



# Adaptation Governance in Canada:

Strengthening horizontal  
adaptation governance  
within the Canadian  
federal government

IISD REPORT



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### **Adaptation Governance in Canada: Strengthening horizontal adaptation governance within the Canadian federal government**

December 2022

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## Executive Summary

In November 2022, Canada will release its first National Adaptation Strategy (NAS), fulfilling a commitment made in its strengthened climate plan, *A Healthy Environment and a Healthy Economy*, released at the end of 2020. Preparing the NAS provides Canada with an opportunity to align and accelerate adaptation planning and action throughout Canada. The success of these efforts will, in part, depend upon the degree to which implementation of the NAS serves to strengthen the governance of adaptation within Canada. As stated by the Intergovernmental Panel on Climate Change in its most recent assessment report, strong governance capabilities are a critical enabler of successful adaptation efforts, as they are associated with more ambitious adaptation plans and their effective implementation. Establishing the structures, processes, and actions of a governance system through which different actors can interact is critical to advancing efforts to adapt to climate change.

There are several factors and characteristics of climate adaptation that make the governance of this issue challenging. These factors include limited awareness among decision-makers of what adaptation means and involves, different interpretations of its meaning by different actors, and ongoing uncertainty regarding the changes to which we are adapting. Adaptation governance systems must also balance different and competing timelines—from addressing urgent and immediate impacts to long-term risks—and bring together many different types of knowledge. They need to coordinate a fragmented landscape of actors, priorities, and actions while centring on justice and equity considerations. The absence of a universal way of measuring adaptation success also makes it difficult to determine agreed-upon goals around which actors and departments can mobilize. Collectively, these factors can make it difficult to know who should be involved in adaptation governance.

As the Government of Canada sets out to implement its NAS, a revitalized adaptation governance structure will be needed to better achieve its goals. The government will need to clarify institutional roles and responsibilities, establish coordination and knowledge-sharing structures, and formalize accountability mechanisms for measuring and assessing progress. This paper aims to set out the options available to Canada's federal government as it seeks to strengthen governance across its departments and agencies—known as the horizontal governance of adaptation. Its content draws upon a review of the literature and international approaches, as well as interviews with 20 key informants within and outside of the federal government.

The paper begins from the premise that a new adaptation governance structure should build upon and be informed by insights regarding the strengths and weaknesses of the current system. As of May 2022, federal adaptation governance consists primarily of coordination committees at the director general and director levels and a separate director general-level committee



established to support the development of the NAS.<sup>1</sup> When adaptation issues need to be addressed at a more senior level—that is, at the assistant deputy minister (ADM) and deputy minister (DM) levels—they are taken forward through the governance structure established to support the implementation of the federal government’s strengthened climate plan and emissions reduction plan. The current adaptation governance structure therefore is weakly linked to senior levels of government decision making. Key informants expressed concern about a lack of understanding of adaptation among senior-level decision-makers on both the political and bureaucratic sides of the government and about the more limited attention it has received compared to the federal government’s focus on achieving its net-zero-emissions goals.

In looking to revitalize the federal government’s adaptation governance structure, key informants expressed interest in achieving greater clarity regarding the purpose and membership of the existing committees and for greater opportunity to hold strategic interdepartmental discussions. There also was an expectation that a strengthened governance structure would be driven by the outcomes and targets expected to be contained in the NAS, which could serve as rallying points for interdepartmental collaboration. As well, they sought a governance system with clearly delineated roles and responsibilities that is efficient, has fewer working groups, and is flexible enough to accommodate new actors and changing circumstances. Many of the interviewees identified the need for greater funding to support both ambitious adaptation actions and the coordination of these actions across the government.

In seeking to identify a stronger horizontal adaptation governance structure, the federal government can take inspiration from the approaches of its peers. While each country has established structures for driving and coordinating adaptation efforts that reflect their unique governance systems, the seven countries reviewed provide insights into the range of options available.<sup>2</sup> The main elements of the governance systems examined were

- **Legal mandate**, which includes legislation, such as the United Kingdom’s Climate Change Act, that typically identifies the responsibilities of the lead ministry and can establish accountability mechanisms.
- **Institutional lead**, which typically is the ministry responsible for the environment.
- **Coordination structures** at the country level, some of which serve only to support horizontal coordination while others support both vertical (or multi-level) and horizontal coordination—either between other levels of government or also with civil society representatives.
- **Knowledge-sharing and capacity-building mechanisms** that may serve to inform members of the national government, all levels of government, or all parts of society.

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<sup>1</sup> The committee is comprised of the following departments: Environment and Climate Change Canada (ECCC), Health Canada, Infrastructure Canada, Natural Resources Canada, Crown-Indigenous Relations and Northern Affairs Canada, and Public Safety Canada. The committee is chaired by ECCC.

<sup>2</sup> The seven countries were Australia, Germany, Japan, Kenya, Nepal, New Zealand, and the United Kingdom.



- **Accountability mechanism** to track progress and derive lessons that may be an entity within the national government or an independent external body that may or may not have a legislated mandate.

In developing its own system, Canada will need to make decisions regarding

- **Legal mandate.** The federal government could follow in the steps of countries such as Japan, New Zealand, and the United Kingdom by passing legislation that designates the ministry responsible for leading efforts to adapt to climate, codifies periodic risk assessments and adaptation plan updates, and/or establishes an accountability mechanism. A separate piece of legislation could be passed or amendments made to the 2021 Canadian Net-Zero Emissions Accountability Act.
- **Institutional lead.** The ECCC currently leads the development and coordination of climate adaptation policy. The file could continue to be led by a line ministry, such as ECCC. Alternatively, oversight and coordination by a central ministry (the Privy Council Office, Finance Canada, or the Treasury Board of Canada Secretariat) could drive a whole-of-government approach to adaptation policy and programming.
- **Senior-level coordination structure.** If there is a desire to strengthen the role of senior-level decision-makers in federal adaptation governance, new ADM- and DM-level committees specifically focused on adaptation could be created. Alternatively, consideration could be given to expanding the mandate of the DM-level committees responsible for climate plan implementation or emergency management to incorporate climate adaptation.
- **Lower-level coordination structure.** Revitalized adaptation governance could include a number of components to facilitate the coordination of activities up to and including the director general level. These components include the following: committee(s) specifically focused on strategic policy and planning, committee(s) that support coordination of adaptation programming, and standing and/or ad hoc interdepartmental working groups that would support the work of the program implementation-focused committee(s).
- **Adaptation secretariat.** Day-to-day coordination of interdepartmental collaboration, as well as tracking progress toward the achievement of the NAS's goals and objectives, could be supported by a dedicated secretariat. This body could be located in a central ministry or in a line ministry. It could be a standalone body or established by expanding the role of an existing entity, such as the secretariat within ECCC supporting the implementation of the strengthened climate plan.
- **Knowledge management and capacity-building unit.** A dedicated unit with a strong knowledge-brokering mandate could be established to strengthen formal and tacit (informal) knowledge exchange and capacity building to advance adaptation action within departments. In collaboration with or as part of the Centre for Greening Government, which currently leads efforts to mainstream climate risk assessment and adaptation planning across all federal departments and agencies, such a unit could support line departments' efforts to access resources, share lessons, and deliver training opportunities.



- **Accountability mechanism.** A body responsible for assessing and sharing the federal government's progress in efficiently and effectively achieving the medium-term objectives and long-term goals contained in the NAS will be needed. This responsibility could be assigned to an inter-ministerial body chaired by the ministry responsible for adaptation, the Office of the Auditor General, or to an existing or new external entity.

The content of the NAS is expected to play a critical role in determining the approach taken by the federal government as it revitalizes its adaptation governance. In particular, if the NAS has clear targets and timelines for the implementation of actions that require regulatory changes and strong interdepartmental collaboration, then a governance structure with strong linkages to senior levels of government may be more appropriate. At a minimum, the current governance structure would benefit from the establishment of separate committees responsible for strategic planning and for coordinated implementation of current commitments, supported by a rationalized number of working groups for which there are clear terms of reference and support from an appropriately resourced secretariat.

The success of any adaptation governance system, though, will depend on the extent to which it is supported by the following elements (in reverse order of importance):

- **Sufficient funding** to ensure that adaptation units within federal departments, as well as any dedicated secretariat or knowledge-brokering unit, have the time and capacity to effectively engage in interdepartmental coordination.
- **Awareness of the characteristics of climate change adaptation** at senior levels of government, particularly with regard to its unique characteristics and differences when compared to climate mitigation and emergency management.
- **Senior-level leadership** and its commitment to enhancing the long-term resilience of Canadians to climate change.

As it begins to implement Canada's first NAS, the federal government has an opportunity to introduce the new horizontal adaptation governance structure required to achieve its goals and desired outcomes. Doing so in a manner that builds upon lessons from international peers and past practices will be a key step toward establishing the foundation upon which to increase Canada's climate resilience now and in the future.



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## Abbreviations and Acronyms

<b>AAFC</b>	Agriculture and Agri-Food Canada
<b>ADAWA</b>	Australian Department of Agriculture, Water, and the Environment
<b>ADM</b>	assistant deputy minister
<b>CCCS</b>	Canadian Centre for Climate Services
<b>CIRNAC</b>	Crown–Indigenous Relations and Northern Affairs Canada
<b>CPI</b>	Climate Plan Implementation
<b>DARTT</b>	Directors Adaptation and Resilience Task Team
<b>Defra</b>	Department for Environment, Food and Rural Affairs
<b>DG</b>	director general
<b>DGARC</b>	Director General Adaptation and Resilience Committee
<b>DM</b>	deputy minister
<b>DMAF</b>	Disaster Mitigation and Adaptation Fund
<b>DND</b>	Department of National Defence
<b>ECCC</b>	Environment and Climate Change Canada
<b>ERP</b>	Emissions Reduction Plan
<b>ESDC</b>	Employment and Social Development Canada
<b>FPT</b>	federal–provincial–territorial
<b>KCCKP</b>	Kenya Climate Change Knowledge Portal
<b>INFC</b>	Infrastructure Canada
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>ISC</b>	Indigenous Services Canada
<b>NAS</b>	National Adaptation Strategy
<b>NRC</b>	National Research Council of Canada
<b>NRCan</b>	Natural Resources Canada
<b>OAG</b>	Office of the Auditor General
<b>PCF</b>	Pan-Canadian Framework on Clean Growth and Climate Change
<b>PCO</b>	Privy Council Office
<b>PMO</b>	Office of the Prime Minister (of Canada)
<b>PS</b>	Public Safety Canada

# 1.0 Introduction







Heat domes. Polar vortices. Atmospheric rivers. These terms have become familiar to Canadians as they increasingly observe and experience the hallmarks of a changing climate—more extreme and unpredictable weather events. These recent events have helped to raise awareness of the need to strengthen the efforts of Canadian governments, businesses, and civil society organizations to prepare for unavoidable changes to our climate.

Within this context, the federal government is currently leading the development of Canada’s first National Adaptation Strategy (NAS). A commitment contained in its strengthened climate plan, *A Healthy Environment and a Healthy Economy* (Environment and Climate Change Canada [ECCC], 2020a), released in December 2020, the NAS is expected to set out a “short, medium and long-term direction” for Canada’s adaptation efforts that will drive more coordinated and effective adaptation planning and action (Government of Canada, 2022a, p. 8). The NAS is anticipated to clarify institutional roles and responsibilities, mobilize sustained action, establish a framework for measuring and evaluating progress, and be supported by regularly updated action plans (Government of Canada, 2022a). The NAS therefore presents a critical opportunity to raise the profile of climate adaptation in the eyes of the Canadian public and its political leaders. It also could serve to advance other policy agendas, such as reconciliation with Indigenous Peoples. However, developing a NAS for Canada is a daunting task, given the country’s geographical, economic, socio-cultural, and political diversity and complexity.

Key steps in developing the NAS were completed in 2021 and 2022, with the federal government holding a Strategy Development Forum in June 2021 and subsequently creating five thematic Advisory Tables that provided input on aspirational goals and supported medium-term objectives for their thematic areas.<sup>3</sup> The Advisory Tables’ recommendations were received in December 2021 and provided the basis for consultations with provincial and territorial governments held in early 2022. Public consultation on the content of the NAS took place in the spring of 2022, with the federal government releasing a discussion paper in May and holding a series of online meetings and discussion forums in June and July. The completed NAS will be released prior to the end of 2022.

Successful implementation of Canada’s NAS will depend, in part, on the strength of its governance structure. Addressing the diverse impacts of climate change requires bringing people with different sets of knowledge together to plan and implement actions that cross jurisdictions, sectors, and disciplines. A coherent, integrated, effective, and accountable system of adaptation governance is needed to act on shared priorities, scale up solutions, and align efforts. As adaptation governance in Canada is currently weak—contributing to fragmented efforts across governments and sectors—the NAS is expected to support the establishment of mechanisms that enable effective, coordinated action within and across jurisdictions while respecting their unique needs and circumstances.

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<sup>3</sup> The thematic focus areas of the five Advisory Tables were Health and Well-being, Resilient Natural and Built Infrastructure, Thriving Natural Environment, Strong and Resilient Economy, and Disaster Resilience and Security (Government of Canada, 2021a).



This paper aims to help identify options for a federal-level horizontal governance structure best suited to guiding the implementation of effective and efficient adaptation policies and programs. It aims to describe the current adaptation governance structure within the federal government and its associated challenges, outline approaches to national-level adaptation governance in other countries, and identify options for an improved adaptation governance structure within the federal government. Its content is informed by a review of available literature and interviews with key informants undertaken in April and May 2022. Although governance across different levels of government—or multi-level (vertical) governance—is critical to effective adaptation action, this paper focuses on horizontal adaptation governance across government departments at the federal level. Where possible and appropriate, however, opportunities for strengthening the vertical governance of adaptation in Canada have been identified.



## 2.0

# Governance of Adaptation: Key concepts and issues





While climate change impacts are felt locally, many aspects will require coordination between households, communities, organizations, and regions to achieve shared objectives such as flood protection or wildfire risk reduction (Huiteima et al., 2016). As such, adaptation is also about governance.

Governance refers to the structures, processes, and actions through which public and private actors interact to address societal problems or create societal opportunities (Huiteima et al., 2016; Intergovernmental Panel on Climate Change [IPCC], 2022; Termeer et al., 2017). But it is more than what is observable; it also represents the norms, values, and rules that guide how power is distributed and shared, priorities are set, policies are formulated and implemented, and stakeholders are made accountable (Huiteima et al., 2016; IPCC, 2022).

Structures and approaches to governance can range from top down and centralized to community-based and decentralized to polycentric (Morrison et al., 2019; Ostrom, 2010). Within government bureaucracies, approaches can include vertical and horizontal governance. Vertical or multi-level governance refers to the distribution of power, actions, and links across scales or levels of governance, such as between municipal, provincial, and federal governments (Organisation for Economic Co-operation and Development, 2010). Horizontal governance, on the other hand, refers to joint activity across two or more agencies or departments “that is intended to increase public value by their working together rather than separately” (Bardach, 1998). Other terms referring to horizontal governance can include cross-departmental, multi-sector, and whole-of-government (Bourgault & Smits, 2014).

The most recent report from the IPCC recognizes governance as a key enabler of adaptation and notes that stronger governance capabilities are associated with more ambitious adaptation plans and their effective implementation (IPCC, 2022). Determining the different structures, processes, and activities that should shape the governance of adaptation requires the consideration of several factors, including

- **Limited awareness and/or different understandings of adaptation.** On the former, much of the emphasis in policy discussions around climate change is still on mitigation. While adaptation has received significantly more attention in recent years, awareness of what it means, what it involves, and what it can look like is still lagging. Where there is a basic awareness around adaptation, it can still represent different things to different actors—for example, from disaster preparedness and supply chain management to managed retreat and retrofitting public buildings. This points to the difficulty of arriving at a shared understanding of the problem and to the need to navigate—and prioritize among—a wide range of solutions.
- **Uncertainty.** Information about future climate and socio-economic conditions is incomplete, making it difficult to make decisions with potentially long-term consequences. We do not always know what we are adapting to. Governance itself therefore must be adaptive and flexible.
- **Different and competing time horizons.** While climate change impacts are being felt today, many other impacts have yet to materialize. We must somehow address the impacts



being felt today while also taking steps to avoid the worst effects of additional foreseen (and unforeseen) changes. Yet, governments will be under pressure to address the “here and now.” Space must be given to consider longer-term priorities and make investments that do not generate immediate benefits—which calls for diverse perspectives and information.

