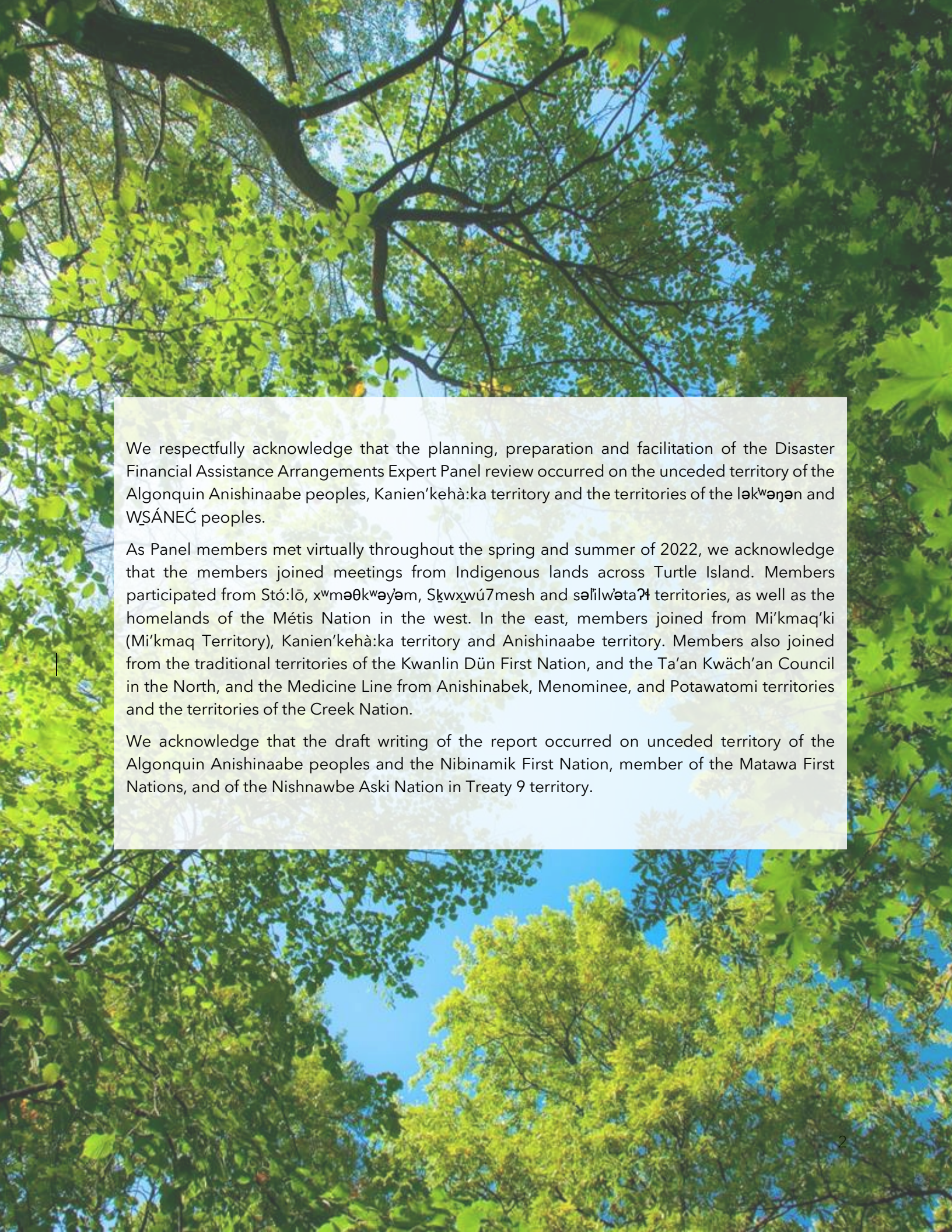
Building Forward Together

Toward a more resilient Canada

Final Report of the Expert Advisory Panel
on the Disaster Financial Assistance Arrangements

November 2022



We respectfully acknowledge that the planning, preparation and facilitation of the Disaster Financial Assistance Arrangements Expert Panel review occurred on the unceded territory of the Algonquin Anishinaabe peoples, Kanien'kehà:ka territory and the territories of the lək^{w}əŋən and W̱SÁNEĆ peoples.

As Panel members met virtually throughout the spring and summer of 2022, we acknowledge that the members joined meetings from Indigenous lands across Turtle Island. Members participated from Stó:lō, x^{w}məθk^{w}əy̓əm, Sḵwx̱wú7mesh and səl̓ilw̓ətaʔɬ territories, as well as the homelands of the Métis Nation in the west. In the east, members joined from Mi'kmaq'ki (Mi'kmaq Territory), Kanien'kehà:ka territory and Anishinaabe territory. Members also joined from the traditional territories of the Kwanlin Dün First Nation, and the Ta'an Kwäch'an Council in the North, and the Medicine Line from Anishinabek, Menominee, and Potawatomi territories and the territories of the Creek Nation.

We acknowledge that the draft writing of the report occurred on unceded territory of the Algonquin Anishinaabe peoples and the Nibinamik First Nation, member of the Matawa First Nations, and of the Nishnawbe Aski Nation in Treaty 9 territory.

Message from the Expert Advisory Panel Chair

The federal government has a long history of supporting communities that have suffered a significant disaster, providing billions of dollars of financial assistance over the years to help communities repair, rebuild and recover. At a time when the risk, frequency and impacts of disasters are increasing in Canada, it is essential this support remains available and is financially sustainable.

The Government of Canada created the Disaster Financial Assistance Arrangements (DFAA) program in 1970 to support provinces and territories when the cost of a disaster exceeds what they could reasonably be expected to bear on their own. Much has changed since then in Canada's disaster risk landscape, and it has become clear that the DFAA program must do more to address the disproportionate impacts of disasters on vulnerable populations and to incentivize risk reduction and build long-term resilience to disasters.

Earlier this year, the President of the King's Privy Council for Canada and Minister of Emergency Preparedness, the Honourable Bill Blair, convened our Advisory Panel to examine the DFAA and provide recommendations to ensure the long-term effectiveness and sustainability of the program in the face of rising disaster impacts. I and my fellow panelists were honoured to undertake this important task and to provide input into the timely review of Canada's approach to post-disaster financing and the DFAA program in the face of changing risks.

Based on the work we conducted over the spring and summer, we reached two key conclusions. First, the DFAA program has a unique role to play in the post-disaster context and must be modernized and streamlined so it can enable and support actions that will lead to long-term resilience and risk reduction. Second, there is a need for greater integration of and investment in climate adaptation and disaster risk reduction across all federal programs, including the DFAA.

This Final Report provides details about our findings and contains a series of specific recommendations on how the updated DFAA program should be designed so it can continue providing disaster support and assistance in the face of increasing demands on the program. It also includes recommendations for other steps the federal government should take to improve disaster resiliency across Canada and increase the sustainability of the DFAA program.

The Panel has framed its recommendations within the context of building forward together, which means not aiming to simply repair and recover losses incurred during a disaster event but to work in collaboration with each other toward building better, stronger and more risk-resilient communities. We believe that implementing these recommendations will improve the long-term effectiveness and viability of disaster financing in Canada.

I would like to thank everyone who contributed to the work of the Expert Advisory Panel, starting with the panelists who brought a diverse range of expertise and experience to our discussions. I would also like to thank the many people we met with and heard from, including representatives of provincial and territorial governments, representatives from National Indigenous Organizations, non-profit organizations, and Canadian academics and practitioners in disaster resilience.

Throughout our deliberations, we have been conscious of the need for a whole-of-society approach to achieving disaster resiliency. We hope this report will contribute to fostering collaboration among all Canadians to make our country stronger and more resilient in the years to come.

Rebecca Denlinger

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Executive Summary

Canada's hazard landscape is changing. The impact of disasters on people, the economy and the environment is increasing, while the frequency and severity of disasters, some of which are concurrent, are stretching the capacity of governments, industries and individuals to cope effectively.

For more than 50 years, the Government of Canada through the Disaster Financial Assistance Arrangements (DFAA) program has provided financial support for provinces and territories following disasters for response and reconstruction costs. However, little has changed with regard to the DFAA since the 1970s despite increasing disaster risks and impacts. Furthermore, the DFAA as currently structured limits the role of the Government of Canada to post-disaster response and recovery, disconnected from pre-disaster risk reduction or helping to build future resilience. In a rapidly changing climate, this is no longer enough.

In March 2022, the President of the King's Privy Council and Minister of Emergency Preparedness convened an expert advisory panel (the Panel) to review Canada's approach to post-disaster financing and to make recommendations for how the DFAA program could evolve to be a relevant, effective and sustainable mechanism for disaster recovery, risk reduction and resilience in the context of the rising frequency, impacts and costs of disasters. The eight-member Panel included experts with experience in the public and private sectors, Indigenous governance, academia and the not-for-profit sector. It met throughout the spring and summer of 2022, reviewing published literature and policy documents and hearing from academic experts and key stakeholders, including representatives from National Indigenous Organizations and provinces and territories.

This final report summarizes the Panel's work and presents a series of recommendations to improve the DFAA program and to align disaster financial assistance with broader objectives for disaster risk reduction and climate change adaptation to increase Canada's disaster resilience.

The Panel recommends significant changes to the DFAA program that not only support provinces and territories for significant disaster events but also encourage investments in disaster risk reduction and climate change adaptation prior to a disaster occurring. The program should both incentivize and fund disaster resilience to accelerate adaptation and help Canada prepare for a changing disaster landscape. The program's processes must be streamlined and digitized to make it easier to access funding and other resources.

The Panel also believes that Canada needs a single, common standard for resilience that weaves together disaster risk reduction and climate adaptation. This integrated disaster resilience standard should be developed collaboratively by all levels of government, with agreed roles and responsibilities for public- and private-sector stakeholders that recognize the capabilities, constraints and authorities of each partner. The DFAA program should support jurisdictions to take action toward this integrated disaster resilience standard while being flexible enough to accommodate different needs and approaches that make sense in specific jurisdictional contexts. Stronger tracking and accountability mechanisms are needed to incentivize and celebrate progress toward disaster resilience.

The Panel recognizes the DFAA program is one of several federal government programs that contribute to disaster risk reduction and climate adaptation and that no single program can deliver all the support, funding and expertise needed to build disaster resiliency. In order to ensure the

long-term success of the DFAA program, the federal government should **improve coordination and program alignment** across all its disaster resiliency programs.

Building disaster resiliency requires a whole-of-society approach. The Panel recommends the Government of Canada **develop tools, information and capabilities to support risk-informed decision making** by all levels of government, Indigenous communities, the private and not-for-profit sectors, academia and the public at large.

