Chair of the DGMC has moved from department to department on an annual basis. This practice was established to ensure equal partnership and was lauded by all interviewees.

- The DGMC could be even more effective by focusing on forward-looking Adaptation policy and science issues, rather than the operational and administrative issues that were more commonly discussed.
- There was initial evidence of cooperation and coordination between programs, such as the cooperative work between INAC and HC on addressing adaptation issues for northern communities.
- The main challenge noted by interviewees was the financial and non-financial reporting burden required as a Theme. However, it was also noted that despite the resources used to report as a Theme, the reporting process had facilitated the dissemination of status updates on financial and non-financial performance to senior management across departments and had helped increase the visibility of the Theme and its objectives.
- Interviewees also generally noted that they were still unclear about the future of the Adaptation Theme, since funding is set to expire in March 2011 and formal plans for continued work have not been developed.¹⁶

Evaluation Issue: Performance	Data Source(s)	Rating
9. What are the best practices / lessons learned from activities within the Adaptation Theme?	Individual Program Evaluations	N/A

There is limited evidence to report for the Adaptation Theme regarding lessons learned or best practices, as they were generally program-specific, perhaps because of the noted variation in the scope and reach of the individual programs. Specific suggestions made during the course of the evaluations are available in each individual evaluation report. A number of lessons learned arising from some evaluations that appear to address thematic issues do bear noting, particularly those regarding the importance of engaging with external stakeholders and recognizing that adaptation is one of many competing priorities and that sustained effort on the part of all partners will be required to address the issues.

- Stakeholders in the evaluation of the Assistance to Northerners in Assessing Key Vulnerabilities and Opportunities Program identified the following lessons learned that would help improve the federal government's approach to adaptation programming:
 - repeat messaging about climate change is needed;

¹⁶ NRCan had received an extension of one year (2011-12) on its programs at the time of the evaluation, but this extension was a re-profiling of existing funds and did not include new resources.

- communities have many priorities other than climate change to address;
- jurisdictional barriers can make it difficult to conduct research;
- adaptation takes time; and
- communities need additional resources to implement their adaptation plans.
- Program management and staff for the AQHI indicated that using local partners to act as outreach agents on behalf of the program was an effective approach, as it allowed the program to access sensitive and targeted populations that it would not have otherwise been able to reach and to widen the network of government and NGO partners engaged in promoting and developing the AQHI.
- Program management and staff for the ICCS noted the following best practices:
 - build in-house science capacity. Recruiting new staff allows for knowledge transfer from senior-level scientists and helps the program to achieve its goals and expected activities for the funded period;
 - partner and link with the Canadian climate research community. One of the program's strengths are the synergies created with research networks in universities, regional research groups and regional Environment Canada staff, which enhance internal research capacity and reduce duplication of effort; and
 - implement training workshops. The workshops are designed to teach researchers and other target users how to access and utilize the data available on the program's website.¹⁷

5.0 CONCLUSIONS

The following section sets out overall conclusions regarding the relevance and performance of the CAA Adaptation Theme. Given the fact that the evaluation findings were based on evidence from programs early in implementation, the conclusions are limited in scope.

Relevance

The Adaptation Theme appears to be a relevant government activity based on the results of the Adaptation Evaluation Review. The programs funded under the Adaptation Theme

¹⁷ External interviewees and training workshop evaluations pointed to the high utility of these sessions as well as their capacity to reach many members of the target population at once, saving time and effort for staff in explaining how to use the websites.

addressed ongoing climate change and air quality issues that would not be otherwise addressed.

Performance

Given the limitations noted earlier, we can draw only tentative conclusions on the performance of the Theme.

- The evidence, both financial and non-financial, on expected implementation, plus the generally positive comments made by Theme stakeholders on the overall management and accountability of the Adaptation Theme, appears to indicate that the programs within the Adaptation Theme constitute the appropriate preliminary steps to implement the Theme.
- The available outcome evidence also indicates that the programs are moving toward achievement of the goals of the Theme, albeit at a very early stage in their progress.
- Furthermore, although stakeholders indicated that the Adaptation Theme was viewed as less cohesive than other Clean Air Agenda Themes, the Theme management structure, particularly the Directors General Management Committee, appears to be operating effectively.
- Evidence on early lessons learned noted the importance of engaging with external stakeholders and recognized that adaptation is one of many competing priorities and that sustained effort on the part of all partners will be required to address the issues.

Given the early indicators of success and the statements made by Adaptation Theme stakeholders regarding the uncertain future of the Theme beyond March 2011, there is a need for additional, formal planning as a Theme to decide how to move forward based on the preliminary evidence of success.

6.0 RECOMMENDATIONS

The following recommendation was made to responsible departmental Assistant Deputy Ministers. Given the early evidence that the Adaptation Theme is a relevant issue for government, and that the Theme's activities appear to be on track toward achieving the desired outcome, balanced against the uncertain future of adaptation funding and the fact that the Theme was developed quickly and was less cohesive than desired, **it is recommended that the responsible Adaptation Theme Assistant Deputy Ministers and other Assistant Deputy Ministers, as appropriate, articulate a plan for possible future adaptation programming and communicate this plan to the responsible Deputy Ministers.**

7.0 MANAGEMENT RESPONSE

Statement of Agreement/Disagreement with the Recommendation		
<p>The ADMs responsible for the adaptation programs that received funding for the 2007-2011 period agree with the recommendation. These ADMs include: Strategic Policy Branch, EC; Science and Technology Branch, EC; Meteorological Service of Canada, EC; Earth Sciences Sector, NRCan; Northern Affairs, INAC; Healthy Environments and Consumer Safety Branch, HC; First Nations and Inuit Health Branch, HC; and Infectious Disease and Emergency Preparedness Branch, PHAC.</p>		
Management Action		
<p>All existing adaptation programs will sunset on March 31, 2011. As such, the relevant ADMs are currently undertaking work to address this recommendation as part of the broader Clean Air Agenda renewal.</p> <p>The ADMs responsible for adaptation policy and programming are developing a consensus-based interdepartmental plan to inform future government decisions for the Adaptation Theme. This plan will be presented to departments participating in the Adaptation Theme renewal.</p> <p>The responsible ADMs include: Strategic Policy Branch, EC; Science and Technology Branch, EC; Meteorological Service of Canada, EC; Science and Policy Integration, NRCan; Earth Sciences Sector, NRCan; Northern Affairs, INAC; Healthy Environments and Consumer Safety Branch, HC; First Nations and Inuit Health Branch, HC; Infectious Disease and Emergency Preparedness Branch, PHAC; Policy Development, TC; Agri-Environmental Policy and Strategic Priorities Directorate, AAFC; Strategic Policy, DFO; Policy and Stakeholder Relations Branch, SCC; the National Parks Directorate, PCA; and Global Issues Branch, DFAIT.</p> <p>A Directors General Management Committee (DGMC) coordinates all Theme activities on behalf of the Adaptation Theme ADMs and is crucial to the overall functioning of the Theme. While the program lead of the DGMC rotates between departments, Environment Canada is the policy lead for climate change adaptation and is therefore responsible for the policy authority of the Theme, including the implementation of management actions.</p>		
Timeline	Deliverable(s)	Responsible Party
April 2011	Plan to renew the Adaptation Theme	Director General, Strategic Policy Directorate, Environment Canada