- **Everybody’s problem, but nobody’s priority.** Climate impacts are pervasive, and framing concepts are both generic (“building resilience”) and domain specific (“protect agricultural productivity”) (Huitema et al., 2016). Adaptation can feel like it is about everything and relevant to everyone, which can dilute its relative importance and make it difficult to identify both who “really” needs to be engaged in adaptation governance and who should drive it.
- **Different sets of knowledge.** Defining and mobilizing adaptation action requires many types of knowledge—from local, traditional, and Indigenous to institutional and based in Western science. Governance therefore means creating the incentives and space for different sets of knowledge to inform adaptation efforts.
- **The fragmented landscape of actors, priorities, and actions.** Adaptation action is largely local or place-based but requires support from higher levels. It involves many disciplines, sectors, and jurisdictional arrangements. While a diverse set of actors and distributed responsibilities can foster innovation and useful redundancies, it can also lead to diffused focus and capacities and introduce inefficiencies, resulting in poor performance (Termeer et al., 2017). Adaptation governance arrangements need to find a balance and create the strategic links required to minimize conflicts.
- **Justice and equity need to be placed at the centre of adaptation.** The impacts of climate change are experienced differently, with socially and economically disadvantaged groups facing the greatest risks. Governance arrangements will need to address different aspects of climate justice: distributive (the allocation of burdens and benefits), procedural (participation and influence in decision making), or recognitional justice (engagement with and consideration of diverse perspectives) (IPCC, 2022). This requirement emphasizes the importance of participation and accountability.
- **Defining success.** There is no universal way of measuring success in adaptation—success means different things to different people. It can mean a steady decrease in insured losses or heat-related mortality every year. It might mean increased agricultural productivity despite changing rainfall and temperature regimes or greater numbers of disenfranchised groups regularly accessing climate services. This diverse set of perspectives begs the question, what are we working toward, and how do we know when we get there? Without a clear or defined collective goal, it can be difficult to convene actors and mobilize action across different departments.

The above considerations are being addressed in different ways and in different parts of the federal government. The challenge will be to address them coherently through a governance structure and processes that lend themselves to the efficient and effective implementation of Canada’s NAS.



# 3.0

## Federal Adaptation Governance







The Canadian government has been engaged in action to address climate change since 1988 when it hosted the Toronto conference on the changing atmosphere, which led to the first international commitments to reduce greenhouse gas emissions (World Meteorological Organization et al., 1988). While the primary focus of Canada's climate concerns then and now has been on reducing greenhouse gas emissions, efforts to prepare for the impacts of a changing climate have increased over time. The current policies, mandates, and institutional structures that shape adaptation governance within Canada's federal government are described in this section. It also captures the outcomes of interviews undertaken with 20 individuals within and outside of the federal government regarding the perceived strengths and weaknesses of this system and where there may be opportunities for improvement.

### 3.1 Current Policy Context

Within the federal government, adaptation governance is currently influenced in part by the following key policies, in addition to the *A Healthy Environment and a Healthy Economy* plan:

- The 2011 **Federal Adaptation Policy Framework**, which defines the federal government's role in adaptation relative to other jurisdictions and actors and provides guidance to support the mainstreaming of "climate change considerations into its own programs, policies, and operations" (ECCC, 2011, p. 4).
- The 2016 **Pan-Canadian Framework on Clean Growth and Climate Change** (PCF), which established priority areas for federal, provincial, and territorial collaboration on adaptation and climate resilience (Government of Canada, 2016). It also stimulated significant federal investment in adaptation-focused programs.
- The 2016 **Greening Government Strategy**, updated in 2020, which seeks to ensure that federal government operations have net-zero carbon emissions, are climate resilient, and are green. Implementation of the strategy is being led by the Centre for Greening Government within the Treasury Board of Canada Secretariat (2020). It is supported by ECCC, which received funding in Budget 2021 "to develop and apply a climate lens" to support the mainstreaming of climate into federal decisions (Department of Finance Canada, 2021b).
- In 2020, **Climate Science 2050** was released by ECCC. This national synthesis identifies climate change science and knowledge gaps to inform the work of researchers and funders (ECCC, 2020b). A climate data strategy is currently being developed (led by ECCC and Public Safety Canada [PS]) to "ensure that the private sector and communities have access to data to inform planning and infrastructure investments" (Office of the Prime Minister [PMO], 2021c).

Alongside these policies directly focused on either climate adaptation or climate change more broadly, the following policies related to disaster management and emergency management help to shape Canada's response to the impacts of climate change:



- The 2008 **National Disaster Management Strategy** establishes a joint vision for disaster management in Canada and establishes shared principles for coordinated national efforts.
- The 2017 **Emergency Management Framework** for Canada aims to guide risk assessment and collaborative federal–provincial–territorial (FPT) efforts to “prevent/mitigate, prepare for, respond to, and recover from” threats and hazards, including climate hazards (Ministers Responsible for Emergency Management, 2017, p. 6). It specifically emphasizes the linkages between climate change and emergency management and the need “for all areas of society to work together to enhance resilience” (Ministers Responsible for Emergency Management, 2017, p. 3).
- The 2019 **Emergency Management Strategy for Canada: Toward a Resilient 2030** builds on and provides guidance for FPT implementation of the 2017 emergency management strategy. Calling for a whole-of-society approach to strengthen Canada’s resilience, it recognizes the increasing role of climate change in driving emergency situations and encourages the consideration of adaptation in the development of emergency management policies (Federal/Provincial/Territorial Emergency Management Partners, 2019).

Of these policies, the most relevant with respect to influencing adaptation governance at present are the PCF and the Greening Government Strategy. As discussed in Section 3.3, the PCF spurred the formation of coordination bodies to track progress and share information that remains important within the federal government’s adaptation governance structure. The Greening Government Strategy, on the other hand, addresses a critique of the Federal Adaptation Policy Framework—namely, its lack of “targets, timelines, and accountabilities” (Office of the Auditor General of Canada, 2017, p. 8). The Centre for Greening Government is mandated to “drive results to meet greening government environmental objectives” and to “track and disclose government environmental performance information centrally” (Treasury Board of Canada Secretariat, 2020).

Governance is more clearly defined in Canada’s framework and strategies for emergency management. As described in Section 3.3, vertical and horizontal coordination of emergency management in Canada are supported by a governance structure led by PS at the federal level (Ministers Responsible for Emergency Management, 2017). Given the interconnections between emergency/disaster management and climate adaptation’s efforts to prevent and prepare for climate-related hazards in the near and long terms, this structure may be expected to inform and/or connect with a future federal horizontal governance structure for adaptation.



## 3.2 Adaptation Mandates and the Roles of Federal Departments

Climate adaptation efforts within the federal government are occurring along two interconnected tracks. Within one track, efforts to mainstream climate change into federal decision making are consistent with the expectations laid out in the Federal Adaptation Policy Framework. A central initiative within this track is the Greening Government Strategy, under which all departments were to have improved their understanding of the risks to federal assets, services, and operations posed by climate change by 2021 and taken action to reduce these risks by 2022 (Treasury Board of Canada Secretariat, 2020).

Within the second track, federal departments are developing and delivering programs to advance an understanding of climate risks and their implications, enabling the implementation of adaptation actions and facilitating knowledge development and exchange. The audience for these efforts includes federal government departments, provincial and territorial governments, Indigenous organizations and communities, the private sector, academia, and/or non-governmental organizations. As a federal adaptation governance system should enable effective coordination between these efforts, this section provides a high-level overview of the current role of various federal departments in supporting climate change adaptation. (Fuller descriptions of the current adaptation-focused activities of specific departments are included in Appendix A.)

### 3.2.1 Current Actions

At the core of the federal government's adaptation efforts are ECCC and Natural Resources Canada (NRCan), which jointly led the federal Climate Change Secretariat established in the late 1990s to coordinate Canada's early efforts to address climate change (external expert, personal communication, 2022). The **ECCC** has served as Canada's formal policy lead for climate change mitigation and adaptation since 2006. It is the lead organization for the development of the NAS and is working with the Centre for Greening Government to develop and apply the new federal climate lens helping to mainstream climate risks and vulnerability into federal decisions. The ECCC also leads federal efforts to achieve Canada's climate change mitigation goals and supports PS in delivering its responsibilities under the federal Emergency Management Act (ECCC, 2021a).

The Climate Change Impacts and Adaptation Division at **NRCan** has played a key role in informing and driving adaptation policy, planning, and action in Canada. The division houses Canada's Adaptation Platform (described in Box 2), co-led with ECCC since 2020, and coordinates Canada's national adaptation assessment process—the most recent of which will conclude in 2023. NRCan also leads efforts to map wildfires and (with ECCC and PS) flood risks (ECCC, 2022).



In recent years, a few key departments have significantly expanded their involvement in climate change adaptation:

- **Infrastructure Canada** (INFC) developed the original Climate Lens to facilitate the consideration of climate change in applications to the Disaster Mitigation and Adaptation Fund (DMAF) launched in 2018 and the Investing in Canada Infrastructure Program.<sup>4</sup> Since 2016, it has also funded the development of future climate design data and national guidelines and standards to increase the climate resilience of Canadian infrastructure—in collaboration with the National Research Council of Canada (NRC) and the Standards Council of Canada (Department of Finance Canada, 2021b; Swanson et al., 2021).
- **Health Canada** led the Climate Change and Health Adaptation programs focused on extreme heat and increasing both information for and support of health system actors preparing for future climate risks (ECCC, 2022). Additional funding has been provided to the Public Health Agency of Canada and the Canadian Institute of Health Research to address health risks due to infectious diseases and Lyme disease, as well as northern food security (Health Canada, 2022).
- **Crown–Indigenous Relations and Northern Affairs Canada** (CIRNAC) has implemented the Climate Change Preparedness in the North program for many years and is also leading the implementation of the First Nation Adapt Program focused on Indigenous communities south of 60°N (CIRNAC, 2021).
- **Indigenous Services Canada** (ISC) leads the Climate Change and Health Adaptation for First Nations and Inuit Communities program addressing climate-related risks to human health (ISC, 2020) and, under the First Nation Infrastructure Fund, delivers targeted community infrastructure investments to First Nations to make them more resilient to potential hazards (ISC, 2022).
- **Public Safety Canada's** core activities focus on supporting emergency and disaster response efforts, including those associated with climate hazards (e.g., through the Disaster Financial Assistance Arrangements). As noted in Section 3.1, PS is now striving to give greater attention to disaster prevention, in line with the Sendai Framework for Disaster Risk Reduction. For example, it was allocated CAD 25 million over 2 years through Economic and Fiscal Snapshot 2020 to work with provinces and territories to understand and reduce flood-related risks as part of the now sunset National Disaster Mitigation Program (ECCC, 2022).

Adaptation-focused initiatives have also been implemented by Agriculture and Agri-Food Canada (AAFC), Fisheries and Oceans Canada, and Transport Canada, as well as agencies like Parks Canada, the NRC, and the Standards Council of Canada. Other departments, such as the Department of National Defence (DND), have more recently become engaged in addressing the risk posed by climate change to their operations (federal representative, personal communication,

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<sup>4</sup> Completion of a climate change resilience assessment is built into the DMAF application form while a climate change resilience assessment is to be completed for funding requests that cross designated financial thresholds under the different streams of the Investing in Canada Infrastructure Program (Government of Canada, 2017).





2022). Global Affairs Canada has long been engaged in climate change adaptation activities internationally, such as through adaptation-focused programming<sup>5</sup> and the provision of funding to multilateral organizations such as the World Bank and various United Nations agencies.

### 3.2.2 Implications for a Federal Adaptation Governance Structure

The growing number of federal departments and agencies implementing adaptation-focused programming is a positive indication of the greater awareness of the diverse risks associated with climate change and the need to take action to avoid or lessen potential impacts. At the same time, the expanding number of departments (and divisions within these departments) pursuing adaptation actions makes horizontal coordination within and between departments more challenging—and more necessary.

There are both commonalities and differences between federal departments that should be accommodated within a collaborative, horizontal adaptation governance structure. In terms of the department's **roles with respect to adaptation policy, programming, and knowledge management** efforts, ECCC currently has a significantly larger role in the development and oversight of federal adaptation policy compared to other federal departments. Other departments play a much greater role in the development and implementation of programming specifically focused on adapting to climate change, such as INFC and ISC, or complementary actions like managing climate hazards (e.g., PS). As well, the knowledge and capacity behind national adaptation efforts is shaped by various departments, such as NRCan and Health Canada.

As well, there are significant differences with respect to the departments' roles when mapped against the **adaptation planning process**. These roles address many topics:

- Climate science and projections (e.g., ECCC).
- Assessment of climate risks and impacts (e.g., NRCan, Health Canada, PS).
- Development of codes, standards, and regulations that promote climate resilience (e.g., INFC, Transport Canada, NRC, Standards Council of Canada).
- Development and implementation of national adaptation programs (e.g., NRCan, INFC, ISC, CIRNAC).
- Financing for climate risk reduction and adaptation measures (e.g., INFC, PC, Treasury Board).
- Implementation of adaptation measures within areas of federal jurisdiction (e.g., INFC, Fisheries and Oceans Canada).
- Assessment, monitoring, and evaluation of the impact of these actions (e.g., ECCC, NRCan).
- Capacity building and learning (e.g., NRCan).

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<sup>5</sup> For example, Global Affairs Canada launched the Partnering for Climate program in 2022 to support climate change adaptation in the Global South, particularly in sub-Saharan Africa (Global Affairs Canada, 2022).



The departments also differ with respect to the **amount of adaptation-related funding** they manage. INFC and PS manage large funds that can be used to finance actions that increase resilience to climate change. INFC's DMAF, for example, received an initial allocation of CAD 2 billion over 10 years in 2018, which was renewed in Budget 2021 with an allocation of CAD 1.375 billion over 12 years (INFC, 2021a). Additionally, it manages the Green Infrastructure Stream of the Investing in Canada Infrastructure Program that can be used to support projects that provide adaptation benefits (CAD 9.2 billion over 10 years, starting in 2017/18), as well as the Natural Infrastructure Fund announced in Budget 2021 (CAD 200 million over 3 years) (ECCC, 2022). Significant financing also flows from PS through the Disaster Financial Assistance Arrangements. An allocation of CAD 1.9 billion over 5 years for these arrangements was provided in Budget 2021 (Department of Finance Canada, 2021b). While these arrangements are primarily designed to assist provinces and territories in financing disaster response and recovery, up to 15% of the total eligible costs for repairs to public or private infrastructure can be used to co-finance enhancements that will mitigate against future damages (PS, 2017).

These budget allocations for INFC and PS greatly exceed the funding received by other departments to support their adaptation planning and programs. While the federal government significantly increased the financing of climate adaptation in Budget 2017, most program budgets were less than CAD 10 million per year, and a number were less than CAD 5 million per year.<sup>6</sup> Moreover, funding for a number of these programs has now ended or are up for renewal.<sup>7</sup> Several of these programs focus(ed) on building capacity (e.g., NRCan's Building Regional Adaptation Capacity and Expertise Program), undertaking research to better understand climate risks (e.g., Fisheries and Ocean's Aquatic Climate Change Adaptation Services Program), and developing tools and standards (e.g., the renewed Standards to Support Resilience in Infrastructure Program). Consistent with their mandates, ISC and CIRNAC also deliver programs that directly aim to increase the climate resilience of Indigenous communities.

The departments also differ with respect to their **engagement with provinces and territories** and with national Indigenous organizations. In this respect, departments may be divided into three categories (see Table 1):

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<sup>6</sup> For example, Budget 2017 included CAD 17.2 million over 5 years for Health Canada's Climate Change and Health Adaptation: Information and Action for Resilience program, CAD 18 million over 5 years for NRCan's Building Regional Adaptation Capacity and Expertise program, CAD 107.6 million over 10 years for ECCC to establish the Canadian Centre for Climate Services, and CAD 27 million over 5 years for the First Nation Adapt program (Government of Canada, 2017). Similarly, in Budget 2021, NRCan received CAD 28 million over 5 years to map areas in northern Canada at risk of wildfires, and ISC received CAD 22.7 million over 5 years to support Inuit and First Nations communities to manage the health impacts of climate change. An exception to this trend of smaller funding allocations to other departments is the funding received by Parks Canada in Budget 2021 to enhance wildfire management in national parks (CAD 100.6 million over 5 years) (Department of Finance Canada, 2021b).

<sup>7</sup> These programs include the NRCan-led Building Regional Adaptation Capacity and Expertise; the Health Canada-led Climate Change and Health Adaptation: Information and Action for Resilience; the PS-led National Disaster Mitigation Program; the NRC-led Climate Resilient Buildings and Core Public Infrastructure Initiative; and the Transport Canada-led Northern Transportation Adaptation Initiative and Transportation Asset Risk Assessment Initiative.