By shifting the focus from building back after a disaster to **building forward together**, Canada can increase disaster resiliency across the country and reduce the impacts of future disasters on Canadian households, communities, infrastructure and the economy.

Recommendations – A New DFAA: Building Forward Together

Recommendation 1

In collaboration with provincial, territorial, Indigenous and municipal governments, establish an integrated disaster resilience standard and requirements for action.

a) Agree on roles and responsibilities for public- and private-sector stakeholders to act on disaster resilience, connected to specific targets, objectives and outcomes.

b) Develop practical, science-informed guidance on actions that can be taken at the local, regional and provincial/territorial levels to achieve the integrated disaster resilience standard.

c) Establish a disaster resilience rating system to strengthen transparency, accountability and progress tracking for federal, provincial, territorial and municipal action on disaster resilience.

d) Establish a multi-sectoral consortium of public-sector, private-sector, non-profit, academic, and Indigenous partners to co-develop innovative solutions and financing options to accelerate action on priority disaster resilience initiatives.

Recommendation 2

Strategically target funding to climate adaptation, disaster risk reduction, and support for vulnerable populations while ensuring solidarity with jurisdictions experiencing a disaster.

a) Connect the national resilience rating system with pre- and post-disaster funding to assist jurisdictions in understanding their current level of disaster resilience and support continuous action toward reducing risk.

b) Establish a stable and predictable pre-disaster funding program designed to reduce future DFAA claims by incentivizing and funding high-impact risk reduction initiatives.

c) Incentivize and provide support for community-based, integrated plans for disaster resilience based on the most current data available.

d) Incentivize nature-based solutions that reduce risk and include private-sector, local and community actors.

Recommendation 3

Incentivize risk-informed decisions by integrating risk data into the DFAA and enforcing restrictions on how funds are used to rebuild assets in high-risk areas.

a) Make risk information available and accessible to enable responsible actions and risk-informed decisions.
b) Invest in regional and cross-jurisdictional risk assessment capacity to inform local understanding of disaster risk.

Recommendation 4

Ensure First Nations, Métis and Inuit peoples are consulted on disaster resilience priorities and programs and have equitable access to and support from federal programs and funding for disaster resilience.

a) Improve coordination and bridge gaps between the DFAA program and the Emergency Management Assistance Program to ensure equitable levels of support and funding for all Indigenous groups.
b) Consult with rights holders on changes needed to existing programs and unaddressed priorities in advancing disaster resilience.

Recommendation 5

Increase the flexibility and scope of DFAA funding to address different needs across jurisdictions and allow for a more progressive and holistic framing of recovery.

a) Enable provinces, territories and Indigenous governments to explore and adopt innovative approaches to disaster recovery through partnerships and delivery models that include the private and non-profit sectors.
b) Expand DFAA funding for actions that support vulnerable and disadvantaged populations.

Recommendation 6

Provide access to technical assistance and funding to address capacity and technical expertise constraints at the local level, especially for remote, rural, northern and Indigenous communities.

a) Share lessons and case studies of disaster recovery and resilience and develop technical guidance to increase disaster resilience knowledge sharing and capacity.

Recommendation 7

Streamline and improve the efficiency of DFAA processes to support applicants and provide timely access to funding.

a) Implement a technological solution to digitize DFAA processes, improve accessibility and efficiency, and enable tracking and analysis of program metrics and performance,including an ongoing assessment of the program's effectiveness in reducing long-term risks.
b) Develop a streamlined and supportive application process with guidance documents, templates and tools that help applicants access the most appropriate sources of funding.
c) Improve the responsiveness of the DFAA program to changing needs and capacities.

Recommendations – Building Resilience Beyond the DFAA

Recommendation 8

Improve the coordination and coherence among federal programs for disaster risk reduction and climate change adaptation, aligning these overlapping domains through the lens of increasing disaster resiliency.

a) Map and harmonize the objectives of federal programs across the spectrum of disaster resilience to identify and correct gaps and redundancies, find efficiencies and ensure funding time horizons are sufficient to implement projects that reduce risk over the long term.
b) Streamline and simplify processes for federal disaster resilience funding programs while supporting jurisdictions in accessing appropriate funding to reduce disaster risks.
c) Accelerate implementation of the National Infrastructure Assessment and prioritize disaster resilience gaps to inform other federal funding programs and investment decisions.

Recommendation 9

Invest and develop capacity in progressive and evidence-informed risk assessment and analysis, integrating future trends, socioeconomic factors, and vulnerabilities to inform decision making across governments.

a) Improve the methodologies and capabilities for quantifying the magnitude of direct and indirect disaster costs and integrate these considerations into funding programs.

Recommendation 10

Increase the availability and accessibility of authoritative, evidence-based risk information to enable responsible action among all societal actors toward disaster risk reduction and climate change adaptation.

a) Increase the capacity for effective risk communication to different stakeholders, including the public, business community, infrastructure owners and communities, and promote positive action toward disaster resilience.

Introduction

From coast to coast to coast, Canadian communities are experiencing more frequent and extreme weather events and natural disasters that disrupt lives, damage homes and infrastructure, and impact businesses and supply chains.

Globally, the frequency and severity of disasters are increasing. The number of people affected, the amount of economic activity disrupted, and insured and uninsured losses continue to climb as nations grapple with deadlier and more powerful storms, floods, heatwaves and other natural hazards. Historically, Canada has been spared the type of devastation caused by disasters such as Hurricane Katrina or the Great Earthquake and Tsunami in Japan, tragedies that have claimed thousands of lives and cost tens of billions of dollars in damages.

But Canada's luck is changing, and without significant investments in disaster risk reduction, it may only be a matter of time until we experience similar events. Average annual insured losses from severe weather were $400 million prior to 2009; since then, the annual average has reached $1.4 billion, with total insured and uninsured disaster losses projected to reach an annual average of $15.4 billion by 2030. These projections only account for direct disaster losses in financial terms, and not impacts on human and societal health and well-being.

Disasters are growing in frequency and severity in Canada due to factors such as climate change, urbanization, population growth, demographic changes, rising asset values and continued development in high-risk areas. The increasing risk requires urgent action across all levels of government and all of society to make significant changes to reduce existing risk, prevent and mitigate the creation of new risk, and improve how we manage residual risk through investment in emergency management and disaster resilience capabilities.

Drivers of disaster risk in Canada

Urbanization: More than 83 per cent of Canadians live in urban centres, which have higher concentrations of disaster risk due to the concentration of people and assets. Canada's cities are growing faster than other parts of the country, and many are located in vulnerable areas such as coastlines and floodplains.

Aging and interconnected infrastructure: Much of Canada's infrastructure was built decades ago for a different climate, demography and economy. Even as infrastructure ages, it is also becoming more interdependent. The interconnectivity of Canada's infrastructure and supply chains increases the risk of a disaster causing disruption far outside its zone of damage.

Climate change: Canada's temperatures are warming at twice the global rate (three times the global rate in the North), which increases the risks of climate-related hazards such as heat waves, droughts, wildfires and flooding. The changing climate is contributing to more frequent and severe weather events, accelerating the impacts of disasters on communities and infrastructure.

Role of the Federal Government

Disaster risk management intersects with all aspects of society and involves complex and overlapping jurisdictional authorities. The Government of Canada plays an important role in assisting communities to reduce the impacts of disasters by providing financial assistance for those affected by disasters as they work to recover and rebuild, and in helping communities reduce disaster risk and adapt to climate change. Provinces and territories, Indigenous governments and communities, and municipalities have specific authorities and responsibilities toward their own disaster prevention, mitigation, response and recovery efforts.

The current emergency management structure in Canada is based on a "bottom up" model, where municipalities take the lead during the initial response and recovery, with support from provinces and territories if the impacts exceed municipal capacity. Upon request, the federal government provides financial support to provinces and territories.

Background on the Disaster Financial Assistance Arrangements

The Government of Canada created the Disaster Financial Assistance Arrangements (DFAA) program in 1970 to support provinces and territories when the cost of a disaster exceeds what they could reasonably be expected to bear on their own and where affordable insurance was not available. The program is based on a per capita cost-share model that reimburses provinces and territories for eligible expenditures above a specific threshold. Since its inception, the DFAA has provided approximately $6.97 billion to provinces and territories for more than 300 events, with 70 per cent of those costs incurred in the past 10 years. The

The federal *Emergency Management Act* defines the role of the Government of Canada in emergency management as supporting provinces and territories with resources and financial assistance upon request during disasters and exercising leadership for emergency management initiatives across the country.

program currently has more than $5.41 billion in outstanding liabilities, and costs are expected to continue increasing as more frequent and damaging disasters impact communities across the country.

Provinces and territories are responsible for developing and administering disaster financial assistance within their respective jurisdictions to deliver support to municipalities, individuals and small businesses. While there are jurisdictional differences in how these programs operate, most are designed to maximize federal reimbursement and therefore align closely with the DFAA program criteria.