- **Purely federal.** The mandate of these departments pertains solely to areas of federal jurisdiction. This includes the central agencies of the Privy Council Office (PCO), Treasury Board of Canada Secretariat, and Finance Canada, and the line ministries responsible for areas of federal power, such as National Defence, Global Affairs Canada, and Fisheries and Oceans Canada.
- **Influencing.** This group of departments can use either their mandate or financial levers to more strongly influence actions taken by provincial or territorial governments. Their influence may stem from their capacity to offer significant funding with strings attached (e.g., PS, INFC, and, potentially, Health Canada), their responsibility for an area of shared jurisdiction under the Constitution (e.g., AAFC; Immigration, Refugees, and Citizenship), or due to their regulatory capacity (e.g., ECCC).
- **Collaborative.** Reflecting the division of powers within the Constitution, these departments primarily seek to work with the provinces and territories to advance action in the PTs' areas of jurisdiction. Collaboration can be through the implementation of shared programs (e.g., NRCan, Health Canada); the provision of data, information, research, and knowledge sharing (e.g., ECCC's Canadian Centre for Climate Services [CCCS], Canada's Adaptation Platform [NRCan and ECCC]); or co-development of national codes and standards (e.g., NRC).

ISC and CIRNAC have a unique, complex, and evolving relationship with Indigenous Peoples and with the three territorial governments that defies clear categorization.

**Table 1.** Illustrative classification of federal departments' roles with respect to engaging with the provinces and territories

Purely Federal	Influencing	Collaborative	Other
Finance PCO Treasury Board Fisheries and Oceans Global Affairs National Defence 🍂 Public Services and Procurement 🍂 Veterans Affairs	AAFC 🍂 Immigration, Refugees and Citizenship Infrastructure	🍂 Employment and Social Development Innovation, Science and Economic Development NRCan Transport 🍂 Women and Gender Equality	CIRNAC ISC
	<b>Depending on the action taken:</b> ECCC, Health Canada, PS		

Note: 🍂 = departments with limited current involvement in climate adaptation.



A renewed federal adaptation governance structure will need to accommodate these departmental differences in mandates, depth of experience in climate adaptation, roles in the adaptation planning process, financing capacities, and relationships with other orders of government. It will also need to keep in mind that some departments are playing an increasingly larger role in adaptation planning and action, that new leaders will emerge over time, and that some smaller departments will always play a supporting role.

### 3.3 Current Governance Mechanisms

Federal-level adaptation policy, planning, and action currently occur through a mosaic of formal governance mechanisms. Some of these are specifically focused on climate adaptation, while others support the federal government's larger climate change agenda as well as its role in emergency management and disaster management.

#### 3.3.1 Adaptation-Focused Governance Structures

As of May 2022, the principal governance mechanisms within the federal government that specifically focus on the coordination of climate adaptation policy and programming are

- The **Director General Adaptation and Resilience Committee** (DGARC) and its supporting **Director-level Adaptation and Resilience Task Team** (DARTT), comprised of directors and managers. Co-chaired by ECCC and NRCan, these structures originally emerged to support the coordinated implementation of the programs established under the PCF. They currently serve as a communications and knowledge-sharing mechanism, as well as a venue for coordinating joint initiatives (e.g., Memoranda to Cabinet). About 24 departments and agencies are represented on each of these committees, and meetings of the DARTT can involve 120-plus participants.
- A **Director General Steering Committee for the National Adaptation Strategy**, which consists of the six departments principally involved in leading the implementation of the NAS and co-chairing its Advisory Tables—ECCC, NRCan, Health Canada, INFC, CIRNAC, and PS. A number of federal advisory committees have been established to facilitate the federal government's input into the NAS process and its Advisory Tables.
- Various program- or initiative-level coordination bodies, including committees for
  - The completion of flood maps for areas at higher risk, which is led by PS, NRCan, and ECCC, and also involves INFC and CIRNAC, among others.
  - The development and updating of future climate design data, national guidelines, and standards that stand to inform national model codes, which brings together INFC, ECCC, the NRC, and the Standards Council of Canada.





- A northern coordination mechanism involving territorial Inuit land claim holders, territorial communities, and federal government representatives to endorse projects in Canada's North related to three of CIRNAC and ISC's programs.<sup>8</sup>
- A number of departments and agencies are also involved in the PS-led development of a National Risk Profile report to be released in 2023, which complements their work on climate adaptation (e.g., ECCC, CIRNAC, Health Canada, INFC, ISC, and NRCan).

The above list is far from comprehensive, representing just some of the initiatives underway within the federal government that were referenced in interviews conducted with different federal representatives.

Running in parallel with these federal-only coordination mechanisms is **Canada's Adaptation Platform**, which brings together representatives from federal government departments, provincial and territorial (environment) ministries, national Indigenous organizations, and invited representatives of professional associations, academia, and non-governmental organizations (e.g., the Federation of Canadian Municipalities). Led by NRCan, which co-chairs its Plenary body with ECCC, the platform was established in 2012 and focuses on knowledge sharing and capacity development. Much of its work occurs through 14 working groups (co-)chaired by different federal departments that bring together stakeholders to collaborate on shared adaptation priorities (NRCan, 2022c).<sup>9</sup>

### 3.3.2 Climate Change-Focused Governance Structures

The federal government also has a clear structure to ensure a whole-of-government approach to the implementation of its strengthened climate plan and emissions reduction plan (ERP), which is headed by the Deputy Minister (DM) Committee on Climate Plan Implementation (CPI). Co-chaired by ECCC and NRCan, the mandate of the committee is to “provide strategic oversight of, and direction on, the development and implementation of federal policies, programs, regulations and services to clean growth and climate change ... that contribute significantly to delivering on Canada's climate change mitigation commitments” (Government of Canada, n.d., p. 1). Its responsibilities include tracking progress toward 2030 and 2050 climate goals; overseeing engagement with Indigenous, provincial, and territorial representatives; ensuring cohesive government-wide communications related to climate change; and alignment with other core government priorities (“e.g., adaptation and resilience”; Government of Canada, n.d., p. 1).

The DM Committee on Climate Plan Implementation is supported by an Assistant Deputy Minister (ADM) Coordinating Committee Secretariat, which in turn is supported by a director

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<sup>8</sup> These programs are Climate Change Preparedness in the North, the Indigenous Community-Based Monitoring Program, and Climate Change and Health Adaptation for First Nations and Inuit Communities (federal representative, personal communication, 2022).

<sup>9</sup> The focus of these working groups includes agriculture, biodiversity, coastal management, economics, energy, forestry, infrastructure and buildings, measuring progress, mining, science assessment, and water (NRCan, 2022c).



general (DG)-level coordinating committee and, as required, DG-level interdepartmental working groups. These committees are also co-chaired by ECCC and NRCan. A small secretariat based in ECCC, which coordinates with NRCan, supports the work of the CPI governance structure (Government of Canada, n.d., p. 1).

While the mandate of the CPI focuses on climate mitigation, focused discussions on climate adaptation do take place from time to time within the CPI committees, given the absence of a formal governance structure above the DG level for this topic (federal representatives, personal communication, 2022). Some key departments responsible for adaptation, such as Health Canada and PS, are not members of the DM Committee on Climate Plan Implementation. However, other members can be (and are) added, and deputy heads can be invited to attend committee meetings on an ad hoc basis (Government of Canada, n.d., p. 1; federal representatives, personal communication, 2022).

Running parallel to the DM Committee for the CPI is the **DM Committee on Climate Change and Energy** co-chaired by AAFC and INFC, which is focused on the “timely implementation of measures to fight climate change and transition to a low carbon economy and clean energy” (PCO, 2022). While the DM Committee for the CPI is focused on implementation, the DM Committee on Climate Change and Energy has a more forward-looking focus (federal representative, personal communication, 2022). This channel is used by their members to vet and gain approval for most policies and programs heading to Cabinet for approval. At the highest level, there are currently two **Cabinet Committees on Economy, Inclusion and Climate**, each of which “considers such issues as sustainable and inclusive social and economic development, post-pandemic recovery, decarbonization, and the environment as well as improving the health and quality of life of Canadians” (PMO, 2021a).

### 3.3.3 Climate Change-Related Governance Structures

The Greening Government Strategy, with its commitment to reducing greenhouse gas emissions and increasing climate resilience within the federal government, is supported by the **Centre for Greening Government** within the Treasury Board of Canada Secretariat. As chair of an ADM-level interdepartmental committee, the centre coordinates federal initiatives related to the implementation of the Greening Government Strategy, including emissions reductions and climate resiliency (Mertins-Kirkwood & Somers, 2021). The Centre for Greening Government also plays a role by sharing best practices and tracking and disclosing federal environmental performance; it “drives results to meet greening government environmental objectives” (Treasury Board of Canada Secretariat, 2021).



Adaptation governance is also influenced by a number of FPT tables on which different departments serve as the federal representative. These include the following:

- ECCC: Canadian Council of Ministers of the Environment and its climate change committee.
- NRCan: Canadian Council of Forest Ministers and the Energy and Mines Ministers' Conference.
- AAFC: Annual Conference of Federal-Provincial-Territorial Ministers and Deputy Ministers of Agriculture.
- Fisheries and Oceans: Canadian Council of Fisheries and Aquaculture Ministers.

Adaptation issues are sometimes added to the agendas of these tables but do not drive them (federal representative, personal communication, 2022).

### 3.3.4 Emergency Management Governance Structures

Alongside these adaptation- and climate change-focused governance mechanisms, consideration also needs to be given to the existing structures governing emergency management, given its role in preparing for, responding to, and recovering from climate-related disasters. While typically focused on current and near-term risks assessed based on past experience—compared to the more forward-looking nature and longer time horizon of climate adaptation—emergency management similarly aims to protect people, the economy, and the environment from climate-related hazards.

The existing vertical **national governance structure** for emergency management “facilitates coordination and collaboration in full respect of each government’s legislated jurisdiction” (Ministers Responsible for Emergency Management, 2017, p. 14). This structure includes three FPT tiers—a ministerial tier, a DM tier, and Senior Officials Responsible for Emergency Management. The latter oversees the work of four FPT co-chaired standing working groups and additional working groups and sub-working groups that are established as needed. There are a number of PS-led senior committees focused on providing guidance on policy and operational initiatives related to emergency management. These committees are increasingly making links to concurrent files advancing climate change adaptation and disaster risk reduction (federal representatives, personal communication, 2022).

The prominence given to emergency management within the federal government increased in the fall of 2021 with the appointment of a dedicated Minister of Emergency Preparedness (who is also President of the Queen’s Privy Council for Canada) alongside a Minister of Public Safety—both of whom are responsible for PS. An existing **Cabinet Committee on Safety, Security and Emergencies** is tasked with managing ongoing emergencies and ensuring “strategic, integrated, and forward-looking leadership for emergency management (mitigation, preparedness, response, and recovery)” (PMO, 2021a). Given the interconnections between climate adaptation and emergency preparation and management, efforts are being made within the PCO to ensure communication between the Cabinet Committees on Economy, Inclusion and Climate and



the Cabinet Committee on Safety, Security and Emergencies (federal representative, personal communication, 2022).<sup>10</sup>

### 3.4 Existing Governance Structure: Perceptions and opportunities for renewal

Between mid-March and mid-May 2022, the authors undertook a series of key informant interviews to gain input on the strengths and weaknesses of the current adaptation governance structure within the federal government. Interviewees were also asked to share their thoughts regarding potential alternatives to the current governance structure. Interviews were conducted with 16 federal government representatives from 13 departments and agencies, as well as four key informants from outside of government. This section captures some of the main messages that emerged from these discussions, while Section 3.5 describes requested changes to the current governance structure.

#### 3.4.1 Raising the Profile and Understanding of Climate Adaptation Within the Federal Government

Recognition of the need to prepare for and adapt to a changing climate is increasing within the federal government, as reflected in the diverse departments engaged in the DARTT and DGARC committees. For some departments, efforts to understand how climate change might impact their mandates, policies, and operations and prepare for climate risks is a relatively recent activity (e.g., DND). Others have a long track record in adaptation planning and established expertise (e.g., NRCan) or are playing an increasingly larger role in advancing Canada's adaptation efforts (e.g., INFC). Regardless of their depth of experience, though, departments are experiencing challenges with respect to mainstreaming and organizing adaptation throughout their organizations.

Interviewees commonly note that climate adaptation remains in the shadows of Canada's climate mitigation efforts and has not yet captured the attention of senior government leaders on either the political or bureaucratic side. Several reasons were cited for this situation, including the following (federal representatives, personal communication, 2022):

- A lack of understanding of adaptation within senior levels of government—on either the political side or within the bureaucracy—and a lack of recognition of its breadth, complexity, and iterative nature.
- A perception and expectation that efforts to adapt to climate change will be very expensive given the complexity of the issue, along with uncertainty regarding the role of the federal government in financing these costs relative to other levels of government.

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<sup>10</sup> A DM Committee on National Security co-chaired by the DMs for Public Safety Canada and National Defense does not appear to have responsibility for emergency management or climate adaptation. The Minister of Environment and Climate Change is not a member of this committee (PCO, 2022).





- The absence of clear targets and measurable outcomes. Canada's climate mitigation goals have been clearly defined, targets and sub-targets have been set, and there are clear metrics for assessing progress. In contrast, adaptation metrics are harder to define and have not yet been established at the national level.
- Uncertainty regarding the impact or effectiveness of adaptation actions that have been or could be taken along with the inherent uncertainties associated with the timeline and consequences of climatic changes.
- A lack of prioritization between different adaptation actions or a clear rationale for why an initiative has been put forward over others or how it connects to other initiatives.

As noted in Section 2, these concerns are not unique to the Canadian federal government. Nonetheless, they present a barrier to moving forward with current commitments. To build the understanding and capacity needed to meet the NAS objectives, it was suggested that formal capacity-building and training initiatives occur across all levels of government, such as through the Canadian School of Public Service and potentially in connection with the work of the Centre for Greening Government.

### 3.4.2 Strengthening the Link to Senior Levels of Government

Many of the respondents noted that the current adaptation governance structures do not provide a clear and dedicated channel for seeking direction, advancing policy decisions, and reporting beyond the DG level. Current efforts to make these links are ad hoc or opportunistic. Strengthening these linkages was anticipated to help increase cross-departmental coherence; advance adaptation policy, practice, and engagement; and raise the necessary profile for adaptation.

Varied comments were made regarding the current practice of funnelling adaptation issues into the CPI governance structure when direction or approval is required from senior government. Some federal interviewees noted that having adaptation discussions feed into the CPI process provided an opportunity to establish synergies between mitigation and adaptation initiatives (e.g., through home retrofit programs). A number of interviewees commented that their ADMs and DMs are primarily occupied with ensuring that the federal government's zero-emissions goals are achieved and therefore do not give climate adaptation significant attention.

### 3.4.3 Revamping Existing Coordination Committees

Many federal representatives stated that they appreciated the efforts being made by ECCC and NRCan through the DGARC and DARTT to bring together a wide array of departments and people to engage in information sharing. However, many felt that the DGARC and DARTT are not functioning to their full potential. They requested clarification of the purpose and function of the committees (e.g., information exchange, collaboration, and/or strategy development) and that their memberships be streamlined to make them more fit for purpose.



### 3.4.4 A Strong Federal Adaptation Community

While current shortcomings and areas of concern were highlighted, a consistent message that emerged from speaking with federal representatives was a desire to work together. Interviewees recognized the need to work across silos within and between departments to increase climate resilience, given its ubiquitous nature. Many described their relationships with other departments as collegial, with a number mentioning that much of their cross-department work relies on personal relationships built over time. Several commented on the depth of adaptation expertise within the federal government, which—even if it currently exists in pockets scattered across the government—positions it well to move the issue forward.

## 3.5 Desired Changes

Through the interviews, federal representatives identified desired characteristics of a revitalized federal adaptation governance structure. These suggestions are captured within the remainder of this section.

### 3.5.1 Clearly Identified Goals and Targets Within the NAS

Many of the interviewees expressed an expectation that the NAS will help drive coordination across departments by setting a clear direction of travel, supported, in part, by identified targets and expected outcomes. Clear targets are anticipated to provide rallying points for cross-departmental collaboration—a common metric around which departments can design programs and align efforts, as well as inject a stronger sense of purpose for structures such as the DGARC and DARTT. They are also expected to place adaptation efforts on a more even footing with climate mitigation and, when included in ministerial mandate letters, help ensure that adaptation needs and priorities capture the interest of senior government officials. This expectation of clearly defined targets and outcomes is consistent with the federal government’s focus on transparency and accountability for the achievement of defined priorities.

### 3.5.2 Clearly Delineated Roles and Responsibilities

The NAS is expected to provide clarity regarding who is responsible for implementing its various objectives. Naming the lead department on a specific file is anticipated to strengthen coordination, as it will provide the department with greater authority to engage in formalized cross-departmental consultations and establish coordination mechanisms to ensure consistent, integrated programs and avoid providing conflicting directions to the same client. Along with the identification of the lead for specific files, it was also suggested that mechanisms—such as an assigned lead—be established to encourage a consistent approach to the development of risk assessments, tools, and policies by various departments.



### 3.5.3 An Inter-Ministerial Coordination Mechanism That Keeps the Tent Wide and Open

While acknowledging the challenges associated with the DARTT's sizable membership, interviewees appreciated the presence of a venue that brings together representatives from across the government to share information. They also appreciated the need to include new departments in this type of committee, such as the recent participation of the DND in the DGARC. The governance structure should provide space for the priorities of departments that are not in the DG Committee for the NAS<sup>11</sup> to be brought forward.

### 3.5.4 Ensure Efficiency and Flexibility in the Governance Structure

While recognizing the need for greater collaboration across departments, a number of interviewees noted that recent increases in the amount of work on adaptation have led to a sudden growth in the number of working groups, program-specific committees, and advisory groups. As such, there is a desire to ensure that a revitalized governance structure does not lead to the creation of even more working groups and committees that take people away from implementing the programs and initiatives for which they are responsible—and ideally, it should lead to fewer interdepartmental coordination bodies that have clearly defined mandates.

A desire to avoid excessive administrative demands was also expressed. A few interviewees commented on the “administrivia” associated with the implementation of the PCF and a desire to minimize reporting requirements.

As well, given that the field of adaptation is continuously evolving, an adaptive governance system will be needed. There will be a need for committees and forums to change memberships, update their terms of reference, and, as appropriate, rotate co-chairs and leads and engage with external (non-government) advisors.

### 3.5.5 Provide Sufficient Financial and Staff Resources

Many of the interviewees identified the need for greater funding to support ambitious adaptation actions. They noted that sizable financing for adaptation is not only required to meet the needs of the country but also helps to increase the profile of the issue within government. As one interviewee noted, federal departments have a tendency to follow the money and prioritize areas in which it is available.

Federal interviewees also expressed a desire for greater financing to support their participation in the committees, working groups, and reporting activities required to develop and implement adaptation actions, including those associated with the NAS. Several commented that they currently have insufficient staff to engage in all the interdepartmental committees related to their

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<sup>11</sup> The current members of the DG Committee for the NAS are ECCC, NRCan, INFC, Health Canada, CIRNAC and PS.



areas of work. Concern was expressed that the NAS process might put additional requirements on people with limited resources.

Concurrently, it was noted that staff turnover within departments is currently high; various departments have unfilled positions or staff that are relatively new to their positions. This turnover makes it more challenging to build up expertise on a complex issue like adaptation. Greater investment in adaptation training could help to mitigate this challenge.

### 3.5.6 The Role of Climate Science and Data

A few interviewees shared perspectives regarding the role of access to and use of climate data to inform federal adaptation research and planning in a future adaptation governance structure. Interest was expressed in seeing a clearer link between the internationally recognized climate research being undertaken by the federal government and its policy processes. While ECCC's climate science capacity is represented on the DARTT and DGARC,<sup>12</sup> concern was expressed that this expertise is not being clearly integrated into senior-level decision-making processes. Similarly, it has been noted that there is no formal connection between the national climate adaptation assessment process coordinated by NRCan and federal adaptation policy and programming (Hammill et al., 2021).

Greater investment in climate science was recommended to ensure that the evidence to inform decision making is available. It should be noted, however, that other interviewees suggested that sufficient information is currently available to inform decision making. Instead, it was suggested that a greater barrier to action is interest and prioritization by senior government. It was also noted that current decision making draws primarily from the natural sciences and gives less attention to the social sciences.

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<sup>12</sup> Representatives of Meteorological Services Canada, the Atmospheric Science and Technology Directorate, and CCCS participate in the DGARC (federal government, personal communication, 2022).



# 4.0

## International Approaches




















Throughout the world, developed and developing countries have established governance systems to coordinate adaptation planning and action across their federal or national governments and between different jurisdictional levels. This section provides examples of the types of governance structures active in a small sample of countries—Australia, Germany, Japan, Kenya, Nepal, New Zealand, and the United Kingdom—an overview of which is provided in Table 2.

## 4.1 Mandates for Adaptation Governance Systems









The mandate behind the processes and structures that constitute a country's approach to adaptation governance can stem from time-bound guidance to more permanent expectations grounded in legislation. Adaptation governance is often informed by ministerial mandate letters that change as government priorities evolve. As well, ministers may establish temporary inter-ministerial committees to support a specific initiative, such as the development of a National Adaptation Plan (NAP) or the implementation of a cross-cutting adaptation program. While recognizing these more time-bound drivers of adaptation governance, this section looks at governance systems reflected in national legislation and policies.

Legislative instruments to formalize adaptation governance are being used by a growing number of countries. These instruments may explicitly focus on adaptation or, more broadly, on climate change (Hammill et al., 2021). Among the earliest of these is the **United Kingdom's Climate Change Act** (2008). This act enabled the establishment of a Committee on Climate Change, which advises the government and evaluates its adaptation progress (see Section 4.5). It gives the Secretary of State (i.e., minister) responsibility for presenting an assessment of climate risks to Parliament every 5 years, taking into account advice received from the Committee on Climate Change (now called the Climate Change Committee). It also requires the Secretary of State to present the government's climate adaptation objectives, as well as the policies, proposals, and timeline for meeting these objectives (i.e., a NAP), and to “send a copy of each programme under this section to the other national authorities” (Climate Change Act, 2008).

**Table 2.** Adaptation governance mechanisms in other countries

	Where institutional arrangements are defined	Institutional lead	Coordination structures	Knowledge-sharing mechanism	Accountability mechanism
Australia	National Climate Resilience and Adaptation Strategy 2021–2025	Department of Agriculture, Water and the Environment	 National Adaptation Policy Office  Australian Government Disaster and Climate Resilience Reference Group  Interjurisdictional Climate Change Adaptation Working Group	 Climate Compass	 Climate Change Authority
Germany	Adaptation Action Plan (2020)	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety	 Inter-Ministerial Working Group on Adaptation to Climate Change	 Climate Impacts and Adaptation in Germany (KomPass)	 Inter-Ministerial Working Group on Adaptation to Climate Change
Japan	Climate Change Adaptation Act (2021)	Ministry of the Environment	 Climate Change Adaptation Promotion Council	 Climate Change Adaptation Platform	 Climate Change Adaptation Promotion Council
Kenya	Climate Change Act (2016)	Climate Change Directorate	 National Climate Change Council	 Kenya Climate Change Knowledge Portal	 National Environment Management Authority
New Zealand	Climate Change Response (Zero Carbon) Amendment Act (2019)	Ministry for the Environment		Not established	 Climate Change Commission





	Where institutional arrangements are defined	Institutional lead	Coordination structures	Knowledge-sharing mechanism	Accountability mechanism
Nepal	Constitution of Nepal (2015) Environmental Protection Act (2019) National Adaptation Plan (2021)	Ministry of Forests and Environment	 Environment Protection and Climate Change Management National Council  Inter-Ministerial Climate Change Coordination Committee	Not established	 Ministry of Forests and Environment
United Kingdom	Climate Change Act (2008)	Department for Environment, Food and Rural Affairs	 Climate Action Implementation Cabinet Committee  Climate Action Strategy Cabinet Committee  Climate Change National Strategy Implementation Group	 Green Book Supplementary Guidance on Accounting for the Effects of Climate Change	 Climate Change Commission's Adaptation Sub-Committee


Note:


 : Federal government only


 : Vertical or multiple levels of government

 : Government and non-governmental actors involved

 : Federal government only, generally to support mainstreaming efforts

 : National focus, including civil society

 : External to the federal government

 : Internal to the federal government





Following the United Kingdom's lead, a number of countries have introduced similar pieces of legislation:

- **Japan's** Climate Change Adaptation Act (2018) designates the Ministry of Environment to lead efforts to understand the country's adaptation progress and develop an evaluation strategy. It requires the Ministry of Environment to prepare an adaptation plan in consultation with related agencies and local governments and to assess the impacts and adaptation progress every 5 years (Government of Japan, 2021).
- **Kenya's** Climate Change Act (2016) establishes a National Climate Change Council "responsible for oversight and coordination" and a Climate Change Directorate within the environment ministry "as the lead government agency responsible for coordinating climate change plans and actions and related measurement, monitoring, and reporting" (Republic of Kenya, 2020, pp. 5, 6). It obliges state departments to establish climate change units, defines the roles of national and county governments with respect to mainstreaming and implementing climate change actions, and requires the completion of a national climate change action plan every 5 years (Republic of Kenya, 2020).
- **Nepal's** Environment Protection Act (2019) requires the government to periodically study the adverse impacts of climate change, publicly disclose actions to mitigate climate risks, and prepare adaptation plans.
- **New Zealand's** Climate Change Response (Zero Carbon) Amendment Act (2019) established a Climate Change Commission responsible for providing independent advice and monitoring progress toward national adaptation goals (Government of New Zealand, 2019).

Apart from legislation, countries have formalized their adaptation governance structures by including them in their NASs or NAPs. By and large, this has involved explicitly assigning responsibility for the NAS/NAP and/or implementation of specific thematic areas of work or programs to specific ministries. For example,

- **Australia** used the preparation of its NAS to commit to the formation of a National Adaptation Policy Office within its environment ministry to support the implementation and oversight of its strategy (see Section 4.3; Government of Australia, 2022).
- **Nepal's** NAP confirms the Ministry of Forests and Environment's responsibility "for the overall NAP process, and for policies, laws, and strategies for climate adaptation" (Government of Nepal, 2020, p. 40). The ministry is also tasked with roles related to monitoring and reporting, convening across sector ministries and jurisdictions, mainstreaming adaptation into policies and programs, and leading research on adaptation. Sectoral ministries are responsible for creating thematic and cross-sectoral working groups (Government of Nepal, 2020).
- **New Zealand's** draft NAP sets out the roles and responsibilities of the central government, local government, iwi/Māori, the private sector, academia, and communities in climate adaptation—including with respect to capacity building, implementation, and



monitoring and evaluation. It also indicates the lead agency for each of the current or proposed initiatives to reduce climate vulnerability expected to be completed by August 2024 (Ministry for the Environment, 2022).

Some governments have formalized their agreed understanding of the division of responsibilities between different jurisdictions. In **Nepal**, its new Constitution (2015) explicitly allocates responsibility for acting on climate change adaptation to all tiers of government (Ministry of Forests and Environment, 2020a). **Australia** negotiated the 2012 document *Roles and Responsibilities for Climate Change Adaptation* with its subnational governments. It sets out the agreed role of the federal, state/territorial, and local governments, as well as the responsibilities of the private sector. The agreement also includes Guiding Principles for the Management and Allocation of Climate Change Risks (Government of Australia, 2012).

## 4.2 Institutional Leads

Among the countries reviewed, one consistent area is the ministry responsible for leading the national government's efforts to adapt to climate change. In all cases, it is the ministry responsible for the environment. This pattern is followed in most developed and developing countries, with some having explicitly established ministers responsible for climate change (e.g., Belize, Pakistan, and the United Arab Emirates) (United Nations Framework Convention on Climate Change, n.d.).

When countries have allocated responsibility for climate change to an entity other than their environment ministry, they have tended to place it in a central ministry. For example, some countries have placed their focal points for climate change within their foreign affairs ministry (e.g., Algeria, Brazil, Chile, Iran, and Japan), economy or finance ministry (e.g., Croatia, Fiji, Jamaica, and Palau), or planning ministry (e.g., Trinidad and Tobago). A few countries have placed climate change within the apex of their governance structure, such as Kiribati's placement of climate change in the Office of the President (United Nations Framework Convention on Climate Change, n.d.). As might be observed from these examples, smaller countries, particularly small island developing states, are more likely to place responsibility for leading climate change in the hands of a central ministry.

## 4.3 Coordination Structures

Countries have established various structures to facilitate coordinated action across national governments. Some of these serve a horizontal coordination function only, while others support both vertical and horizontal coordination—either only with other governments or also with civil society representatives.

Examples of adaptation governance structures focused solely on coordination across the national government can be found in Japan, Germany, and Australia. **Japan's Climate Change Adaptation Promotion Council** was established to support the implementation of its NAP.



Chaired by the Minister of the Environment, the council facilitates coordination among members from relevant ministries and agencies, promotes measures related to climate change adaptation undertaken together, and periodically checks progress. Specific ministries are assigned to ensure the implementation of specific actions (Government of Japan, 2021).<sup>13</sup>

**Germany’s Inter-Ministerial Working Group on Adaptation to Climate Change** plays a similar role in coordination across the federal government. It brings together representatives from the Federal Chancellery, 10 ministries, and three agencies to coordinate activities and set new goals.<sup>14</sup> Under the direction of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the working group is “responsible for policy advice, drafting the adaptation strategy, steering the participation of stakeholders, preparing the adaptation action plans, and cross-departmental coordination” (Terton et al., 2021, p. 15). Participation in the working group is voluntary, and decisions are made on the basis of consensus (Vetter et al., 2016, as cited in Terton et al., 2021). To facilitate interlinkages between Germany’s efforts to address climate adaptation and disaster risk reduction, members of the adaptation working group and the Inter-Ministerial Working Group for the Implementation of the Sendai Framework sit on each other’s committees and engage in “intensive dialogue” (Government of Germany, 2020, p. 35).

The **Australian Government Disaster and Climate Resilience Reference Group** also supports coordination between adaptation and disaster risk reduction. It is tasked with “driving a whole-of-government approach to disaster and climate resilience, risk reduction and adaptation” (Government of Australia, 2020, p. 1). Accountable to the ministers responsible for emergency management and the environment, the Reference Group is co-chaired by the deputy secretaries for the Department of Agriculture, Water and the Environment (ADAWE) and the Department of Home Affairs and brings together deputy secretaries from 20 departments and agencies on a quarterly basis. The co-chairs are responsible for providing an annual joint ministerial briefing, and the Reference Group is to provide Australian Government secretaries with an annual update. Secretariat support for the work of the Reference Group is provided by the departments on an alternating basis (Government of Australia, 2020).

While the focus of this paper is on horizontal governance at the federal level, the review also noted a number of examples of bodies established to facilitate coordinated adaptation action by different levels of government and with civil society. These examples include

- **Australia’s National Adaptation Policy Office:** In its NAS released in 2021, Australia committed to establishing a National Adaptation Policy Office “to coordinate work on climate resilience and adaptation across all governments and provide a central point of

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<sup>13</sup> For example, the Ministry of Agriculture, Forestry and Fisheries will support adaptation in the livestock industry, which includes maintaining productivity despite more frequent heat waves and maintaining forage crop yields under the increasing stress of drought, excessive heat, and pest damage (Government of Japan, 2021).

<sup>14</sup> The 10 involved are the ministries of Finance; Defence; the Interior; Health; Labour and Social Affairs; Education and Research; Families, Seniors, Women and Youth; Transport and Digital Infrastructure; Economy and Energy; and Economic Development and Cooperation. The three agencies are the German Federal Foreign Office, the federal Press and Information Office, and the German Environment Agency (Terton et al., 2021).



contact for businesses and communities” (Government of Australia, 2021, p. 21). Located in the ADAWE, the office is responsible for ensuring the implementation of its NAS in a coordinated manner across governments (ADAWE, 2022).

- **Germany’s Permanent Committee on Adaptation to the Consequences of Climate Change:** As part of the Federal-Länder<sup>15</sup> Working Group on Climate and Sustainability, the Permanent Committee provides information to the federal government and Länder; it also coordinates adaptation activities (e.g., the evaluation of adaptation measures and monitoring and indicator systems) (Terton et al., 2021).
- **Nepal’s Environment Protection and Climate Change National Council:** Established under the 2019 Environment Protection Act and chaired by the prime minister, it brings together representatives of the “Ministry for Forest and Environment, Ministers of the Government of Nepal, Chief Ministers of all provinces, National Planning Commission, professors, and experts in the field of forests and environment” (Ministry of Forests and Environment, 2020b). Among its roles is tracking progress on the integration of climate change adaptation into the country’s long-term policies and plans and providing guidance to provincial and local governments (Ministry of Forests and Environment, 2020b). Secretariat services for the National Council are provided by the federal Ministry of Forests and Environment.
- **Nepal’s Inter-Ministerial Climate Change Coordination Committee:** Reporting to the National Council, the Coordination Committee was established under the 2019 National Climate Change Policy. Covering both climate mitigation and adaptation, the committee seeks to “cultivate a consolidated, consistent, and regulated climate change approach in Nepal” by bringing together provincial and local governments and institutions (Ministry of Forests and Environment, 2020c). It is also housed within the Ministry of Forests and Environment.