DFAA Challenges

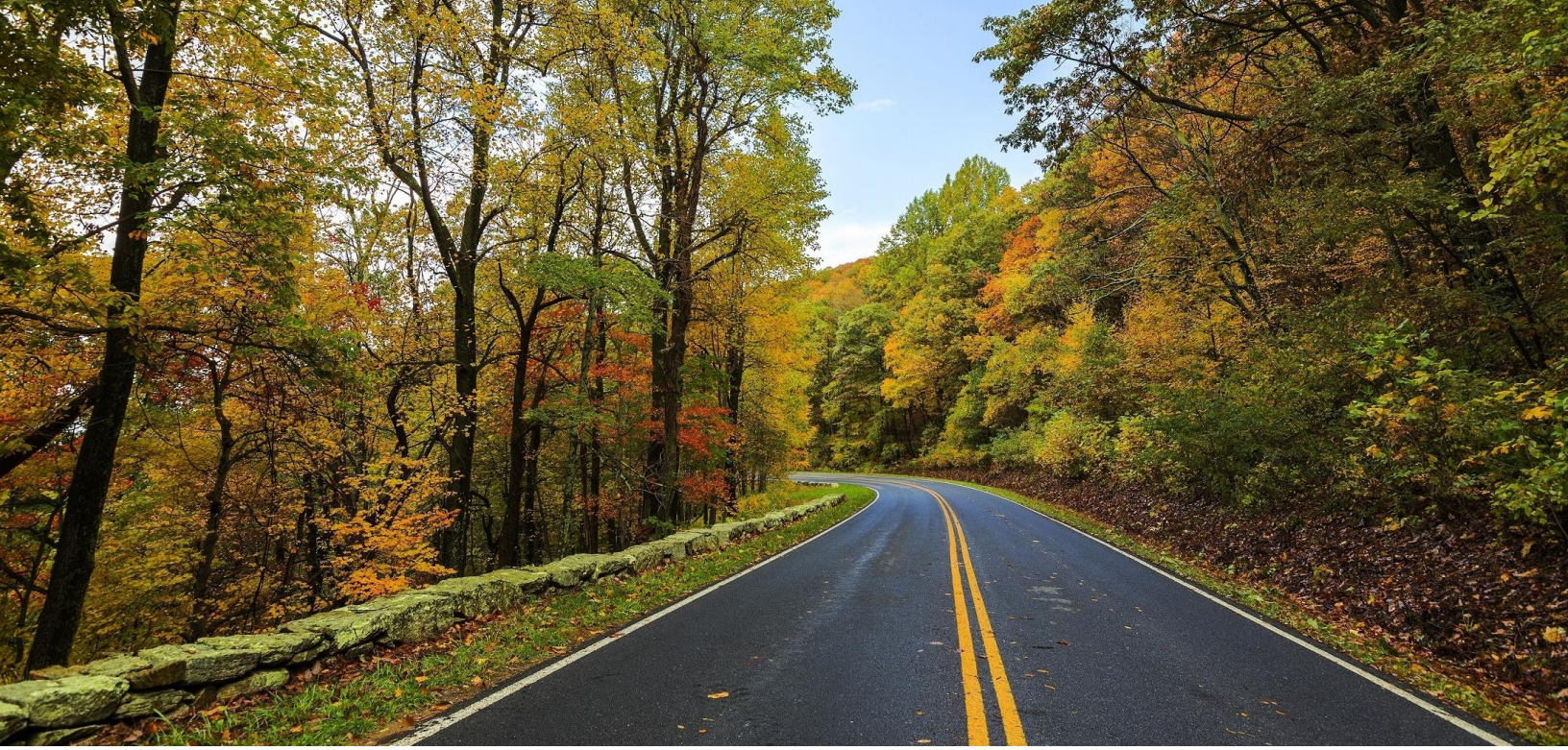
For decades, the DFAA has served as de facto insurance. As the funder of last resort, the federal government pays, on average, 82 per cent of eligible disaster costs but has limited involvement in pre-disaster decisions and investments in prevention, mitigation and preparedness. This contributes to an incentive structure in which the majority of disaster costs are borne by the level of government that has minimal influence on decisions that create or increase disaster risk.

While there is a continued need for the federal government to support Canadians when significant disasters occur, the existing DFAA program does not do enough to incentivize risk reduction or build long-term resilience to disasters. The program also focuses heavily on structural damage, generally limiting reconstruction to pre-disaster conditions, and does not adequately address the disproportionate impacts of disasters on vulnerable populations. This is no longer an effective approach given increasing disaster risks and impacts.

Elements of the existing program work against collective resilience and contribute to problematic incentives. For example, many governments permit developments in high-risk areas and choose not to purchase insurance for public infrastructure because they can rely on the DFAA program to pay for the majority of damage costs in the event of a disaster. Municipalities may be disincentivized to provide adequate risk information to property owners or developers, especially for high-yield taxable properties such as those on waterfronts, because the financial responsibility for damages falls to the DFAA when insurance is not available – which is currently the case for areas at the highest risk of flooding.

Provinces and territories have highlighted the high administrative cost of the DFAA program and how some of its components, such as restrictions on the use of post-disaster mitigation funding, limit their ability to strategically reduce risk.

In December 2021, the President of the King's Privy Council for Canada and Minister of Emergency Preparedness (the Minister), the Honourable Bill Blair, received a mandate letter commitment to undertake a comprehensive review of the DFAA program. The purpose of the review was to make recommendations for how the program could evolve to be a relevant, effective and sustainable mechanism for disaster recovery, risk reduction and resilience in the context of the rising frequency, impacts and costs of disasters.



Methodology: DFAA Expert Advisory Panel

In March 2022, the Minister convened an expert advisory panel (the Panel) to review Canada's approach to post-disaster financing and reflect on how best to align this program with broader efforts toward disaster risk reduction and climate adaptation. The Panel was tasked with providing recommendations to the Government of Canada on how to improve the sustainability and long-term viability of disaster financing in Canada, improve the administration of the DFAA program and reduce disaster risks.

Chaired by Rebecca Denlinger, the former Deputy Minister for Emergency Management British Columbia, the eight-member Panel represented a diverse group of experts with experience in the public and private sector, academia, Indigenous governance and the not-for-profit sector. Each member brought a unique and important perspective to the conversation.

DFAA Expert Advisory Panel Members

- Rebecca Denlinger, former Deputy Minister for Emergency Management British Columbia (Chair)
- Alain Bourque, Executive Director of Ouranos
- Tracy Anne Cloud, member of Metepenagiag Mi'kmaq Nation and Director of Trilateral Negotiations for Mi'gmawe'l Tplu'taqnn Inc.
- Maryam Golnaraghi, Director of Climate Change and Environment at The Geneva Association
- Stephen Mooney, President, Kluane Dana Shaw Development Corporation
- Kevin Page, CEO of the New Institute of Fiscal Studies and Democracy at the University of Ottawa and former Parliamentary Budget Officer
- Robert Phillips, member of the Northern Secwepemc te Qelmucw (Shuswap) of the Canim Lake First Nation and member of the First Nations Summit Political Executive
- Veronica Scotti, Chairperson of Public Sector Solutions for Swiss Re Group and Group Managing Director.

Member biographies can be found in Annex A.

How the Panel Worked

The Panel met numerous times throughout the spring and summer of 2022. Panelists reviewed published literature and policy documents, heard from academic experts and key stakeholders, and brought their own experiences and considerable expertise to the discussions.

The Panel met for six half-day themed sessions, each one focused on exploring a different aspect of disaster risk. The session topics included:

- Emergency management in Canada;
- Emergency management governance in a multijurisdictional context;
- Disaster mitigation and resilience;
- Insurance and financial risk transfer;
- Meeting with representatives from the Assembly of First Nations and Métis National Council to understand the specific context for Indigenous communities; and
- Meeting with representatives from provincial and territorial governments to understand their perspectives, challenges and considerations.

In addition to hearing directly from the Assembly of First Nations and Métis National Council, the Panel also reviewed the National Inuit Climate Change Strategy, developed by Inuit Tapiriit Kanatami. Natural disasters in Inuit lands look different from those in the rest of Canada because of the substantial threat posed by climate change: melting sea ice, rising oceans and melting permafrost often pose more significant risks than floods or wildfires.

During each session, Panelists discussed key topics and considerations for the future of the DFAA program and the broader context of disaster risk reduction. The summaries from these sessions are included in Annex B.

The Panel met for an additional three sessions to develop, refine and prioritize recommendations to the Minister on improvements for the DFAA program and how to align the program within the broader context of disaster risk reduction and climate change adaptation.

Final Report

This final report is the culmination of the Panel's work and presents a package of recommendations aimed at aligning disaster financial assistance with broader objectives for disaster risk reduction and climate change adaptation to increase Canada's resilience.

Although the majority of the Panel's recommendations focus on the DFAA program, the Panel also offers recommendations for enhancing disaster resilience across the federal government because the long-term success of the DFAA program depends on addressing issues with coordination and competing priorities that have been created by the current siloed and piecemeal approach.

The Panel's recommendations are organized into two main sections:

> A New DFAA: Building Forward Together provides the Panel's strategic recommendations for improving the DFAA program by focusing its role on advancing disaster risk reduction, shifting to outcome-driven goals with enhanced accountability while increasing flexibility for provinces and territories, and creating stronger incentives for all societal actors to reduce disaster risk. The updated program will require a collaborative approach that respects jurisdictional differences and empowers communities to make decisions based on local

contexts while advancing all of Canada toward common targets and objectives for disaster risk reduction and climate change adaptation.

Building Resilience Beyond the DFAA offers the Panel's recommendations on how to address some of the underlying gaps and challenges for aligning post-disaster financing with disaster risk reduction across the complex network of federal programs and overlapping mandates. Enhancing coordination and reducing siloes of effort and information will contribute significantly to the success of the DFAA program and other federal programs in building resilience in Canada.

Toward Implementation

The Panel respects the jurisdictional authority that provinces and territories, Indigenous governments and communities, and municipalities have toward their own disaster prevention, mitigation, response and recovery efforts. While the recommendations in this report were prepared with a federal mandate, disasters affect all of society and require integrated, multijurisdictional and cross-sector collaboration.

Implementing the recommendations in this report will require ongoing conversations and collaborative partnerships across and between the Government of Canada, the provinces and territories, Indigenous communities and governments, municipalities, and the private and charitable sectors. This includes a re-examination of all relevant programs to ensure an alignment of efforts in the spirit of better collaboration as we build forward together to create a more resilient Canada.

To ensure progress is made in implementing the recommendations in this report, the Panel strongly encourages the Minister to develop an implementation plan that identifies key tasks, responsible departments, timelines for implementation, and costs.

Findings & Recommendations

With the human and economic impacts of disasters continuing to increase, the Panel emphasized the need for more investment across the spectrum of disaster risk reduction* (DRR). Although the DFAA program is only one among many federal programs in this ecosystem, it plays a unique and critical role in the post-disaster period.

The Panel noted how crucial it is for Canada to align its objectives for climate adaptation and DRR into a single, integrated approach *and* to align its pre- and post-disaster actions, investments and development decisions to reduce disaster risk over the long term. The current DFAA program is entirely reactive and does not connect to actions taken in advance to reduce or prevent risk, nor does it create incentives for stakeholders to reduce risk. As a critical program in the disaster resiliency space, the DFAA program must recognize and enable actions that will lead to long-term resilience.

* A note on terminology

The Panel noted the confusion that can arise between *climate mitigation* (actions that reduce or remove greenhouse gas emissions) and *hazard/disaster mitigation* (actions that reduce the potential impact of a hazard). To increase clarity, this report uses the term *disaster risk reduction* to refer to all actions that are taken to identify, assess, and mitigate or reduce the risks and impacts of disasters.

Until Canada and other nations take serious steps toward reducing greenhouse gas (GHG) emissions, the risk of greater climate extremes will continue to increase. While climate adaptation is critical to prepare for current and future risks, the long-term success of climate adaptation depends upon curbing and ultimately reducing GHG emissions to limit the destructive potential of unmitigated climate change. The Panel urges the federal government to integrate carbon emission reduction into all DRR and climate adaptation funding programs through enabling net-zero or energy efficient reconstruction.

As the Government of Canada updates the DFAA program, it must consider the diverse needs of the different Indigenous peoples, including First Nations, Métis and Inuit, and how to provide sufficient, relevant and sustained support to Indigenous governments. Many Indigenous communities were relocated to hazardous and remote areas through the process of colonization and continue to live in areas unsuitable for settlement and highly vulnerable to disasters. Federal programs must ensure sufficient, appropriate and accessible funding is available for Indigenous communities to reduce disaster risk and increase climate resilience.

Through its review of Canada's post-disaster financing structures, the Panel noted how inflexible the DFAA program is to regional differences, changing conditions, or innovative approaches. The program is based on a centrally controlled, top-down approach that lacks sufficient feedback loops and adaptive processes to enable it to respond to the changing needs of provinces and territories. As a result, the DFAA program can sometimes act as a barrier to disaster resilience or can fail to realize opportunities to reduce future disaster risks.

To become a more effective vehicle for reducing risk that will ultimately improve the long-term sustainability and viability of the program, the DFAA should adopt and fund actions toward a collaboratively developed standard for disaster resilience that integrates DRR and climate adaptation. While funding should be connected to this common standard, the program should develop a flexible funding approach that allows jurisdictions to develop innovative solutions for implementation based on their contexts, with increased access to technical guidance materials and expected and strengthened tracking and accountability mechanisms. The Panel believes the DFAA program should not serve as a reason for governments, or any other stakeholder, to take higher risks when it comes to the potential impacts of disasters. Rather, the program should support and incentivize action toward disaster resilience.

This requires a substantial shift in how Canada recovers from disasters, from building back to *building forward together* toward greater resilience. The framing of "building forward together" captures both the necessary orientation of recovery – to reduce future risks – and the approach – working together, collaboratively, across all of society.

Design Principles and Purpose

In formulating its recommendations for the DFAA program, the Panel developed design principles that reflect crosscutting themes from the literature, stakeholder input and Panel discussions:

- *Solidarity*: The federal government should be there for Canadians during a disaster in the spirit of support and camaraderie.
- *Timeliness and transparency*: Disaster assistance should flow quickly to affected areas and be based on clear objectives and eligibility criteria that are understood by recipients in advance, with publicly accessible data on how funds are spent.
- *Accountability*: All stakeholders should be accountable for how their actions support and deliver on the program's objectives. This can be enabled through the development of program targets and strengthened tracking mechanisms.
- *Collaboration*: The program should not be wholly top-down or bottom-up, but a balanced approached leveraging the key strengths of different stakeholders and working together toward resiliency.

- *Coherence*: The DFAA should work seamlessly alongside other federal programs to advance action on disaster risk reduction and climate change adaptation.
- *Risk-informed decision making*: The program should integrate appropriate risk data into its processes and funding criteria to enable decisions that reduce disaster risk.
- *Resilience*: The DFAA should enable and build capacity for jurisdictions to adapt to, prevent and reduce the impacts of disasters, now and in the future.

These principles should guide policy development for the updated DFAA program and will continue to be essential during implementation.

The Panel recommends the purpose of the DFAA program should be ***to provide assistance to provinces, territories and Indigenous communities for disaster risk reduction, climate adaptation and recovery efforts that ultimately improve disaster outcomes and increase the resiliency of communities and individuals to future disasters.***

The program should both incentivize and fund disaster resilience to accelerate adaptation and help Canada prepare for a changing disaster landscape.

Based on this goal and design principles, the Panel offers 10 recommendations to the Government of Canada on changes that should be made within the DFAA (7) and across all federal disaster resilience programs (3) to enable the DFAA program to be successful in achieving its purpose.

A New DFAA: Building Forward Together

The Panel offers the following seven recommendations to the Government of Canada on changes that should be made within the DFAA program so it can deliver on its purpose. Recommendations 1-4 describe the need to focus on disaster resilience and changes needed to get there. Recommendations 5-7 focus on improvements to how the program provides funding to provinces and territories. Each recommendation contains specific sub-elements to provide further detail on the intent of the recommendation.

Recommendation 1: In collaboration with provincial, territorial, Indigenous and municipal governments, establish an integrated disaster resilience standard and requirements for action.

The current siloed approach that treats disaster risk reduction and climate adaptation separately has led to uncoordinated actions and confusing, sometimes contradictory direction. The Panel believes Canada should establish an ***integrated disaster resilience standard*** as a single common standard for disaster risk reduction and climate adaptation.

The Panel recommends the federal government leverage its convening capability to bring together stakeholders from provincial, territorial, Indigenous and municipal governments to collectively align disaster risk reduction and climate adaptation into an integrated disaster resilience standard with a single common goal: to increase disaster resilience. This standard should consider the capabilities, constraints and authorities of each partner and incorporate the latest evidence from climate

research and building sciences to establish specific and concrete actions each level of government should undertake to advance disaster resilience.

a) Agree on roles and responsibilities for public- and private-sector stakeholders to act on disaster resilience, connected to specific targets, objectives and outcomes.

   The main output of an integrated disaster resilience standard should be clarity on roles and responsibilities for public- and private-sector stakeholders, along with the collective development of specific targets, objectives and outcomes to enable greater transparency and accountability of progress toward the collective goal. This process may uncover gaps or constraints which should be addressed through the creation of an integrated standard. The Panel stressed that involving all levels of government in the development of these requirements will establish a sense of ownership, responsibility and empowerment for each actor to do their part in advancing disaster resilience.

b) Develop practical, science-informed guidance on actions that can be taken at the local, regional and provincial/territorial levels to achieve the integrated disaster resilience standard.

   The federal government should play a leadership role in developing guidance on how to enhance disaster resilience by drawing upon its substantial scientific expertise and connections with private-sector partners active in this space, including the insurance, finance and construction industries. Guidance materials should help address gaps in technical expertise at the local level by making disaster resilience actions accessible and implementable by local, provincial and territorial governments.

   Specific guidance should be co-developed *with* Indigenous communities *for* Indigenous communities, recognizing the unique and central relationship Indigenous peoples have with the land and the importance of integrating Indigenous Knowledge into disaster resilience actions.

c) Establish a disaster resilience rating system to strengthen transparency, accountability and progress tracking for federal, provincial, territorial and municipal action on disaster resilience.

   Developing a single, integrated standard is an important first step in enabling more coordinated collective action on building disaster resilience, but it is not sufficient on its own. The disaster resilience standard must include regular reporting and tracking mechanisms that increase transparency and accountability for actions.

The Panel recommends the development of a national resilience rating system that provides a resilience score for each jurisdiction based on its risk and actions toward achieving disaster resilience. The objective of this type of system is to measure action against a common standard and provide numerous pathways and incentives for improvement, all in pursuit of a single goal to increase disaster resilience. The rating system should include a regular assessment cycle to track and incentivize continuous progress in building disaster resilience. Rating results should be publicly accessible and published on an established frequency to increase transparency.

Resilience rating systems can take different forms. For example, the U.S. Federal Emergency Management Agency's Community Rating System is a voluntary incentive program that reduces premiums for the National Flood Insurance Program as communities undertake key actions to reduce flood risk. In the United Kingdom, reinsurer *Flood Re* is proposing the creation of a Flood Performance Certificate program to assess and rate properties on flood risk and resilience measures.

d) **Establish a multi-sectoral consortium of public-sector, private-sector, non-profit, academic, and Indigenous partners to co-develop innovative solutions and financing options to accelerate action on priority disaster resilience initiatives.**

Government-led initiatives may fail to create the space for innovative and creative solutions when rigid procurement rules and requests for proposal processes do not allow for alternative options. The Panel highlighted that the private sector is currently underutilized in the disaster resilience space and has significant capacity and expertise to contribute. It also heard examples of successful models such as Canada's Advisory Council on Flooding.

Canada's Advisory Council on Flooding was established in 2018 to bring together partners from the public sector, national Indigenous organizations, civil society, the private sector and academia to advance action on flood risk management. The Council focused on how to continue developing flood insurance and financial management tools for flood risk, as well as expanding flood risk mapping. This in turn led to the creation of the Task Force on Flood Insurance and Relocation, which advanced considerations for a made-in-Canada low-cost national flood insurance program.

The Panel recommends the establishment of a multi-sectoral consortium of public-sector, private-sector (including the banking, real estate, insurance and construction industries), non-profit, academic and Indigenous partners to tackle specific and pressing disaster risks. The co-development approach to involving the private sector opens the door to innovative solutions that are only possible through strategic partnerships among the different sectors.

In addition, Panelists noted how the private sector could be better leveraged to provide services to under-served communities. The Panel heard examples of how the insurance industry was able to work with the technology industry in Mexico City to help identify households in informal settlements and connect them to the federal tax authority so they could access more services offered by the

municipal and federal governments. It also heard how the insurance industry was able to create a low-cost health insurance product for women in Egypt to access medical services.

Although the specific needs in Canada are different from these international examples, the Panel urges the federal government to recognize the value the private sector can bring and the role they can play in disaster resilience and risk reduction, a domain that has long been government-centric. For under-served communities, niche markets, or specific situations where the public sector may be challenged to provide adequate services, the private sector may be well-positioned to deliver targeted and scalable service to fill the gaps. Enabling novel private sector approaches or creating innovative public-private partnerships could help address such gaps.

Recommendation 2: Strategically target funding to climate adaptation, disaster risk reduction and support for vulnerable populations while ensuring solidarity with jurisdictions experiencing a disaster.

The Panel recommends the DFAA program include incentives for climate adaptation and disaster risk reduction, in alignment with a national standard for disaster resilience (see Recommendation 1). While the Panel emphasized the importance of the federal government continuing to support provinces, territories and Indigenous governments in recovering from disasters, it also highlighted the opportunity for the DFAA to support the broader goal of disaster resilience through incentivizing actions designed to reduce risk and build resiliency.

Rather than funding all post-disaster actions equally, the DFAA program could increase cost-sharing or allocate special grants for actions connected to climate adaptation and disaster risk reduction, and to support vulnerable populations, to create a financial incentive encouraging these activities. The DFAA could also consider offering deductions or rebates on provincial and territorial cost share for jurisdictions that adopt and track progress toward the integrated disaster resilience standard.

Support for vulnerable populations

In the United Kingdom, the Environment Agency tracks and reports on how much of annual flood management spending reduces risk in the 20% most deprived geographic areas, as determined by the Index of Multiple Deprivation. This encourages the prioritization of reducing flood risk in the poorest areas.

a) **Connect the national resilience rating system with pre- and post-disaster funding to assist jurisdictions in understanding their current level of disaster resilience and support continuous action toward reducing risk.**

The Panel recommends the DFAA program connect its funding streams with the national resilience rating system to encourage and support continuous action on disaster resilience. This approach should reward jurisdictions that are actively and seriously committed to reducing their risks and provide funding to help them advance their plans. The program should also include enhanced support for jurisdictions that have less capacity and high levels of socioeconomic vulnerability, recognizing how this may impact a jurisdiction's ability to reduce disaster risk. Enhanced support should include access to technical experts who can assist jurisdictions in understanding risk and developing plans.

b) Establish a stable and predictable pre-disaster funding program designed to reduce future DFAA claims by incentivizing and funding high-impact risk reduction initiatives.