## 4.4 Knowledge Sharing and Capacity Building

Among the countries reviewed, a few have established national-level knowledge-sharing platforms:

- **Japan’s Climate Change Adaptation Platform:** Hosted by the National Institute for Environmental Studies (a government think tank), the platform provides information on climate change impacts and adaptation and technical advice to local governments (Government of Japan, 2021). The National Institute for Environmental Studies is the lead organization for collecting and sharing climate adaptation information, including to local governments, as embedded in Japan’s Climate Change Adaptation Act (Government of Japan, 2021).
- **Climate Impacts and Adaptation in Germany (KomPass):** Established by its environment ministry to support the development and implementation of its NAP,

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<sup>15</sup> Länder are the subnational bodies in Germany, the equivalent of Canada’s provinces.





KomPass provides information, promotes networking between actors, and supports knowledge creation. Its target audience is primarily individuals, associations, and companies outside of government (Umwelt Bundesamt, n.d.).

- **The Kenya Climate Change Knowledge Portal (KCKKP):** Created by the Climate Change Directorate, the portal provides a “one stop repository of climate change information” (Ministry of Environment and Forestry, n.d.). It provides Kenyans with access to resources and aims to link actors across various sectors (Ministry of Environment and Forestry, n.d.).

The review turned up limited examples of knowledge-sharing tools and platforms specifically to support horizontal governance. An exception is Australia’s **Climate Compass** developed in 2018 for the Australian Government Disaster and Climate Resilience Reference Group (Lin et al., 2018). Similar to the climate lens being developed by ECCC for the Office of Greening Government, the Climate Compass framework is designed to support public servants with mainstreaming of climate risks into policies, programs, and asset management (Lin et al., 2018). Australia committed to further application of the Climate Compass in its NAS (Government of Australia, 2021). As well, the United Kingdom government has developed supplementary guidance for its **Green Book** that sets out expectations for embedding climate adaptation in government “policy, programme and investment decisions, drawing on climate evidence and assessments” (Government of the United Kingdom, 2021, p. 8).

## 4.5 Accountability Mechanisms

Monitoring and reporting on progress, including assessing if adaptation actions are being implemented effectively and efficiently, is a critical component of adaptation governance systems. Countries have addressed the need for an accountability mechanism in their systems either by establishing independent external bodies to undertake this task or by allocating this responsibility to existing government bodies.

Whenever the topic of external accountability mechanisms arises, people reference the **United Kingdom’s Climate Change Committee**. Under the Climate Change Act (2008), this independent body was established to provide advisory services to the United Kingdom government and the devolved governments of Scotland, Wales, and Northern Ireland. The Climate Change Committee has established an Adaptation Sub-Committee that is specifically responsible for preparing the government’s Climate Change Risk Assessment every 5 years and providing advice and analysis on request to national authorities. It also presents a report to Parliament every 2 years that includes an assessment of the United Kingdom’s progress toward implementing its adaptation program (Government of the United Kingdom, 2010). The eight members of the Adaptation Sub-Committee come from academia and civil society organizations and are appointed by the Cabinet of the United Kingdom for a 5-year term (Climate Change Committee, n.d.). Funding for the work of the Adaptation Sub-Committee



comes from the Department for Environment, Food and Rural Affairs (Defra) (Committee on Climate Change, 2018).

**New Zealand** established a similar Climate Change Commission under its Climate Change Response (Zero Carbon) Amendment Act (2019). Like its counterpart in the United Kingdom, New Zealand's seven-person Commission is required to prepare national risk assessments every 6 years and provide NAP progress reports every 2 years, to which the minister is required to respond (Government of New Zealand, 2019). Notably, the Climate Change Commission is required under the act to ensure that one of its members has expertise relevant to the legal and cultural experience of the iwi/Māori and is to consider “the Crown-Māori relationship... and specific effects on iwi and Māori” in its activities (Government of New Zealand, 2019).

**Australia** also established an independent statutory body, the Climate Change Authority, in 2011 under a dedicated act. Australia's Climate Change Authority is tasked with providing the federal government with expert advice, undertaking commissioned reviews, and completing targeted research (Climate Change Authority, n.d.). While the Climate Change Authority's focus to date has been on tracking and supporting climate mitigation efforts, Australia's NAS tasked it with assessing the implementation of the country's adaptation strategy (Government of Australia, 2021). At the same time, the National Adaptation Policy Office is to “report on Australia's adaptation progress” (Government of Australia, 2021, p. 21).

A greater number of countries have assigned responsibility for monitoring and reporting on their adaptation progress to an established ministry or agency. This includes **Nepal's** Ministry of Forests and Environment, which is responsible for reviewing and reporting on the implementation of the NAS (Government of Nepal, 2020), and **Germany's** Inter-Ministerial Working Group on Adaptation to Climate Change, which has developed a reporting system to support its monitoring responsibilities (Government of Germany, 2020).

The United Kingdom's Climate Change Act (2008) gives the British government additional capacities to support the monitoring of progress. Under the act, it has the authority to request that “persons or bodies with a function of a public nature” report on the actions they are taking to adapt to climate change (Defra, 2018). Referred to as the **Adaptation Reporting Power**, the government has used this authority to have government agencies, regulators, and a range of other entities (e.g., major infrastructure providers, transport companies, electricity providers, and heritage organizations) provide voluntary reports on how they are preparing for current and future climate impacts. The reports provide the government with a picture of the country's preparedness for climate change and inform reports to Parliament (Defra, 2018).

## 4.6 Final Note

While this section has presented different structures that have been established, it does not provide an assessment of their functionality or effectiveness. Throughout the world, there are numerous examples of structures set up by different governments that may exist in name but not in practice. For example, under its Climate Change Act (2016), Kenya set up a National Climate



Change Council chaired by the President that was “responsible for oversight and coordination” of items such as the country’s climate change action plans and the National Climate Change Fund (Gueye & Bilich, 2019; Republic of Kenya, 2020, p. 5). In practice, the council was not operationalized, as there was “much politics about it” (Ageyo & Muchunku, 2020, p. 7). Similarly, while South Africa officially has a number of coordination mechanisms in place,<sup>16</sup> the government recognized a lack of clarity regarding government sector mandates and included a strategic intervention in its NAS focused on establishing “effective governance and legislative processes” to support climate adaptation (Department of Environment, Forestry and Fisheries, 2019).

Similarly, while much has been touted of the United Kingdom’s Climate Change Committee, its independent advice and reporting have not necessarily driven strong adaptation action within the government. As noted in its 2021 assessment report, adaptation action in the United Kingdom “has failed to keep pace with the worsening reality of climate risk” despite the country having “the capacity and the resources to respond effectively to these risks” (Climate Change Committee, 2021, p. 11).

Governance mechanisms require more than an “if we build it, they will come” philosophy. Additional factors are required for an effective governance system, such as political commitment, the building of trust between departments, and proper resourcing.

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<sup>16</sup> South Africa’s intergovernmental coordination bodies include the federally focused Forum of South African Directors General; the Intergovernmental Committee on Climate Change and the Inter-Ministerial Committee on Climate Change that support multi-level coordination; and the National Climate Change Committee, which brings together both government and non-government representatives.



# 5.0 Options for a Revitalized Adaptation Governance Structure







Considering the desired changes to the federal government’s current system and international approaches, this section presents potential options for strengthening adaptation governance within Canada’s federal government. It presumes that the revised adaptation governance structure will need to support policy and planning, program coordination, and knowledge exchange and learning, as well as have an accountability mechanism. Specific attention is given to potential options for more firmly connecting adaptation governance to senior government levels, coordinating across government, and strengthening accountability. It begins, though, by looking at options for formalizing the adaptation governance structure and the institutional lead for adaptation.

## 5.1 Legal Mandate

Canada’s NAS is expected to include a governance structure to support its implementation. This structure is to be “effective, efficient, and coordinated ... [and] aligned with formal mechanisms being established to achieve stronger coordination” with emergency management and adaptation efforts (ECCC, 2022, p. 25). Placing the governance structure in the NAS will provide it with a clear mandate to pursue its assigned objectives, relationships, and functions.

Additionally, though, the federal government may also choose to strengthen the legal framework for adaptation governance by embedding it in legislation, either by introducing a new act focused exclusively on climate adaptation (as has been done in Japan) or by amending an existing act (as has been done in New Zealand). The advantage of embedding the adaptation governance structure in legislation is its greater permanence since it cannot be as easily disbanded by a subsequent government (McKenzie et al., 2021).

Reflecting the content of similar acts introduced in other countries, the legislation could include all or some of the following elements:

- Designating the responsibilities of the ministry leading national efforts to adapt to climate change.
- Codifying a timeline for routinely assessing climate risks, developing plans to address these risks, and tracking and evaluating progress toward achieving adaptation goals.
- Establishing an accountability mechanism—either within or independent of the federal government—to provide advice, monitor and assess progress, and/or conduct research.

Building on current legislation, the federal government could choose to follow in the footsteps of New Zealand and amend the Canadian Net-Zero Emissions Accountability Act to also advance adaptation actions. As described in Box 1, the Net-Zero Emissions Accountability Act includes many of the same elements found in legislation guiding adaptation governance. The draft NAS’s 2030 medium-term objectives and 2050 transformational goals are also aligned with the act’s targets and commitments under the Paris Agreement (ECCC, 2022).



### Box 1. Canada's Net-Zero Emissions Accountability Act

The Canadian Net-Zero Emissions Accountability Act enshrines in law Canada's commitment to reaching its 2030 Paris Agreement emissions target and its 2050 net-zero emissions goal by requiring the federal government to set 5-year emission reduction targets starting in 2035 and developing emission reduction plans. It outlines responsibilities to be undertaken by the assigned minister, which is defined as meaning the Minister of the Environment.<sup>17</sup> The Net-Zero Emissions Accountability Act also enshrines accountability mechanisms, namely by

- Establishing a Net-Zero Advisory Body mandated “to provide the Minister with independent advice with respect to achieving net-zero emissions by 2050” and undertake engagement activities (p. 11). The Advisory Body is to have up to 15 members appointed by the Governor in Council for renewable 3-year terms and to provide an annual report to the minister that will be released to the public.
- Requiring the Commissioner of the Environment and Sustainable Development to report on the government's emission reduction measures “at least every five years” (p. 13).
- Requiring the Minister of Finance to publish, in cooperation with the Minister of the Environment, an annual report on key measures taken by federal departments and agencies to “manage its financial risks and opportunities related to climate change” (p. 13).
- Requiring the minister to report to Parliament on progress toward achieving the country's emission reduction targets and explain any failures.

The act is to be reviewed 5 years after coming into force (which was June 29, 2021).

While legislation rarely sets out specified adaptation governance structures, as seen in other countries, it can provide a strong mandate for an external accountability mechanism. Legislation can also ensure that governments consistently complete climate risk assessments, develop plans to address these risks, monitor progress and lessons learned, and then repeat this cycle. The iterative and ever-evolving nature of the climate change risk landscape requires regular, streamlined, and transparent assessment and response processes linked to decision making—a current gap in Canada's national risk assessment and adaptation planning process (Hammill et al., 2021).

## 5.2 Institutional Lead

When considering the institutional lead for driving a coordinated federal approach to climate change adaptation, two main options exist. The first is placing primary responsibility for

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<sup>17</sup> Under the act, the Governor in Council may assign a federal minister to take on the roles and responsibilities it contains.



overseeing adaptation policy and programming in a central ministry—either the PCO, Finance, or the Treasury Board. Long seen as an effective way to coordinate the implementation of adaptation actions, the principal advantage of this option is a central agency’s capacity to drive a whole-of-government approach through top-down pressure (McKenzie et al., 2021; Organisation for Economic Co-operation and Development, 2009). Their mandates and closer engagement with senior government officials in the PMO and Cabinet give central agencies greater capacity to bring line departments together and monitor success in achieving particular policy objectives—particularly when they have been endowed with the legal authority to do so (Henstra, 2022). However, these central agencies generally lack significant knowledge of climate change adaptation, and secretariats within them tend to be small and see their roles (and existence) transformed as governments and political agendas change.

The second option is to designate a line ministry with responsibility for exerting lateral pressure on departments to undertake adaptation actions. As previously noted, most countries, particularly developed countries, have chosen this approach and designated their environment ministry to lead the coordination of adaptation policy and action. This leaves the environment ministries responsible for achieving policy goals that depend on other departments successfully implementing adaptation actions within their own areas of responsibility. The capacity of environment ministries to exert lateral pressure on other departments, though, is limited. One minister is unable to tell another minister what to do, and environment ministries typically have less power and influence compared to other (larger and more economically powerful) line departments. A further disadvantage of having environment ministries as the designated lead for climate adaptation is that it reinforces the misperception that climate change is an environmental issue rather than a social and economic issue (external expert, personal communication, 2022).

In practice, a combination of these two options is often in place. When a central ministry is given responsibility for driving climate action, it is often supported by a line ministry. For example, when British Columbia’s Climate Action Secretariat was housed within the Premier’s Office, its staff came from the Ministry of Environment (McKenzie et al., 2021). Similarly, a line ministry’s capacity to exert lateral pressure on its fellow departments can be bolstered by a clear mandate from the executive office. For example, the PCF governance structure was co-chaired by ECCC and the PCO. This prior arrangement and ongoing work with the PCO’s results and delivery unit increase ECCC’s capacity to gain information from other departments, as they are backed by awareness of senior government’s attention to this issue (federal representative, personal communication, 2022).

The adaptation file within the federal government is led by ECCC, with NRCan playing a strong supporting role. An advantage of this type of co-leadership is that it lowers the likelihood of the lead ministry’s interests and priorities becoming the country’s main adaptation priorities. It also can increase the profile of adaptation—particularly if one of the co-leads is from a powerful department. As the volume of adaptation-focused programming and internal mainstreaming of climate-resilience measures increases, though, a more polycentric approach that clearly distributes leadership for particular issues or files to a greater number of departments becomes more



appropriate. To some extent, this process is already underway within the federal government, as reflected in the inclusion of Health Canada, INFC, CIRNAC, and PS (along with ECCC and NRCan) in the Director General Steering Committee for the National Adaptation Strategy.

In determining its future adaptation governance structure, the federal government could choose to retain ECCC as the lead on climate adaptation policy, with adaptation programming being led by all departments. As such, ECCC could be responsible for leading efforts to set the federal government's overall strategic direction on climate adaptation as well as tracking and promoting alignment of adaptation planning, programming, and capacity building being undertaken by other departments accountable for leading adaptation actions within their mandated areas of responsibility. This approach would be consistent with current international precedence. As noted, developed countries generally do not make a central ministry, such as the PCO, solely responsible for driving adaptation policy and programming. Nor is it usual for a line department other than the ministry of the environment, such as NRCan or PS, to become the sole lead for climate adaptation.

## 5.3 Senior-Level Coordination Structures

As noted in Section 3.4, the federal government's current governance structure does not include a dedicated channel for bringing climate adaptation issues to the attention of senior levels of government. A revitalized adaptation governance structure may include a clear connection to Cabinet-level decision making. Three possible means of achieving this goal are presented below, as well as a fourth alternative.

### 5.3.1 Strengthen Adaptation Within the Current CPI Governance Structure

While its terms of reference are firmly oriented toward achieving federal mitigation targets, adaptation matters are brought forward from time to time to the DM Committee on Climate Plan Implementation. Additional ministers, such as those responsible for health and emergency management, are invited to participate in committee meetings at which adaptation is discussed. This current arrangement could be formalized through steps such as

- Expanding the DM Committee on Climate Plan Implementation's mandate to explicitly include responsibility for the development and implementation of federal programs to support climate adaptation, including those included in the NAS.
- Broadening the number of ministers on the committee to include those whose mandates are clearly linked to climate adaptation, particularly Health Canada and PS.
- Requiring that adaptation be the focus of the committee's attention on a regular schedule (e.g., every other month).
- Renaming the committee.
- Retaining separate adaptation-focused committees at the DG and director levels, similar to the current DGARC and DARTT.



The principal advantages of this approach are that it reflects the historical practice of addressing both sides of the climate change challenge together (e.g., under the PCF), facilitates seeking synergies and reducing trade-offs between mitigation and adaptation, and may be less burdensome for those departments with a single climate change unit.