Currently, the balance of government spending on disasters is too heavily weighted to the post-disaster period. Strengthening the connection between pre- and post-disaster funding is critical to address the existing incentive structure that rewards high-risk developments and inaction on building disaster resilience through generous post-disaster federal assistance.

The Panel recommends the federal government establish a pre-disaster transfer program, separate from but connected to the DFAA, designed to reduce future DFAA claims. This new program should incentivize and fund disaster resilience activities by targeting high-risk areas and accelerating actions to reduce those risks.

The new program should be developed in alignment with other federal funding programs such as Infrastructure Canada's Disaster Mitigation and Adaptation Fund and Indigenous Services Canada's Emergency Management Assistance Program to avoid duplication, and should focus on spending more money up front to decrease post-disaster spending. A dedicated portion of this pre-disaster funding should go to Indigenous communities, which face disproportionate disaster risks and impacts.

c) Incentivize and provide support for community-based, integrated plans for disaster resilience based on the most current data available.

The Panel discussed the importance of all jurisdictions having an integrated disaster resilience plan based on their understanding of local disaster risks that includes prioritized actions and timelines. These plans are essential to establishing common goals and desired outcomes, coordinating the activities of relevant stakeholders, outlining priority actions and tracking progress. While some places in Canada have such plans, many do not.

The Panel recommends the DFAA program include incentives and support for communities to develop and update local disaster resilience plans. Prior to a disaster, communities may require funding and/or technical support to develop such plans, which could be a focus of federal funding based on the resilience rating system. Following a disaster, the understanding of risk and prioritization of risk reduction activities may change, and the DFAA should enable and support this evolution so communities can *build forward together* toward greater resilience. Having a current local disaster resilience plan could become a requirement to access funding under certain federal programs or to access a more generous cost share, although a phased approach should be implemented to give jurisdictions time to meet (or exceed) new standards.

The Panel highlighted the critical importance of tracking the progress of communities, regions and the country as a whole. This will help to create momentum, incentivize communities to continue working on implementing their plans and allow partners to find ways to celebrate important achievements.

d) **Incentivize nature-based solutions that reduce risk and include private-sector, local and community actors.**

The Panel recommends specific funding and incentives be developed to encourage jurisdictions to explore and implement nature-based solutions where these options are effective at reducing risk. Nature-based solutions may offer additional benefits in terms of carbon mitigation, protection of local ecosystems, potential health benefits of expanding green and blue spaces and can be more sustainable. The Panel believes these solutions should be promoted as an alternative to structural mitigation where they offer equivalent protection and risk reduction.

Protection of local ecosystems

On Texel Island in the Netherlands, the Prins Hendrik dyke was reinforced using a nature-based solution, expanding the sand dunes to create a natural salt-marsh habitat in the transition between land and water that protects the local community from flood risk.

Recommendation 3: Incentivize risk-informed decisions by integrating risk data into the DFAA and enforcing restrictions on how funds are used to rebuild assets in high-risk areas.

The Panel discussed the need for improvements in risk assessment and analysis capabilities to inform decision making in all federal funding and infrastructure programs, including the DFAA. Panelists recognized that many of the constraints at the local level – such as lack of funding, limited taxation capabilities, lack of technical expertise and insufficient access to decision-quality risk information – have contributed to development in high-risk areas. The Panel emphasized the importance of embedding risk data into the DFAA so the same risks are not re-created during recovery and reconstruction.

Investments in risk assessment methodologies should integrate western scientific knowledge with Indigenous, ancestral and ecological Knowledge as directed by Indigenous peoples in the "two-eyed seeing" approach. The combination of western and Indigenous Knowledge systems encourages a broader perspective and understanding of risk that considers the long-term and wider impacts of development decisions on natural systems.

The Panel recommends the DFAA program, in partnership with other levels of government, provide access to better risk information and support efforts to reduce risk in high-risk areas both before and after a disaster. This risk data should be targeted to each stakeholder, providing sufficient information to empower them to take appropriate actions. The DFAA program should support mitigation in high-risk areas and restrict funding for the repair and reconstruction of unmitigated structures in these areas, making it clear that DFAA funds are not a reason for jurisdictions to take higher risks or to not invest in risk reduction.

a) **Make risk information available and accessible to enable responsible actions and risk-informed decisions.**

Where the federal government has developed risk assessment data, the Panel recommends this be incorporated into the DFAA program and made accessible to program applicants in advance. For example, the DFAA website could include flood maps that show designated "high risk" areas and explain how DFAA funding is restricted in these areas, with links to

information and potential funding programs to reduce risk. Although the Panel recognizes municipalities might not consult the DFAA website before making development decisions, risk information needs to be more widely available and accessible across all federal programs to support a necessary societal shift in behaviour toward risk reduction and prevention.

The federal government should also work with provinces and territories to incorporate risk data they may have into their disaster assistance programs. For the DFAA program to be successful and sustainable over the long term, it must support and enable risk-informed decision making.

b) Invest in regional and cross-jurisdictional risk assessment capacity to inform local understanding of disaster risk.

As part of its discussions on the importance of risk data, the Panel noted how risks can often only be understood at regional or cross-jurisdictional levels, which challenge traditional risk assessment methods of only examining risk within a jurisdiction's boundaries. The complexity and interconnectivity of ecological and societal networks require a system-level view of risk, which should then inform local planning efforts. Because of the multiple layers of authority and jurisdiction, a targeted approach is needed to assess regional and cross-jurisdictional risk.

The Panel recommends the federal government play a leadership role in convening key partners, funding regional risk assessments and ensuring these assessments are available to local jurisdictions to inform their understanding of local risks.

Recommendation 4: Ensure First Nations, Métis, and Inuit peoples are consulted on disaster resilience priorities and programs and have equitable access to and support from federal programs and funding for disaster resilience.

The history of colonization and the creation of reserves[1] and the scrip system[2] forced many Indigenous communities onto lands that were not suited for permanent settlements, with many facing repeated flooding or wildfire events on an increasingly frequent basis.

Panel members heard from representatives from the Assembly of First Nations and the Métis National Council and reviewed a report from Inuit Tapiriit Kanatami about unique barriers and hazards faced by Indigenous groups and communities, gaps in services and challenges in accessing funding. The remoteness of many Indigenous communities and pre-existing housing and infrastructure deficits exacerbate disaster recovery challenges and too often result in Indigenous

[1] The Indian Act (1876) created the reserve system, through which many First Nations were relocated to reserve lands that were not suitable for permanent development, far removed from other communities and existing transportation networks. Reserves should not be confused with traditional territory, which involves all the territory that the nation traditionally used.

[2] The scrip system was the process by which Métis individuals could acquire formal title to their lands in the form of a certificate, or scrip. By the time the system was established, much of the traditional Métis territory had already been granted to settlers and to colonizing companies; some Métis communities were forced to relocate hundreds of kilometres from their homes to acquire land.

peoples being displaced from their homes for years. Dedicated funding and support are needed to reduce displacement timelines and help Indigenous communities return home more quickly after a disaster.

Panelists heard about the importance of culturally appropriate services and the need for more dedicated and sustained support to address the substantial disaster risks and limited capacity of many Indigenous communities. It was evident that Indigenous governments are often excluded from decision-making tables, which further exacerbates issues of inequality.

The Panel strongly recommends the federal government include Indigenous groups in decision-making forums and ensure sufficient, appropriate and accessible funding is available to Indigenous communities before and after disasters to build resilience.

a) Improve coordination and bridge gaps between the DFAA program and the Emergency Management Assistance Program to ensure equitable levels of support and funding for all Indigenous groups.

   First Nations reserves access disaster assistance through the Emergency Management Assistance Program (EMAP), delivered by Indigenous Services Canada. Unlike the DFAA program, EMAP provides pre-disaster funding for infrastructure, mitigation and preparedness in addition to response and recovery funding. However, this funding is limited to on-reserve First Nations and does not apply to First Nations people who live in other areas or to Métis or Inuit communities.

   Métis communities are not direct recipients of the DFAA program and cannot access EMAP, leaving some in a programmatic grey zone. Métis communities primarily access funding through provincial and territorial programs, which may not be set up to address the specific needs and cultural considerations of Métis peoples.

   Inuit Nunangat – the Inuit homeland – does not in general experience the same types of natural disasters that occur in other parts of Canada, such as floods and wildfires. Disasters in the North do not always fit into the existing DFAA definition of "natural disasters"; however, the Arctic region is warming three times faster than the global average, and melting permafrost and sea ice and rising sea levels are creating significant challenges for Inuit communities.

   The Panel recommends the Government of Canada improve the coordination between federal disaster funding programs, especially DFAA and EMAP, to ensure equitable levels of support and funding for all Indigenous peoples and to ensure there are no gaps in coverage for Indigenous communities.

b) Consult with rights holders on changes needed to existing programs and unaddressed priorities in advancing disaster resilience.

   The needs of Indigenous communities across the country vary greatly because of the diversity of Indigenous Nations, peoples and communities within Canada. To understand these needs and in the spirit of reconciliation with Indigenous peoples, the Panel recommends the federal government consult with rights holders to understand the gaps and unaddressed priorities in existing programs and to co-develop approaches to advancing disaster resilience led by Indigenous peoples.

Recommendation 5: Increase the flexibility and scope of DFAA funding to address different needs across jurisdictions and allow for a more progressive and holistic framing of recovery.

The Panel noted how a one-size-fits-all approach cannot be effective in a country as large and diverse as Canada, and, while provinces and territories have their own disaster financial assistance programs, more is needed to blend top-down and bottom-up approaches. Inflexible and centrally controlled processes contribute to inefficiencies in the existing DFAA program and can delay funding for jurisdictions experiencing a disaster. Greater flexibility to recognize different jurisdictional contexts is essential to an effective and sustainable program.

Panelists also discussed a number of actions the DFAA should encourage during disaster recovery to help jurisdictions build more resiliency to future risks. A progressive and holistic framing of recovery looks beyond the structural damage of disasters to initiatives that reduce carbon emissions, build local capacity and adaptation, invest in human well-being and social connections, restore healthy ecosystems and advance reconciliation with Indigenous peoples. Some specific ideas the Panel offered include enabling reconstruction to net-zero standards, rebuilding to disaster resilient standards that incorporate the latest guidance on climate resilience (such as increasing drainage to handle more intense rain events) and disaster resilience (such as raising furnaces and electrical panels in basements in case of flooding), using nature-based solutions for risk reduction, and advancing reconciliation through meaningful consultation and co-development of recovery projects with Indigenous peoples. The specific needs, priorities and implementation of projects might look different in different areas, which requires the program to be built upon a foundation of flexibility and collaboration.

Although flexibility is critical, the Panel also recognizes the role of the DFAA program in establishing a common national standard. A balance is needed between centralized and decentralized decision-making under the program, which is why the collaborative development of an integrated disaster resilience standard (as described in Recommendation 1) is so important.

The Panel recommends the DFAA adopt a flexible funding structure that enables jurisdictions to develop innovative approaches based on their needs and context centered around common objectives for disaster resilience. Action should integrate local knowledge and be owned at the local level but implemented and funded collaboratively. This type of flexible funding structure requires strengthened tracking and accountability for program funding and disaster recovery outcomes, which is not possible under the existing program that focuses on expense auditability and does not include any targets or benchmarks. The Panel recommends Public Safety Canada take a collaborative approach to developing program benchmarks and funding criteria, drawing on the substantial experience of provinces and territories in applying the program within their jurisdictions.

The updated DFAA program should establish clear criteria and guidance for the objectives of activities that are eligible under the DFAA program, with specific funding streams dedicated to building resilience and reducing disaster risk, while encouraging creative approaches to implementation. Information about new funding streams and criteria must be clearly communicated to and understood by all partners in advance of disasters so provinces and territories can adapt their programs as necessary.

a) **Enable provinces, territories and Indigenous governments to explore and adopt innovative approaches to disaster recovery through partnerships and delivery models that include the private and non-profit sectors.**

Creativity and innovation are essential to building disaster resilience. Both the private and non-profit sectors can bring significant expertise and capacities to disaster recovery and risk reduction, but the government-centric funding structure of the DFAA limits the potential for innovation. Many government procurement processes are based on rigid requests for proposals that outline a pre-determined approach to projects and do not allow for discussion, ideation or creativity. The Panel recommends the DFAA program enable innovative and strategic partnerships to co-finance and co-develop innovative projects that advance disaster resilience through flexible funding mechanisms.

Innovative and strategic partnerships

Fifteen Canadian insurance companies recently joined forces with Ducks Unlimited Canada, an environmental non-profit, to implement nature-based solutions that reduce flood risk. The initiative, called "Nature Force," is currently prioritizing flood-risk mitigation projects in British Columbia, Ontario and Québec.

b) **Expand DFAA funding for actions that support vulnerable and disadvantaged populations.**

Throughout its sessions, the Panel heard from Indigenous organizations, academics, disaster recovery practitioners, and provinces and territories on some of the ways in which disasters disproportionately impact disadvantaged populations and can increase vulnerability. Panelists also shared personal experiences with disaster inequalities, such as delayed notification of an imminent wildfire for a local First Nation community and the challenge of applying for recovery support when government services require Internet access, which is more likely to be disrupted and take longer to restore in remote communities.

Building off the increased scope of DFAA funding to allow for more progressive and holistic recovery, the Panel recommends the DFAA program specifically focus on expanding funding for actions intended to support vulnerable populations and reduce disparities in accessing recovery support and services.

Recommendation 6: Provide access to technical assistance and funding to address capacity and technical expertise constraints at the local level, especially for remote, rural, northern and Indigenous communities.

The Panel highlighted the wealth of local knowledge that can be mobilized during recovery to advance disaster resilience initiatives rooted in local realities which meet the needs of local communities, but noted that the capacity of local authorities may not be sufficient to conduct technical risk assessments, interpret risk data and distill it into actionable information, and implement these actions in their jurisdictions. This presents a challenge for the Government of Canada, given the parallel need to understand local and regional realities while still seeing the big picture of disaster resiliency from coast to coast to coast. Effectively addressing disaster risk and building resiliency must involve collaboration among all levels of government, which requires a

shared understanding of disaster risk. Information asymmetry between partners can create or exacerbate existing inequalities and reduce the desire for collective action.

The Panel recommends the federal government explore ways of developing capacity for disaster resiliency across all levels of government and in Indigenous communities, within the context of federal responsibilities and jurisdiction. This should include a deployable team of experts who can help communities that do not have technical expertise or capacity to develop plans for reducing risks and rebuilding more resilient communities following a disaster. The DFAA program must be able to work with jurisdictions to support and encourage creative and locally-driven solutions while providing sufficient support for jurisdictions with capacity and technical expertise constraints.

a) Share lessons and case studies of disaster recovery and resilience and develop technical guidance to increase disaster resilience knowledge sharing and capacity.

   The Panel recommends Public Safety Canada, as part of updating the DFAA program, create a resource database and library of case studies, technical guidance and examples of disaster recovery and resilience activities to enable jurisdictions to learn from what others have done. The DFAA program should also actively and regularly connect practitioners, academics and technical experts through media such as learning labs, webinars and other interactive events. Digital platforms should be used to ensure guidance on disaster recovery and resiliency is widely accessible.

   Although Public Safety Canada can play an important convening role, capacity development initiatives should be neither "top-down" nor "bottom-up" but based on collaboration and respect for different perspectives and spheres of knowledge, bringing together the capacities and expertise that exist at various levels to advance disaster resilience.

Recommendation 7: Streamline and improve the efficiency of DFAA processes to support applicants and provide timely access to funding.

During its review of the DFAA program, the Panel examined DFAA policy documents and heard from provinces and territories about challenges accessing DFAA funds and some of the limitations of this funding to help build resilience to future disasters. Although the principle of solidarity is evident within the existing DFAA program, many of its processes create barriers and inefficiencies that reduce the timeliness and transparency of funding and act against its core purpose of supporting provinces and territories in times of disaster.

To deliver on the program's recommended goal of *providing assistance to provinces, territories and Indigenous communities for disaster risk reduction, climate adaptation and recovery efforts that ultimately improve disaster outcomes and increase the resiliency of communities and individuals to*

future disasters, the DFAA program must be easier to access, more responsive to the needs of jurisdictions applying for funding, and provide greater clarity on expense eligibility.

The Panel recommends the DFAA program streamline its application and administrative processes and develop more supportive and accessible guidance materials to reduce barriers and help jurisdictions quickly access funding during and after a disaster. If the DFAA program is not the most appropriate source of funding, program administrators should help jurisdictions identify and navigate other funding programs (this idea is expanded in Recommendation 8).

Navigating federal funding

The Canadian Northern Economic Development Agency (CanNor) delivers several programs to support economic development in Canada's North but also helps other northern organizations navigate the web of federal funding programs. It often serves as the first and most accessible point of contact with the federal government for many of these organizations and helps them identify and contact the correct federal government agencies for their specific initiatives.

a) **Implement a technological solution to digitize DFAA processes, improve accessibility and efficiency, and enable tracking and analysis of program metrics and performance, including an ongoing assessment of the program's effectiveness in reducing long-term risks.**

The Panel recommends the implementation of a technological solution to digitize DFAA processes and enable document and data sharing between Public Safety and provinces and territories. The technological solution should include the ability for Public Safety to layer geospatial risk data to enforce program eligibility criteria for high-risk areas and to better track and analyze expenditures.

An effective technological solution will help improve the quality of DFAA program data, which Public Safety can use to assess the effectiveness of the DFAA program over the long term. During implementation, Public Safety should develop supportive tools, videos and training materials for provinces and territories to help them navigate a new system.

The Panel highlighted how transparent tracking can help to create momentum for progress and incentivize continuous action and improvement. In compliance with privacy protection legislation, DFAA data should be accessible and navigable for all levels of government, private-sector partners, academics and other interested stakeholders.

b) **Develop a streamlined and supportive application process with guidance documents, templates and tools that help applicants access the most appropriate sources of funding.**

Panelists discussed the importance of creating a streamlined application process for disaster recovery and resiliency efforts that connects applicants to the most appropriate funding stream. This could be done through the creation of a concierge function within the DFAA program to help provinces and territories navigate the various federal programs.

The Panel recommends the development of a supportive application process to ensure that information on the DFAA program is clear and accessible, with guidance documents, templates and tools to assist applicants seeking funding. Panelists heard examples of other federal programs that allow jurisdictions to submit videos or other visual media instead of written applications and encourages Public Safety Canada to consider how it can enable more flexible and supportive application processes that recognize the capacity constraints

of potential applicants, especially in the immediate aftermath of a disaster when governments face numerous competing priorities.

c) Improve the responsiveness of the DFAA program to changing needs and capacities.

As Canada's disaster risk landscape rapidly evolves, the DFAA program must include mechanisms to make it more responsive to changing needs while providing stability and certainty of funding during a disaster. The Panel recommends the updated DFAA program implement more effective mechanisms for continuous improvement, beyond an internal review every five years. Through collaborative relationships with provinces and territories, program administrators could identify key challenges and constraints on an ongoing basis and could develop guidance materials and technical support documents or host learning events to address questions and needs so all jurisdictions can learn from one another and identify innovative ways to improve disaster recovery outcomes.

Periodic reviews are also important but should assess the program's effectiveness in fulfilling its long-term goal of helping Canada build disaster resiliency and identify trends or barriers to achieving that goal. These reviews could leverage existing multilateral groups with experience relevant to the program to provide different perspectives and ideas for improvement.

Building Resilience Beyond the DFAA

The disaster resiliency landscape in Canada is complex and evolving, with a multitude of partners at all levels of government, Indigenous communities, the not-for-profit sector and the private sector. Although the changing climate has been linked to increasing frequency and severity of disaster events, programs aimed at disaster risk reduction and those aimed at climate change adaptation are not often harmonized. The upcoming National Adaptation Strategy is an important step toward establishing a common framework to align action on climate change adaptation and disaster risk reduction.

The Panel recognizes that the DFAA program does not exist in a silo and is part of a broad ecosystem of overlapping and interconnected initiatives for disaster risk reduction and climate change adaptation that involve several departments, including Public Safety Canada, Natural Resources Canada, Indigenous Services Canada, Crown-Indigenous Relations and Northern Affairs Canada, Environment and Climate Change Canada, Infrastructure Canada and others. No single program can encompass or deliver all the support, funding and expertise needed to reduce disaster risk and adapt to climate change. The effectiveness of the DFAA depends in part on the coordination and coherence among other federal programs.

As noted in the recommendations for the DFAA program, the Panel strongly emphasized the need for alignment between disaster risk reduction and climate change adaptation to enable *building forward together* toward disaster resilience, an approach which should be applied to other programs as well.