On the other hand, this structure has clear disadvantages. The most obvious of these is the persistent imbalance of attention given to climate mitigation in comparison to climate adaptation. A single governance channel for climate change presents a serious risk of adaptation measures being completely overshadowed by ministerial attention focused on achieving the targets set out in their mandate letters, the ERP, and the Accountability Act—as is the present case. Moreover, achieving the government’s ambitious net-zero goals requires, and will continue to require, a significant investment of federal staff time and dedicated attention to this issue.

Perhaps less obvious are the fundamental differences between climate mitigation and adaptation. Broadly speaking, climate mitigation has a strong technological and economic focus, can be implemented within sectoral silos, requires strong involvement by the private sector, and has clear indicators by which to measure success. Adaptation, in contrast, is an ongoing, iterative process; requires responses tailored to local circumstances; is strongly connected to social determinants of well-being; involves a greater range of actors; has less capacity to attract private sector finance; and generally lacks easily quantifiable indicators of success. These differences mean that discussions around mitigation and adaptation differ significantly. Having them occur within one channel may therefore be inappropriate.

Despite these differences, there are specific issues around which opportunities for achieving mitigation and adaptation synergies exist, such as nature-based climate solutions, urban planning, building design, and renewable energy systems. Coordination within departments and through cross-departmental program committees is required to ensure that these opportunities are identified and maximized.

### 5.3.2 Link Adaptation to the Current Governance Structure for Emergency Management

As noted in Section 3.3, emergency management has an established FPT governance structure and, at the federal level, the Cabinet Committee on Safety, Security and Emergencies is co-chaired by the Minister for Emergency Preparedness. Recognizing the significant intersections between emergency management and climate change adaptation with respect to preparing for and mitigating climate hazards, an adaptation governance structure could be more strongly linked to the federal government’s internal emergency management governance structure.

Formally linking the governance of climate adaptation with that of emergency management has some potential advantages. Emergency management has significant traction within the government at the moment, which could be utilized to advance adaptation efforts. Like aligning with the CPI process, it would provide an opportunity to coordinate efforts, maximize synergies, and minimize duplication. For example, efforts such as the National Risk Profile and national





disaster risk assessment could inform or complement analyses from climate change risk assessments. Pursuing this structure also could serve to accelerate the transformation of Canada's emergency management efforts to make them more focused on prevention rather than response, ensure greater alignment between these two national priorities, and leverage the significant investments being made through the Disaster Financial Assistance Arrangements to build more climate-resilient communities.

However, there are some fundamental differences between emergency management and climate adaptation. As noted by one interviewee, emergency management is focused on increasing the capacity to respond to climate (and non-climate) events, while adaptation is focused on looking at why you have climate-related emergencies and making investments to lower the probability of their occurrence in the near term and coming decades. Moreover, climate adaptation encompasses a broader set of issues than just floods, wildfires, extreme heat, and other climate-related hazards. Climate adaptation also involves addressing slow-onset impacts, such as changes in the distribution of flora, fauna, pests, and diseases; sea level rise and coastal erosion; modification of the timing and length of growing seasons; and loss of cultural identity. These longer-term changes for which preparations are needed today could receive insufficient attention within a governance structure linked to emergency management.

### 5.3.3 Establish a New Channel Specifically for Climate Adaptation

A third option is to establish a new committee at the DM level whose mandate focuses exclusively on advancing national (and international) efforts to adapt to climate change, including implementation of the NAS. Like the DM Committee on Climate Plan Implementation, a DM-level committee could focus on providing strategic oversight of efforts to mainstream climate adaptation across the federal government and ensuring the delivery of policies, action plans, and programs aligned with the goals and objectives of the NAS. Its core responsibilities could similarly include direction and coordination of federal efforts, tracking progress toward adaptation goals, engagement with Indigenous Peoples and the provincial and territorial governments, ensuring alignment with other federal priorities like the CPI and emergency management, and facilitating coordinated communications.

The committee could inform the work of one of the Cabinet Committees, such as the Cabinet Committee on Economy, Inclusion and Climate and/or the Cabinet Committee on Safety, Security and Emergencies. It could be supported by an additional ADM-level committee as well as by modified versions of the existing DGARC and DARTT. Day-to-day support could be provided by a secretariat within ECCC.

Introducing a new deputy ministers committee for adaptation has the advantage of raising the profile of adaptation as a government priority and providing it with focused attention. It provides the opportunity to create a body directly connected to the PCO that includes the ministries that are critical to moving the adaptation priorities forward in a coordinated manner. It would also ensure that sufficient time can be given to the implementation of adaptation actions for which



direct oversight by senior levels of government is required, such as the creation of regulations or tracking progress toward defined targets (federal representative, personal communication, 2022).

The principal disadvantage of this approach is the presence of yet another DM-level committee that will require human resources to support it at a time when there is generally a desire for fewer committee meetings. Additionally, given the pervasive impacts of climate change—and therefore the expanding involvement of departments—it will be challenging to limit the size of the committee. Inspiration may be taken from Australia’s Disaster and Climate Resilience Reference Group to address this challenge, as it brings together DM equivalents from more than 20 departments on a quarterly basis and presents ministerial briefings on an annual basis.

### 5.3.4 Leave the Current Structure Unchanged

Finally, while interest was expressed in strengthening the link between the current DGARC and more senior levels of government, the option exists to continue moving forward with the current structure while strengthening coordination at the lower levels (see Section 5.4). While making it more difficult to draw ministerial attention to adaptation concerns and priorities, it was noted that if coordination is led from the DM level, lower-level staff may become bogged down in preparing for DM meetings and responding to ministerial requests and therefore have less time to spend focused on implementing adaptation actions. There is a risk associated with giving senior levels of government that do not have a strong understanding of adaptation needs significant responsibility for overseeing its progress. Rather, it was suggested that the focus of coordinated actions be at the implementation level.

**Table 3.** Options for senior-level interdepartmental coordination around climate adaptation

Option	Potential chair(s)	Potential members	Advantages	Disadvantages
Strengthen role in the CPI governance structure	ECCC & NRCan	Current CPI members, plus Health Canada, PS, and possibly DND	<ul style="list-style-type: none"> <li>• Retain historical connection to climate mitigation</li> <li>• Increase potential for mitigation/adaptation synergies</li> <li>• Less burden on smaller departmental climate teams</li> </ul>	<ul style="list-style-type: none"> <li>• Risk of continually being overshadowed by mitigation</li> <li>• Insufficient staff time to address both priorities</li> <li>• Climate mitigation and adaptation are fundamentally different</li> </ul>



Option	Potential chair(s)	Potential members	Advantages	Disadvantages
Integrate into the emergency management governance structure	ECCC & PS	To be determined	<ul style="list-style-type: none"> <li>• Build on the current prioritization of emergency management</li> <li>• Potential for greater synergies and alignment</li> <li>• Accelerate emergency management transition to focus on disaster prevention</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency management and climate adaptation concerns both broader than addressing climate hazards</li> <li>• Potential for less attention to slow-onset climate risks</li> <li>• Differences in time horizons</li> </ul>
New DM-level committee for climate adaptation	ECCC, or ECCC & a permanent or rotating co-chair	PCO, Treasury Board, Finance, AAFC, CIRNAC, DND, ESDC, Health Canada, ISC, INFC, NRCan, and PS	<ul style="list-style-type: none"> <li>• Focused oversight and time on climate adaptation objectives, including NAS</li> <li>• Raise the profile of adaptation at the senior level</li> </ul>	<ul style="list-style-type: none"> <li>• Requires additional time and resources</li> <li>• Size limits may restrict the ability to reflect the interests of all involved departments</li> </ul>
Retain the absence of a senior-level coordinating structure	ECCC & NRCan, or ECCC & rotating co-chair	Current DGARC, with the flexibility to expand	<ul style="list-style-type: none"> <li>• Greater flexibility</li> <li>• Coordination focused on the implementation level</li> <li>• More time to focus on implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Less senior-level attention to climate adaptation</li> </ul>

## 5.4 Lower-Level Coordination Structures

A more effective federal adaptation governance structure will need to facilitate stronger coordination of policy and program development across departments. This breaking down of silos between departments is particularly important given the interconnected, interdisciplinary nature of climate adaptation. The current horizontal coordination structures—DGARC and DARTT—already play a positive role in advancing this objective by connecting and informing participants about ongoing and upcoming adaptation initiatives.

However, as previously noted, improvements are needed to the current DGARC and DARTT structures to overcome identified weaknesses. This section explores various options for



strengthening adaptation governance at the DG and director levels of the federal government. It outlines the potential components for a revised governance structure that supports strategic planning, policy development, and program coordination. Specific attention is then given to the characteristics of a potential secretariat to support these bodies.

### 5.4.1 Strategic Policy and Planning Committee(s)

The lack of a committee specifically to support strategic, forward-thinking policy development and planning has been identified as a current gap in the federal adaptation governance structure. There is a recognized need for a smaller committee comprised of ministries at the centre of national adaptation efforts. The primary role of this DG-level committee, supported by a parallel committee at the director level, could be to

- Identify current gaps in or barriers to advancing adaptation action in Canada.
- Collaboratively prioritize areas for policy enhancement, regulation, capacity building, and investment.
- Develop strategies by which to pursue prioritized objectives.
- Vet policies and programs that will go to Cabinet for approval (e.g., Memoranda to Cabinet).

Other potential roles could include ensuring a cohesive federal communications strategy on climate adaptation and linking international and domestic climate adaptation initiatives.

To facilitate effective decision making, this committee would need to be comprised of a limited number of departments and agencies, likely selected by the PCO. Given the committee's proposed mandate, it would be important to ensure that the PCO is engaged in the committee, ideally in a co-chair role. The second co-chair could be ECCC or could rotate between the ministries to ensure a balanced representation of the interests and priorities of committee members, as well as generate a shared sense of responsibility. Reflecting the desire for strategic discussions, the number of representatives per department could be limited—such as one person with one or more designated alternates on the DG-level committee and one or two representatives on the director-level committee. This approach would require departments to coordinate internally to ensure that the breadth of their concerns and priorities is brought forward to the committee. As appropriate, the DG-level committee could be linked to the chosen senior-level coordination structure.

While initially bringing together the current and emerging leaders in federal adaptation planning efforts, the mandate of this committee should be sufficiently flexible to bring in additional ministries as priorities, circumstances, and needs evolve. In particular, it may be appropriate to include representation from an additional ministry with a strong social focus, such as ESDC, as their involvement in climate adaptation increases.



## 5.4.2 Implementation Committee(s) Structure

Anticipating a significant uptick in the range and size of adaptation programming occurring across the federal government as the NAS is implemented, a dedicated structure for encouraging aligned efforts could be established. The mandate of an implementation-focused committee structure could include the following:

- Tracking progress toward the achievement of adaptation goals, objectives, and targets identified in the NAS.
- Bringing forward areas in which challenges are being experienced in order to seek solutions.
- Identifying areas for synergies or at least minimizing duplication of efforts.
- Aligning engagement with other levels of government.

Committee(s) could be established at the DG and/or director levels and involve departments with active adaptation programs.

The implementation committee(s) could be linked to or supported by **interdepartmental working groups** that bring together multiple departments around a particular issue or theme. These could be ad hoc, initiative-focused working groups, similar to the current collaboration on the development of climate-resilient building codes and flood risk mapping, but more formally linked to the implementation committee. These working groups could be expected to form over time in response to changing government needs and priorities.

The work of the implementation committee(s) could also be supported by standing working groups focused on consistent areas for collaboration. These working groups could be clustered in the following ways:

- **System clusters at the core of the NAS:** Building on the NAS Advisory Tables and their associated federal advisory committees, five standing working groups could be established to ensure coordinated implementation of their associated short-term priority actions. Leadership of these working groups could reflect the existing roles of ECCC, Health Canada, INFC, NRCan, and PS in, respectively, leading the Advisory Tables focused on a thriving natural environment, health and well-being, resilient natural and built infrastructure, a strong and resilient economy, and disaster resilience and security.

This design would allow for current momentum and experience to be built upon. However, interviewees cited limitations to this approach, such as the challenge of addressing the inherent interlinkages between the identified clusters (e.g., natural infrastructure links to all five tables) and the need for some departments with a limited number of experts in climate adaptation to be engaged in all five clusters (e.g., agriculture).





- **By climate hazard.** Particularly if the NAS contains targets strongly connected to increasing resilience to specific extreme weather events, standing working groups each focused on, for example, floods, wildfires, drought, and extreme heat, could be appropriate. This structure would build on the existing interdepartmental working groups mapping flood and wildfire risks.
- **By jurisdiction.** As noted in Section 3.2, federal departments play different roles with respect to their relationships with the provinces, territories, municipalities, and Indigenous communities. Reflecting these differences and the context-specific nature of adaptation, standing working groups could be established that focus on the following:
  - Federal adaptation efforts, such as increasing the climate resilience of key infrastructure assets, national parks, the banking sector, and other areas of federal jurisdiction (e.g., fisheries). Efforts to achieve the climate-resilience goals of the Strategy for Greening Government could also fall within or be aligned with the mandate of this working group.
  - Provincial–territorial engagement, such as the implementation of joint action plans, responding to specific needs (e.g., disaster recovery in B.C.), and addressing domestic transboundary issues. It could also facilitate more coordinated engagement with provincial and territorial governments, such as streamlined asks for input and information.
  - Community-level engagement, recognizing the direct and indirect involvement of departments such as Health Canada, AAFC, and INFC in shaping the climate-resilience efforts of non-Indigenous communities of various sizes throughout the country.
  - Indigenous engagement, linking to the existing bilateral tables established to support federal engagement with the Inuit, First Nations, and Metis on climate change. It should be noted that several department representatives expressed concern about how best to incorporate Indigenous Knowledge systems, science, and perspectives in their adaptation policies and programs. They requested a governance structure that would not only allow but also actively facilitate and/or require this process.
  - International engagement, bringing together departments with a clear international mandate (e.g., DND, Global Affairs Canada) as well as those that have international programming or interests (e.g., ECCC, AAFC).

As well, standing committees could be established that focus on core components of the adaptation process, such as

- **Climate science and risk assessment.** A standing working group could be mandated to coordinate, synthesize, and share research findings and identify research gaps. This approach would provide an avenue for directly connecting scientific knowledge to decision making and could potentially be linked to Climate Science 2050 and the pending climate



data strategy. It should also bring in social science research relevant to the field of climate adaptation.

- **Adaptation communications.** For effective engagement of the federal government and the larger Canadian public on climate adaptation, there is a significant need to improve how climate risks, opportunities, strategies, and measures are communicated. A working group that focuses on telling the climate adaptation story—going significantly beyond sharing information about federal actions—could be established to strengthen strategic communication on this issue.

Each of these options has its strengths and weaknesses, and it may be appropriate to select components of any of them. In deciding on a preferred working group structure, principal objectives to be kept in mind would be ensuring awareness and coordination of programming in the same region or sector, enabling more streamlined engagement with other levels of government and national Indigenous organizations, and having a smaller number of coordinating bodies with clearly defined mandates. A full assessment of existing interdepartmental working groups, informed by the commitments contained in the NAS, would need to be undertaken to strategically identify the number and focus of the supporting working groups.

### 5.4.3 Information Exchange Meetings

Reflecting the current value of the DGARC and DARTT, an adaptation governance structure could include the organization of meetings whose principal function would be to ensure that a broad cross-section of the federal government is up to date on what is occurring within the climate adaptation file. As within the present structure, its purpose would be communicating—on either a regular or periodic basis—updates on the progress of current policy initiatives, the focus of upcoming meetings, changes in ongoing programs, etc.

Such a venue could be integrated into the work of the proposed implementation committee's mandate depending on its size and the degree of overlap in participants. Alternatively, the information-sharing objectives of these meetings could be achieved (in whole or in part) through the use of alternative knowledge-sharing and communication tools (e.g., weekly e-newsletters) and/or combined with the knowledge-building options discussed in Section 5.5.



**Table 4.** Options for lower-level interdepartmental coordination around climate adaptation

COMMITTEES			
Option	Potential mandate	Potential chair(s)	Potential members
<p><b>Strategic policy and planning committee(s):</b> DG and/or director level</p>	<ul style="list-style-type: none"> <li>Identify current gaps or barriers to advancing adaptation action in Canada</li> <li>Collaboratively prioritize areas for policy enhancement, regulation, capacity building, and investment</li> <li>Develop strategies by which to pursue prioritized objectives</li> <li>Vet policies and programs that will go to Cabinet for approval</li> </ul>	<p>Co-chaired by:</p> <ul style="list-style-type: none"> <li>PCO</li> <li>(a) ECCC or (b) revolve between line departments</li> </ul>	<p>One to two representatives of CIRNAC, ECCC, Health Canada, INFC, NRCan, PS, and DND or GAC</p>
<p><b>Implementation Committee(s):</b> DG and/or director level</p>	<ul style="list-style-type: none"> <li>Tracking progress toward the achievement of adaptation targets identified in the NAS</li> <li>Bringing forward areas in which challenges are being experienced, to seek solutions</li> <li>Identify areas for synergies or at least minimize the duplication of efforts</li> <li>Align engagement with other levels of government and national Indigenous organizations</li> </ul>	<p>Co-chaired by:</p> <ul style="list-style-type: none"> <li>ECCC</li> <li>Line department</li> </ul> <p>Selection informed by NAS commitments and/or senior-level coordination structure</p> <p>Could rotate</p>	<ul style="list-style-type: none"> <li>1 to 2 representatives from all departments with active adaptation programs</li> <li>Representatives from the PCO, Finance, and Treasury Board</li> </ul>



WORKING GROUPS	
Clustering options	Potential focal areas
By the <b>five systems</b> under the NAS	<ul style="list-style-type: none"> <li>• A strong and resilient economy</li> <li>• Disaster resilience and security</li> <li>• Health and well-being</li> <li>• Resilient natural and built infrastructure</li> <li>• A thriving natural environment</li> </ul>
By <b>climate hazard</b>	<ul style="list-style-type: none"> <li>• Floods</li> <li>• Fires</li> <li>• Extreme heat</li> <li>• Drought</li> </ul>
By <b>jurisdiction</b>	<ul style="list-style-type: none"> <li>• Federal adaptation efforts</li> <li>• Provincial–territorial engagement</li> <li>• Community-level engagement</li> <li>• Indigenous engagement</li> <li>• International engagement</li> </ul>
By <b>core components</b> of the adaptation process	<ul style="list-style-type: none"> <li>• Climate science and risk assessment</li> <li>• Adaptation communications</li> </ul>

## 5.5 Strengthened Adaptation Secretariat

In discussing the DGARC and DARTT committees, a number of interviewees felt that there is a need to strengthen their day-to-day operations and pointed to the lower-level CPI meetings as models that could be emulated in a revitalized adaptation governance structure. These meetings, as well as the larger CPI governance structure, are supported by a dedicated secretariat located in ECCC.

Originating out of the PCF process and referenced in the terms of reference for the DM Committee on Climate Plan Implementation, the CPI secretariat serves to ensure that all of the goals of the PCF, strengthened climate plan, and ERP are achieved. It supports the coordination of activities taking place across the CPI member departments, tracks what is working well, and notes areas of potential concern. It assists with the organization of weekly DG-level meetings, monthly ADM meetings, and (approximately) monthly DM-level meetings. The secretariat has adopted a client services model that aims to lower the reporting burden on policy analysts and holds meetings on a regular schedule with a consistent agenda template. An effort is made to request presentations with sufficient notice (Government of Canada, n.d.). Noted additional strengths are clarity on who are the leads and co-leads on specific initiatives, forward-looking agendas, and involvement of the central ministries. The CPI secretariat has also begun to support capacity-building efforts, such as the pilot development and roll-out of the new climate lens with the Centre for Greening Government (federal representatives, personal communication, 2022).





A secretariat similar to that established for the CPI likely will be required to support an adaptation governance structure. Such a dedicated adaptation secretariat would need to be sufficiently staffed to support the organization, agenda setting, and documentation of DG-, ADM-, and/or DM-level committees. Budget allocations should reflect the fact that coordination in and out of itself takes time and effort. The CPI secretariat currently has seven positions (federal representative, personal communication, 2022); it may be expected that an adaptation secretariat would be of comparable size. To fulfill its functions, its staff should have expertise in the governance functions of a federal secretariat and in progress tracking. It could also benefit from having individuals with expertise in change management and facilitation, given that these processes are fundamental to climate adaptation efforts. Facilitation skills are required to build the trust needed between departments to enable interdepartmental collaboration—that is, to trust that collective action will be completed and will avoid initiatives being significantly advanced before being shared with others (external expert, personal communication, 2022).

A stronger adaptation secretariat (or more than one) could be housed in a few locations, depending on its function. Options include

- **Within a central agency.** If the implementation lead for climate adaptation is raised into a central ministry, it may be appropriate for the secretariat to also be located at this level. If the primary purpose of the secretariat is to advance policy development and track progress toward the achievement of adaptation targets and ministerial mandate goals, then it may be appropriate for the secretariat to be based within the PCO. Alternatively, if the secretariat has a strong focus on knowledge sharing, capacity building, and mainstreaming adaptation across government, then the Treasury Board (specifically, the Centre for Greening Government) may be an appropriate home.
- **Within a line ministry.** As with the current CPI secretariat, an adaptation secretariat focused on coordinating and tracking program implementation across government could be based within ECCC. It could be an extension of the current CPI secretariat or a standalone entity. If another line department were selected as Canada’s adaptation policy lead, then the secretariat could be located within it.

A key benefit of housing the secretariat in a central agency is their greater capacity to leverage action, prioritize needs and programs, and take a “big picture,” whole-of-government approach. On the other hand, existing secretariats within the central agencies tend to be small and do not necessarily have the relevant adaptation expertise and experience required in comparison to a line ministry. As previously noted, a secretariat that balances technical expertise with enforcement capacity is likely to be most effective.

## 5.6 Knowledge Management and Capacity-Building Unit

The iterative nature and evolving understanding of climate risks and responses mean that access to and translation of knowledge play a key role in advancing and ensuring the effectiveness of adaptation actions. While individual departments currently support—and can be expected



to continue to support—climate change adaptation knowledge and capacity development within their areas of responsibility, there is a complementary need to link these efforts across departments where appropriate and provide support in areas of shared concern. A dedicated unit with a strong knowledge-brokering mandate within a revitalized federal adaptation governance structure could help strengthen formal and tacit (informal) knowledge exchange and capacity building across departments. Taking both a responsive and proactive approach, such a unit could play a range of roles, including being responsible for

- Housing general experts in adaptation that could backstop capacity within departments, particularly those that currently have less in-house capacity in the area of climate adaptation, while also helping to connect people with sectoral or issue expertise located within other departments (i.e., knowing who is doing what and where).
- Supporting adaptation experts within departments through efforts such as
  - Keeping abreast of new perspectives and knowledge within the ever-evolving field of climate adaptation.
  - Accessing tools and guidance to support federal adaptation mainstreaming efforts.
  - Facilitating knowledge creation by funding or coordinating adaptation-focused research conducted within or outside of the federal government, potentially directed by the working groups proposed in the previous section.
- Pulling together and synthesizing lessons learned through the rolling out of adaptation programs and policies by different departments.
- Capturing and sharing stories of change within the federal government to help communicate both successes and lessons learned.
- Building personal relationships across departments, as this can facilitate access to information and support in a timely manner.
- Providing capacity-building opportunities on topics of interest to multiple departments, such as collaborating with ISC/CIRNAC to increase knowledge of how to bring Indigenous Peoples and their knowledge systems, science, and perspectives into adaptation planning and implementation.
- As appropriate, supporting the federal monitoring, evaluation, and learning system associated with the NAS (with an emphasis on the learning element).

The unit could bring expertise from outside of the federal government into its work, building on existing relationships with organizations such as the Canadian Climate Institute, Climate Risk Institute, Council of Canadian Academies, Ouranos, and Royal Roads University.

Many of these functions are currently undertaken by NRCan's Climate Change Impacts and Adaptation Division, such as through the Adaptation Platform and the national adaptation assessment process. A future adaptation governance structure would continue to benefit from a separate unit that remains focused on cross-department knowledge sharing and management, as well as internal capacity building.



The knowledge-brokering unit could be housed within a line ministry, such as NRCan or ECCC. Or it could be housed in a central ministry to better reflect its whole-of-government support and provision of independent advice. For example, it could be linked to or integrated within the Centre for Greening Government, helping to advance its efforts to increase the climate resiliency of the federal government. A third option would be to establish a new federal agency focused on the provision of adaptation services to the federal government and potentially to other levels of government, businesses, non-governmental entities, etc. As a counterpart or partner to the CCCS, it could bring together current initiatives (e.g., the Adaptation Platform, Adaptation Hub, and national adaptation assessment process) into one unit.

## **Box 2. Canada's Adaptation Platform**

Canada's Adaptation Platform, established in 2012 and currently co-led by NRCan and ECCC, has long played a prominent role in linking federal departments, subnational governments, national Indigenous organizations, and representatives of different civil society groups. It is perceived within the federal government as a useful venue in which to discuss topics of shared interest, advance adaptation efforts in different departments, and establish the informal relationships between adaptation practitioners needed to accelerate action. The effectiveness of the platform has weakened over time, though, which has made newer participants question its utility. As noted in different interviews, the platform was stronger when it had sufficient funding to enable working groups to come together around joint projects designed to help advance knowledge or action in a specific area. In the absence of this capacity, there is less of a shared purpose, and participation has slipped below the director level to those that lack the authority to make decisions on behalf of their department.

The platform also has some inherent structural challenges. It is not formally linked to a federal decision-making body, which means that recommendations made within the platform cannot be raised to more senior levels of government, such as DGARC. The mix of government and non-government participants has led to uncertainty regarding its role with respect to federal-provincial discussions and sensitivity to what is said within the platform structure compared to other FPT tables. Its membership also could be expanded to more fully reflect the social dimensions of climate adaptation.

At present, the Adaptation Platform does not play a central role in facilitating collaborative policy development and program implementation at the federal level. Consistent with its mandate, it has played a larger role in facilitating knowledge exchange and capacity building at a national level. If this role is retained going forward, the platform may be expected to play a greater role in advancing collaborative research and exploring shared problems as part of a multi-level adaptation governance structure.



Finally, as previously noted, the need for a greater understanding of climate adaptation at all levels of government, including senior levels of government, emerged as a need through the interviews. It was suggested that formal civil service training be undertaken, such as through the Canada School of Public Service. A federal adaptation knowledge-brokering unit could actively support the development and implementation of this training.

## 5.7 Accountability Mechanism

Adaptation governance structures may establish mechanisms to assess and communicate whether actions are being implemented effectively and are achieving the government's medium-term objectives and long-term goals. These mechanisms may be located within the federal government or in an external body. There are pros and cons to both approaches.

**When housed solely within government**, progress tracking can be undertaken by the ministry responsible for adaptation, with or without the engagement of a central ministry (e.g., the PCO). Germany's Inter-Ministerial Working Group on Adaptation to Climate Change and Japan's Climate Change Adaptation Promotion Council provide examples of this approach.

Alternatively, traditional mechanisms such as the audits conducted by the Commissioner of the Environment and Sustainable Development within the Office of the Auditor General (OAG) can serve to assess progress, highlight deficiencies, and make these findings publicly available. Placing the accountability mechanism within the hands of the OAG is consistent with current practice and does not require building something new. However, consulted experts raised some concerns about this approach. One concern is that the Commissioner and OAG do not have sufficient understanding of climate adaptation to effectively hold the government to account. In the absence of this expertise, its recommendations have less authority and may receive less attention within and outside of government. Additionally, the OAG's inherent "naming and shaming" approach may be inappropriate with respect to assessing broad progress toward creating a climate-resilient Canada and identifying areas for strengthening federal adaptation policy, planning, and programming.

In part to address these concerns, Canada could choose to establish an **external accountability mechanism** similar to those in place in New Zealand and the United Kingdom. Benefits of this approach include the provision of independent and transparent advice and an ability to take advantage of the perceived tendency (for better or worse) of senior levels of government to listen more to advice received from outside of government compared to counsel from within the civil service.

The design of an external accountability mechanism would need to take into consideration factors that include its

- **Role** – Is the body responsible for progress assessment, preparation of guidance/advice, and/or undertaking of research at the request of the government (in lieu of, for example, the Council of Canadian Academies)?



- **Authority** – Would it be an advisory body that provides advice that might not be made public? Or would it have a greater capacity to hold the government to account, similar to the United Kingdom’s Climate Change Commission, which presents a progress report and recommendations to Parliament every 2 years?
- **Accountability** – Would the body report to the DM or minister responsible for climate adaptation, Cabinet, or the legislature?
- **Membership** – What parameters will guide member selection, such as the appointment process, number of members, length of term, level of expertise, and diversity of representation—including representation of Indigenous Peoples?
- **Mandate** – Would the new body’s role and structure be backed by legislation?
- **Location** – Would it be a new entity, or would its secretariat be housed within an existing external organization?

Decisions related to these options would be critical to shaping the actual and perceived effectiveness of the body within and outside of government, and also with respect to its ability to garner the attention of other levels of government and Indigenous Peoples. In particular, for its findings to have weight, it will be important to ensure that the body has a clear mission, is representative, and has substantial recognized adaptation expertise. Interviewees further emphasized the need to think through how recommendations from an external authority would be actioned. It was suggested that an accountability mechanism for adaptation might be more effective if it places greater emphasis on building knowledge and capacity to take action rather than holding the government’s feet to the fire. As well, it was noted that the federal government already actively engages with many of the adaptation experts in Canada—within academia, non-governmental organizations, and the private sector—which means that an additional external body with this function might not be necessary.



6.0

# Potential Way Forward





Completion of the NAS process will be a critical milestone in Canada's ongoing efforts to understand, plan for, and take action to reduce climate change impacts. As the country moves into the stage of implementing the NAS, it will need to be supported by an effective, strong, and clear federal adaptation governance structure. This structure should advance efforts to both mainstream adaptation across the federal government and implement program commitments under the NAS, as well as enable greater multi-level coordination of adaptation. International examples can help to inform the design of the federal adaptation governance structure, but ultimately it will need to be tailored to Canada's own unique needs.

In crafting its horizontal adaptation governance structure, the federal government could keep in mind the following objectives or principles:

- Build on existing structures that are strong and effective.
- Take an adaptive management approach, ensuring that there is sufficient flexibility to change the structure to address agreed-upon weaknesses, bring new federal actors into the system, and create room for emerging leaders to play a larger role.
- Incorporate continuous learning through regular review processes, with respect to both a greater understanding of successful adaptation approaches and the effectiveness of the current governance system.
- Provide clear entry points for engagement with the provincial and territorial governments and with Indigenous Peoples.