The Panel offers the following three recommendations to the Government of Canada on changes required beyond the DFAA that are necessary to enable the program's long-term success to increase disaster resiliency. Recommendation 8 focuses on coordination and alignment among

federal programs. Recommendations 9 and 10 discuss improvements needed in risk assessment and risk communication capabilities.

Recommendation 8: Improve the coordination and coherence among federal programs for disaster risk reduction and climate change adaptation, aligning these overlapping domains through the lens of increasing disaster resiliency.

Panelists stressed the importance of taking a *disaster resiliency* lens to federal programming to ensure all disaster risks, climate-driven and otherwise, are addressed. While climate change may be increasing the risks of floods, wildfires, storms and droughts, many regions in Canada also face risks from earthquakes, landslides, tsunamis and other hazards. The siloed approach in which some programs or departments focus exclusively on a specific risk reduces the ability of the federal government to invest strategically in disaster resilience and introduces the potential for competing or contradictory program goals. It also puts pressure on the limited capacity of local and Indigenous governments to prioritize between hazards when there are often opportunities to build resilience across multiple hazards.

The Panel explored the relationship between the DFAA and other federal programs and highlighted how the success of the DFAA program in part depends on how well coordinated and aligned it is within a complex federal ecosystem. Parallel and concurrent initiatives must be better harmonized, with an emphasis on identifying and reducing risk from a systems perspective. Where possible, the number of programs (not funding) should be reduced, making it easier to design programs that work together coherently and simpler for applicants to navigate.

For instance, restrictions on new unmitigated infrastructure and developments in designated high-risk areas should be common across all funding programs so new investments do not create future liability for the DFAA program and reduce Canada's overall resilience. This would also align with the Panel's recommended restrictions on how post-disaster DFAA funds are used in high-risk areas (see Recommendation 3), creating a consistent and coherent federal policy approach for high-risk areas that incentivizes more responsible development decisions.

The Panel strongly recommends the federal government align and coordinate its programs on disaster risk reduction and climate change adaptation through the lens of disaster resilience to improve coherence, reduce duplicative and contradictory program goals and realize opportunities for cross-benefits.

a) Map and harmonize the objectives of federal programs across the spectrum of disaster resilience to identify and correct gaps and redundancies, find efficiencies and ensure funding time horizons are sufficient to implement projects that reduce risk over the long term.

   The Panel noted that many federal programs in the disaster risk reduction and climate change adaptation domains are often trying to accomplish the same goal but may focus on slightly different hazards or use different terminology. The resulting complexity has created instances of duplication and inefficiency while leaving some disaster risks unaddressed. For example, the risk of extreme heat is often overlooked when jurisdictions seek to improve stormwater drainage to protect against extreme rainfall, despite natural synergies through planting trees or expanding green spaces that can help address both risks.

The Panel recommends the federal government undertake an urgent mapping of federal programs aimed at disaster risk reduction and climate change adaptation to align the intent and objectives of these programs, identify and correct gaps and ensure funding time horizons are sufficient to deliver long-term disaster resilience. Where applicable, programs should use the same disaster resilience terminology, targets and metrics, as highlighted in Recommendation 1. This process should provide visibility into the totality of spending on disaster resilience and give the Government of Canada the opportunity to ensure there is sufficient spending on climate mitigation, adaptation and disaster risk reduction to prepare Canada for the future.

The outputs of this mapping process should be made available to jurisdictions applying for federal funding to help them identify appropriate programs for their needs. The Panel also recommends the development of inter-departmental feedback mechanisms through which departments delivering programs and program participants are encouraged to share ideas and best practices and identify gaps or contradictions between programs.

b) Streamline and simplify processes for federal disaster resilience funding programs while supporting jurisdictions in accessing appropriate funding to reduce disaster risks.

The breadth and complexity of federal programs and guidance related to disaster resilience can cause challenges for other governments and Indigenous communities when trying to develop local plans and identify priorities for disaster resilience initiatives. Federal programs can be difficult to access and navigate, and provincial, territorial, municipal and Indigenous governments are not always aware of all the funding opportunities offered by the federal government.

Panelists heard directly from key stakeholders about the challenges of accessing federal programs and how the onus is on the jurisdiction experiencing a disaster to apply for multiple programs in order to meet their funding needs. This was characterized as "mobilizing an army of grant writers" at a time when capacity is stretched responding to disasters and the people needed for grant writing may also have been personally impacted. The heavy administrative burden also privileges larger jurisdictions with greater organizational capacity at the expense of smaller jurisdictions that may face greater risks.

Building off the program mapping initiative of Recommendation 8a, the Panel strongly recommends the federal government streamline and simplify its application and funding processes. It should develop mechanisms for sharing applicant information across federal programs so jurisdictions do not need to complete multiple application forms when the same information has already been collected by another program. It should also identify potential opportunities for stacking federal programs to support low-capacity jurisdictions.

Federal programs should be designed to support jurisdictions in accessing appropriate funding, which will improve the process for applicants but also enable the federal government to invest more efficiently and effectively. The Panel encourages the creation of a 'single window' application process (where a single intake application can then be directed to the most relevant funding program) and the development of a disaster resilience centre that can help jurisdictions navigate federal programs.

c) **Accelerate implementation of the National Infrastructure Assessment and prioritize disaster resilience gaps to inform other federal funding programs and investment decisions.**

The federal government has announced its intention to conduct Canada's first National Infrastructure Assessment to inform infrastructure investment decisions over the coming decades. The Panel sees a national infrastructure assessment that identifies gaps and dependencies through the lens of resilience as a critical source of data and prioritization for federal funding programs, including the DFAA, and strongly encourages the Government of Canada to accelerate this initiative.

As the federal department responsible for the DFAA program, Public Safety Canada should work with Infrastructure Canada as it conducts its National Infrastructure Assessment, with a focus on identifying needs and priorities for building disaster resiliency and supporting long-term planning toward a net-zero emissions future.

The National Infrastructure Assessment

The three main priorities of the National Infrastructure Assessment are:

- Assessing Canada's infrastructure needs and establishing a long-term vision
- Improving coordination among infrastructure owners and funders; and
- Determining the best ways to fund and finance infrastructure.

"The assessment would help identify needs and priorities for Canada's built environment. This measure would improve infrastructure planning and help all orders of government make informed decisions about infrastructure projects that ensure we have stronger, cleaner, more resilient communities." (2021 Federal Budget)

Recommendation 9: Invest and develop capacity in progressive and evidence-informed risk assessment and analysis, integrating future trends, socioeconomic factors, and vulnerabilities to inform decision making across governments.

Disaster risk is highly complex and the data are constantly evolving. Canada requires significant investment in its risk assessment and risk analysis capabilities to inform better decision making at all levels of government.

The foundation for risk-informed decision making is the existence, accessibility and use of comprehensive risk assessments. Risk assessments are common in emergency management and focus on hazards such as floods or wildfires but do not necessarily incorporate other key contextual information such as economic analysis, sociodemographic information or community vulnerabilities. These assessments generally do not account for the significant costs associated with inequalities in communities or the costs associated with a disaster's impacts on health, mental health and human well-being. They are also overwhelmingly based on historical data, which fail to consider climate change, demographic shifts and trends that impact future risk.

The Panel emphasized the need for the Government of Canada to play a leadership role in advancing the methodologies and capabilities for forward-looking risk assessments that can be replicated, or at least leveraged, by other levels of government to identify local risks and potential disaster impacts. Progressive or forward-looking risk assessments incorporate future trends such as climate change and demographic projections into assessments where most data points are constructed from historical events.

Translating risk data into meaningful and actionable information is another critical component. Techniques such as scenario planning can help make evidence-based risk assessments easier to understand and apply to program development and investment decisions. The Panel believes risk assessments and analysis should be embedded in all pre- and post-event disaster planning, with the goal of preventing new risk and reducing existing sources of risk.

The Panel noted the capabilities of the private sector, especially the insurance industry, in advancing risk assessment methodologies and encourages the federal government to explore partnership models with insurance to enhance its risk assessment capabilities.

Translating risk data

Developed by the African Union, Africa *RiskView* is a software product available for free to national governments and other organizations that combines drought data (based on weather and crop information) with data on vulnerable populations to help predict food insecurity needs. The platform provides decision makers with expected and probable maximum costs of drought-related responses before an agricultural season begins and as the season progresses to help nations develop food security contingency plans and create strategic stockpiles.

a) **Improve the methodologies and capabilities for quantifying the magnitude of direct and indirect disaster costs and integrate these considerations into funding programs.**

Disaster impacts create both direct and indirect costs for communities. Direct costs include loss or damage to infrastructure, while indirect, long-term social and economic losses can include things such as interference with education and decreases in health, wellness or productivity.

Quantifying indirect losses can be difficult. For example, when a culturally significant site is destroyed by a natural hazard, the replacement or real-market value of that site and its buildings does not consider the social and cultural meaning of the site or the services it provided to the community. Other "intangible losses" include the psychological and environmental impacts caused by disasters.

The Panel calls on the federal government to play a leadership role in improving the methodologies and capabilities of quantifying the magnitude of indirect disaster costs and integrating these considerations into all of its disaster resilience funding programs.

Recommendation 10: Increase the availability and accessibility of authoritative, evidence-based risk information to enable responsible action among all societal actors toward disaster risk reduction and climate change adaptation.

The ultimate goal of risk assessments is to make relevant risk information accessible and actionable for all societal actors to make risk-informed decisions, especially related to property purchases,

rental decisions, property development and infrastructure investments. Reducing disaster risk requires people to be aware of and understand their risk *and* what they can do to address it.