With these objectives in mind and reflecting on international approaches and the potential options presented, consideration could be given to establishing a revitalized federal adaptation governance structure comprised of the following components (see Figure 1):

1. **Legislation** that requires the completion of a national climate risk assessment, preparation of a response strategy or plan, and evaluation of this response strategy or plan on a set, cyclical schedule.
2. **A DM-level committee** explicitly focused on advancing climate adaptation in Canada, particularly if the NAS has a strong focus on achieving defined targets and includes regulatory changes. Cross-linkages to the DM-level committees focused on climate mitigation and/or emergency management could be achieved through joint DM-level meetings held on a quarterly basis. This body would be supported by a parallel committee at the ADM level.
3. **A strategic policy and planning committee** at the DG level, supported by a parallel committee at the director level, that reports to the ADM- and DM-level adaptation committees, if established. Its mandate would be forward looking, setting the course for responding to emerging issues and gaps in progress.
4. **A program implementation committee** at the DG level, supported by a parallel committee at the director level that also reports to the ADM- and DM-level adaptation committees, if established. The implementation committee could be co-chaired by ECCC





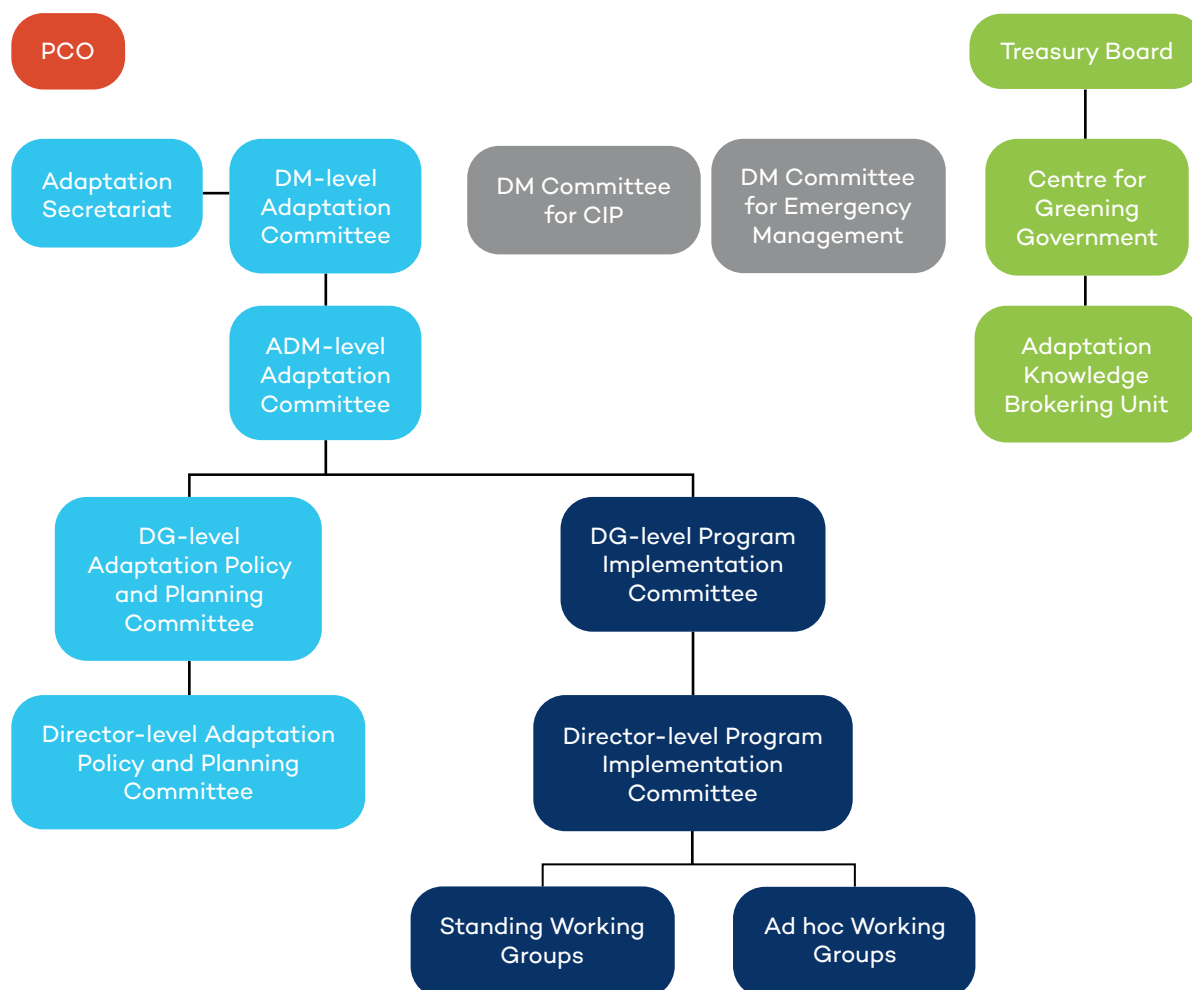
and the PCO or another department on a rotating basis. Through regularly scheduled meetings, it would bring together the breadth of departments responsible for delivering adaptation programs and (if applicable) achieving targets contained in the NAS.

5. **Standing working groups and ad hoc working groups** that report to the program implementation committee and, when requested, to the strategic policy and planning committee. The specific working groups would be informed by the commitments contained in the NAS and focus on areas requiring interdepartmental collaboration. Each would be led by the department responsible for its area of focus (e.g., a table on natural infrastructure could be co-chaired by INFC and ECCC). Standing working groups dedicated to federal engagement with Indigenous Peoples on climate adaptation, and with provincial and territorial governments, could be established. A standing working group (or incorporation of an existing governance structure) focused on climate science and climate risk assessments may also be advantageous.
6. **Standalone adaptation secretariat** housed within ECCC to support the coordination of the two DG-/director-level committees and, if established, the DM-/ADM-level adaptation committees. The secretariat would focus primarily on achieving the goals and objectives contained in the NAS. If appropriate, the mandate of this secretariat could be expanded to also support NAS implementation at the national level, similar in scope to Australia's National Adaptation Policy Office. The secretariat could, in collaboration with the knowledge-brokering unit (see below), organize regular information-sharing meetings open to those involved in the federal adaptation file.
7. **Knowledge-brokering unit** within the Centre for Greening Government. Building on the centre's mandate with respect to mainstreaming climate resilience across the government, it could play a larger role in knowledge creation and dissemination within the federal government (and potentially more broadly). It could draw in elements currently undertaken within NRCan's Climate Change Impacts and Adaptation Division.

The federal adaptation governance structure will also require a formal **accountability mechanism**. An external mechanism would provide the greatest legitimacy and alignment with international peers. However, there are a number of design elements that need to be considered in greater depth—such as to whom it would report, degree of authority, breadth of activities, and membership—prior to putting forward a fully developed option for consideration.



**Figure 1.** Possible federal adaptation governance structure



An adaptation governance system composed of some or all of these components could serve to strengthen federal policy development and program implementation and advance adaptation action in Canada. However, the effectiveness of even the most robust and well-designed governance system will be limited if it is not supported by the following elements (in reverse order of importance):

- **Sufficient funding.** A governance system needs sufficient and consistent funding to enable it to serve its functions. The coordination of efforts itself requires time and focus, and sufficient funding and capacity over years are needed to enable this to occur. Financial resources will be required to support entities such as the proposed dedicated adaptation secretariat and the knowledge-brokering unit. Financing will also be required to adequately invest in the adaptation units within federal departments to ensure that they are able to coordinate and drive efforts internally, as well as participate in



interdepartmental collaboration, without reducing their work on implementing adaptation commitments.

- **Greater awareness of adaptation characteristics at senior levels of government.** The differences between climate mitigation and adaptation, as well as between emergency management and climate adaptation, need to be deeply understood by decision-makers. There is a need for greater awareness that adaptation is an ongoing, continuous process that requires sustained support and a whole-of-government approach; that it involves a balance of addressing near-term climate risks and those projected to occur in the coming decades; that adaptation actions can be cost-effective; and that, if care is not taken, maladaptive investments today will lead to more costly financial and human impacts in the future.
- **Leadership at the most senior levels of government.** In the absence of strong interest and support by the Cabinet for enhancing the long-term climate resilience of Canadians, progress will be constrained.

With these elements in place, supported by an effective and efficient adaptation governance structure, the potential exists for transformative change in Canada's climate resilience.





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## Appendix A. Department Profiles

Adaptation planning and action are taking place across a range of federal government departments. The descriptions below provide a snapshot of their roles and the nature of their programming.

### Environment and Climate Change Canada (ECCC)

ECCC is the federal government's assigned lead for climate change mitigation and adaptation and, as such, is responsible for the implementation of the Pan-Canadian Framework on Clean Growth and Climate Change, the strengthened climate plan, and the recently released 2030 Emissions Reduction Plan. It is also responsible for finalizing the National Adaptation Strategy (NAS), leading both interdepartmental and public consultation processes. As well, ECCC supports Public Safety Canada (PS) in its implementation of the Emergency Management Act (ECCC, 2021a).

ECCC also plays a critical role in monitoring and communicating Canada's current, forecasted, and projected weather and climate. It hosts the Canadian Centre for Climate Services, which is tasked with providing authoritative climate change data and information to other governments, the private sector, academia, and civil society organizations to inform the development and implementation of adaptation processes. Concurrently, ECCC is home to the Canadian Centre for Climate Modelling and Analysis, which is a world leader in the provision of climate projections. ECCC is currently leading, in collaboration with other departments, the development of a new climate data strategy (Office of the Prime Minister [PMO], 2021c).

### Natural Resources Canada (NRCan)

For more than 20 years, NRCan has lead adaptation programs that have increased understanding within communities and businesses of the potential impacts of climate change and supported the development of solutions to address them. These programs have also helped identify emerging climate adaptation issues. This work includes the following:

- Coordinating Canada's comprehensive national climate impacts and adaptation assessment process. The first of these assessments led by NRCan was completed in 2008, with an update released in 2014. The most recent national assessment is expected to be completed in 2023 (NRCan, 2022b).
- Establishing Canada's Adaptation Platform, building on its establishment of Regional Adaptation Collaboratives in 2009. The platform provides a forum for federal departments, provincial and territorial representatives, and external research and private sector organizations to share knowledge and undertake common projects (NRCan, 2022c).





- Leading the 5-year program, *Building Regional Adaptation Capacity and Expertise*. The program supported capacity building, training, and knowledge-exchange activities in all 10 provinces (NRCan, 2022a).

At present, NRCan is currently working with PS and ECCC to develop updated flood maps and increase the resilience of forests to wildfires. It is also working with ECCC on a new climate data strategy and with Infrastructure Canada (INFC), the National Research Council, and others to develop updated building codes that promote climate resilience.

As the lead department on the management of key resource sectors, including forestry, fisheries, mining, and energy, NRCan also sets broad policy directions within these areas and—in cases where issues cross provincial and territorial boundaries—directly regulates these sectors. A focus of NRCan’s activities at present is mainstreaming adaptation across their departmental policies and programs and through their engagement with provinces and territories (federal representative, personal communication, 2022).

## Health Canada

Health Canada engages in research, planning, training, and engagement on the health impacts of a changing climate. They ran an extreme heat and health risk assessment program and a program to track the current and potential future health impacts of climate change for a number of years. They are the lead for national climate change and health assessments (working with NRCan) and have a small data team that supports the quantification of climate impacts on health (federal representative, personal communication, 2022). The Public Health Agency of Canada runs a program that aims to prepare and protect Canadians from climate-driven infectious diseases that are zoonotic, food-borne, or water-borne by building and increasing access to infectious disease-based evidence, education, and awareness (Health Canada, 2022).

Much of this work has involved funding and communication with various provincial and local health authorities on a voluntary basis, such as working with provinces and cities to assess and plan for extreme heat events (federal representative, personal communication, 2022). In the future, they anticipate working more with the broader health sector—at both the provincial and territorial levels—and with health sector organizations (e.g., Canadian Medical Association) and private industries (federal representative, personal communication, 2022).

## Infrastructure Canada (INFC)

Consistent with its responsibility for providing “long-term, predictable support to help Canadians benefit from world-class, modern public infrastructure,” INFC is mandated to increase the climate resilience of Canada’s public infrastructure (INFC, 2020a; PMO, 2021e). INFC influences provincial and territorial (and, in turn, municipal) infrastructure policy through the delivery of substantial funding programs and the development of model standards. For example, it is responsible for the multi-billion-dollar Disaster Mitigation and Adaptation Fund (DMAF),



the Investing in Canada Infrastructure Program (including its Green Infrastructure Stream), the CAD 1.5 billion Green and Inclusive Community Buildings program, and the Natural Infrastructure Fund announced in Budget 2021 (Department of Finance Canada, 2021a; INFC, 2021a, 2022). It also flowed financing to the Federation of Canadian Municipalities to support its programs focused on capacity building for climate change, including adaptation (Swanson et al., 2021). It established the Climate Lens General Guidance to facilitate the integration of climate considerations in projects seeking funding above designated thresholds from different streams of the ICIP and a climate resilience assessment for all fully funded applications to the DMAF (INFC, 2019). INFC also provides funding to and works with the National Research Council and the Standards Council of Canada on the development and dissemination of new national guidelines, standards, and related potential content for national model codes for the construction of climate-resilient infrastructure (INFC, 2020b). Alongside these initiatives, INFC is currently leading Canada's first national infrastructure assessment (INFC, 2021b) and is engaged internationally with the Coalition for Disaster Resilient Infrastructure and the Coalition for Climate Resilient Investment (federal representatives, personal communication, 2022).

## **Crown–Indigenous Relations and Northern Affairs (CIRNAC) and Indigenous Services Canada (ISC)**

CIRNAC and ISC support and collaborate with Indigenous communities on several adaptation-focused programs. CIRNAC is responsible for the First Nation Adapt Program and the Climate Change Preparedness in the North Program<sup>18</sup>—both of which have provided funding support to First Nations communities for adaptation projects. It also runs the Indigenous Community-Based Climate Monitoring Program, an innovative initiative that uses Indigenous Knowledge systems and science led by Indigenous Peoples for the benefit and use of Indigenous Peoples and communities. Through these programs, they have established and fostered networks of federal, provincial, and First Nations collaborators.

The ISC runs the Climate Change and Health Adaptation Program that supports First Nations and Inuit as they manage the health impacts of climate change, such as access to country foods, impacts of extreme weather events, and the mental health impacts of climate change on youth (ISC, 2020). As well, ISC delivers targeted community infrastructure investments to First Nations under the First Nation Infrastructure Fund with the objective of modifying hazards, including removing, reducing, or eliminating them and altering the design and construction of infrastructure assets to make them more resilient to potential hazards (ISC, 2022).

Together, CIRNAC and ISC also play an important role in collaborating with other departments on the integration of Indigenous Peoples' priorities into their own climate adaptation policy initiatives—including collaborating with ECCC on the development of the NAS.

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<sup>18</sup> The Climate Change Preparedness in the North Program sunset in March 2022.



## Public Safety Canada (PS)

Although PS has long been mandated to reduce the risk of, prepare for, respond to, and support recovery from climate-related natural disasters, it has placed greater emphasis on disaster risk reduction and preparedness in recent years—consistent with Canada’s commitments under the Sendai Framework for Disaster Risk Reduction. This focus is reflected in the 2017 *An Emergency Management Framework for Canada and the 2019 Emergency Management Strategy for Canada: Toward a Resilient 2030*, which also committed to mainstreaming climate change into emergency management. At present, PS is leading the development of a National Risk Profile public report, drawing on scientific evidence and stakeholder input. It will provide a strategic national disaster risk and capability assessment of risks related to floods, wildfires, and earthquakes (PS, 2021). While initially focused on understanding current risks and capabilities related to these hazards, drawing upon historical data, it is also expected to look at future risks to 2050. As such, it could create a forward-looking picture of Canada’s disaster risk and capabilities in order to strengthen the resilience of Canadian communities (federal representatives, personal communication, 2022). PS is also leading the Task Force on Flood Insurance and Relocation with the Minister of Families, Children and Social Development.<sup>19</sup> A core role of PS is the management of Disaster Financial Assistance Arrangements to support provinces and territories with the cost of responding to and recovering from large-scale natural disasters (PS, 2022).

## Other Departments and Agencies

Other departments and agencies that have or had adaptation programs include the following:

- **Agriculture and Agri-Food Canada** (AAFC) works closely with provinces to implement programs that reduce near-term climate risks, such as through the AgriInsurance and AgriStability programs. As well, through the Canadian Agricultural Partnership, AAFC provides support for the implementation of a number of beneficial management practices that have climate adaptation co-benefits (AAFC, 2021). Climate action and resilience are expected to be at the core of the next agricultural policy framework, but with a stronger focus on climate mitigation (Government of Canada, 2021b; PMO, 2021b).
- **Fisheries and Oceans Canada**, which is undertaking aquatic climate science research within the Aquatic Climate Change Adaptation Services Program (Fisheries and Oceans Canada, 2021).
- Innovation Science and Economic Development, through the **National Research Council** and the **Standards Council of Canada**, which are working with NRCan and INFC to develop standards for climate-resilient buildings. They are also supporting ECCC in their development of the Climate Science Strategy (PMO, 2021d).

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<sup>19</sup> The objective of the Task Force is “to create a new, low-cost national flood insurance program to protect homeowners at high risk of flooding and without adequate insurance protection” (PS, 2020).



- **National Defence**, which is supporting Global Affairs Canada in the establishment of the NATO Climate Change Security Centre of Excellence (PMO, 2021f).<sup>20</sup> Within National Defence, the Policy Group has created a small climate and security cell, which examines the defence implications of a changing climate. In addition, the Canadian Forces Intelligence Command has created a climate assessment capacity with a focus on awareness, monitoring, and early warning in areas where the effects of climate change are likely to affect Canadian Armed Forces deployments. Furthermore, in addition to ongoing mitigation and research efforts, all branches of the Canadian Armed Forces are evaluating the impacts of climate change on their activities and are developing adaptation strategies.
- **Transport Canada**, which has explored climate impacts through two relatively small funding programs that assessed risks to federally owned and operated transportation infrastructure and northern transportation systems. The Northern Transportation Adaptation program and the Transportation Asset Risk Assessment initiative ended in March 2021 and March 2022, respectively. They also participate in the Adaptation Platform and on various committees led by PS and INFC related to adaptation (Transport Canada, 2021).
- **Parks Canada**, which is currently taking steps to increase the preparedness of national parks for wildfires (Department of Finance Canada, 2021b). Taking action on climate change, including climate change monitoring and integration of resilience and adaptation into its work, is also one of the agency's goals under its 2022/2023 departmental sustainable development strategy (Parks Canada Agency, 2020).

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<sup>20</sup> In June 2022, during the North Atlantic Treaty Organization Summit in Madrid, Spain, it was officially announced that the NATO Climate Change Security Centre of Excellence will be established in Montreal (Government of Canada, 2022b).

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