The Panel recommends the Government of Canada continue to invest in and develop authoritative, evidence-based risk data on Canada's major natural hazards. Although current methodologies and technologies rely primarily on historical data, the federal government should increase the accessibility of this information to relevant stakeholders even as it develops better data and integrates future projections on climate and demographic changes. The Panel recognizes that this is a rapidly evolving field, with new technological capabilities and methodologies emerging all the time, but encourages the federal government to make risk information accessible *now* to help inform development decisions in the present that may contribute to future risk.

a) **Increase the capacity for effective risk communication to different stakeholders, including the public, business community, infrastructure owners and communities, and promote positive action toward disaster resilience.**

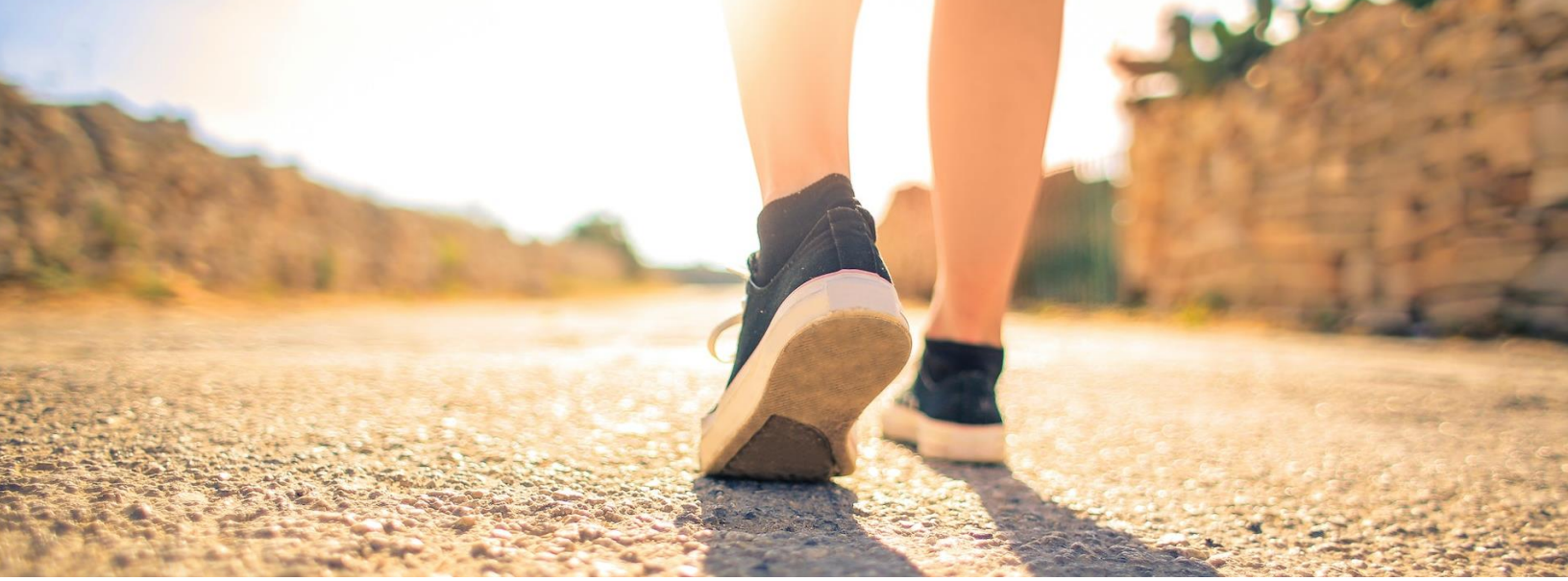
Relevant risk data should be transparent and accessible to all stakeholders, including the public. This requires improved risk communication strategies and risk literacy to ensure stakeholders have adequate knowledge and awareness of risk, risk assessments and the particulars of the properties they are seeking to purchase, rent or develop.

Different stakeholders have different risk information needs. Information should be made available based on its relevance for each target audience, including how it can be used to enable responsible actions. This goes beyond simply distributing information and should include guidance on how to integrate it into decision making. For example, the public health domain has had a number of successful risk awareness campaigns that have changed behaviour across generations, from reducing smoking to increasing the use of seat belts. Part of the success of these efforts is the multi-pronged and targeted approaches to communicate risk to different stakeholders, embedding information at all steps along the decision-making process.

The Panel encourages the federal government to work with different partners to develop effective risk communication strategies and promote positive action toward disaster resilience as part of a collaborative and shared effort of building forward together toward a more resilient Canada.

Targeted risk information

The Environmental Agency in the United Kingdom studied how different types of communication improve public understanding of flood risk and encourage people to act. This research emphasized the importance of tailoring messages to the needs of different audiences and avoiding the use of probabilistic language to communicate flood risk, as it does not help people translate risk into action.



Next Steps

The Panel believes that implementing the recommendations in this report will ensure the Disaster Financial Assistance Arrangements program can continue to support provinces and territories when recovering from a disaster and improve risk assessment, reduction, mitigation and adaptation efforts *prior* to a disaster occurring.

The first step is to develop an **implementation plan** based on the recommendations in this report that outlines key tasks, assigns responsible departments, establishes timelines and identifies costs. This Plan would increase accountability for Public Safety Canada to make the necessary changes to the DFAA program.

As Public Safety Canada **updates the DFAA program,** it should not only provide funding for disaster recovery but also incentivize building disaster resiliency across Canada. The program should have **streamlined processes** to make it easier to access funding and other supports. It must also be more **flexible, adaptable, responsive** and **innovative** in building disaster resilience.

The federal government should leverage its convening capability to bring together stakeholders from provincial, territorial, Indigenous and municipal governments to collectively establish a common and **integrated disaster resilience standard** for disaster risk reduction and climate change adaptation to guide pre- and post-disaster actions and investments to reduce risk and improve disaster outcomes for Canadians.

Looking beyond the DFAA program, the federal government should **improve coordination and alignment** across all its programs that support disaster risk reduction and climate adaptation and **develop risk assessment capabilities and decision tools** for use by all levels of government, Indigenous communities, the private and not-for-profit sectors, academia and the public at large.

The implementation of the recommendations in this report will require the same principles that guided its development: **solidarity, timeliness and transparency, accountability, collaboration, coherence, risk-informed decision making** and **resilience.** Although much of this report deals with actions that can be taken by the federal government within its areas of responsibility, achieving disaster resiliency requires a whole-of-society approach based on a shared and common goal. Success will ultimately depend on collective action and coordination, with all of us working toward the common goal of building resilience.

The Panel encourages everyone in Canada to begin **building forward together** without delay.

Annexes

Annex A: Expert Panel Members' Biographies

Alain Bourque

Alain Bourque has served since 2013 as Executive Director of Ouranos, an innovation cluster and consultation forum enabling Quebec society to better adapt to climate change. He implemented the Vulnerabilities, Impacts and Adaptation program, which includes more than 200 projects, since joining the non-profit organization in 2001. During his career, he has completed many regional, national and international scientific summaries and regularly contributes to media stories and policy discussions about climate change and adaptation. Mr. Bourque was a meteorologist/climatologist with Environment and Climate Change Canada from 1989 to 2001, where he worked on the Saguenay flood of 1996, the ice storm of 1998 and on climate services. Alain Bourque holds a Master's in atmospheric science from Université du Québec à Montréal (UQAM).

Tracy Anne Cloud

Tracy Anne Cloud is a proud member of Metepenagiag Mi'kmaq Nation and has been the Director of Trilateral Negotiations for Mi'gmawe'l Tplu'taqnn Inc. (MTI) since 2016. Ms. Cloud has worked within the Atlantic Indigenous communities, particularly in the area of Indigenous Rights and Treaty Implementation. Her eclectic professional experience includes working in the Lands and Trust Directorate at Indigenous Services Canada and as a Policy and Implementation Officer at the National Centre for First Nation Governance. From 2012 to 2016, Ms. Cloud served her community, holding public office as Metepenagiag Mi'gmaq Nation Band Councillor. Much of her work has focused on facilitating dialogues on aspects of governance, leadership, nation rebuilding and rights implementation. She is a mother of three children and a grandmother of six and has a passion for and deep connection with her people, culture and land. Ms. Cloud continues to advocate for Indigenous Rights, the revitalization of Mi'gmaq laws, reconciliation and reclamation within Mi'kmaq'i.

Becky Denlinger (Chair)

Becky Denlinger's experience from the local community to high levels of government provides valuable expertise in emergency planning and response. Ms. Denlinger currently serves on the Board of Directors of Oceans Networks Canada. She served as Deputy Minister, Assistant Deputy Minister and Fire Commissioner for British Columbia. She was a member of the Senior Officials Responsible for Emergency Management, the Canadian Council of Emergency Management Organizations, the Canadian Council of Fire Marshals and Fire Commissioners and was active in numerous international, national, provincial and regional emergency management and fire service committees. Prior to joining the B.C. Public Service, Ms. Denlinger was Fire Chief of the Cobb County Fire and Emergency Services department in the metropolitan Atlanta, Georgia area. She served on numerous committees, boards and councils during her tenure as chief, including the Georgia Homeland Security Task Force and the National Infrastructure Advisory Council to which she was appointed by President George W. Bush. Ms. Denlinger holds degrees from Thomas Edison State University, has completed the Harvard Senior Executives in State and Local Government Fellowship Program, completed the Chief Fire Officer Designation from the Center for Public Safety Excellence, is a past Member of the Institute of Fire Engineers, and is an active

member of the National Fire Protection Association and the International Association of Fire Chiefs and its Metropolitan Fire Chiefs Section.

Maryam Golnaraghi

Dr. Maryam Golnaraghi is the Director of Climate Change and Environment at The Geneva Association, an international think tank whose members are CEOs of the largest insurance companies globally. Previously, Dr. Golnaraghi was the Chief of the Disaster Risk Reduction Program at the World Meteorological Organization, where she headed up and built an international program and led major capacity development initiatives with more than 40 governments. She also served as an adviser to former U.S. President Bill Clinton in his capacity as the United Nations Special Envoy on Tsunami Recovery. Dr. Golnaraghi founded and served as the CEO of Climate Risk Solutions, Inc., a first of its kind analytics and advisory firm that worked with companies in the energy, agriculture and financial sectors as well as the U.S. government on solutions for managing physical risks of climate change. Dr. Golnaraghi serves on a number of executive and advisory boards of corporates, governments, centres of excellence and multilateral organizations and is a non-resident senior fellow at the Atlantic Council. She has authored numerous internationally referenced reports and a book on Strategic Partnerships in Multi-Hazards Early Warning Systems. She holds a BS in Chemical Engineering from Cornell University, an MS in Applied Physics and a PhD in Physical Oceanography from Harvard University, after which she worked as a senior research fellow at the Harvard Business School.

Stephen Mooney

Stephen Mooney is a senior executive working to support infrastructure and energy development in the Yukon. Mr. Mooney has previously served as the Director for the Northern Housing Innovation Centre, Yukon Research Centre, Yukon University and previously as the Director of the Cold Climate Innovation hub at the Yukon Research Centre. In these capacities, he has worked to create economic development opportunities for all Yukoners through applied research, innovation and commercialization, emphasizing food security, energy and technology. Mr. Mooney has served to create national and international partnerships for Yukon University and develop its applied research facility into a globally recognized program, focused on solving northern issues. He has recently served on the National Research Council of Canada Board of Directors (2014 – 2018) and is currently the Interim President, Kluane Dana Shaw Development Corporation of the Kluane First Nation. Mr. Mooney has a Master of Science, Management and Leadership and is a member of the Yukon Association of Professional Engineers. Mr. Mooney has represented Canada on numerous Technology and Innovation Missions to Sweden, Denmark, Greenland, Norway, Finland, the United States and Russia, fostering working relationships with international governments and organizations. Mr. Mooney has presented at more than 80 regional, national and international conferences, promoting Northern Canadian technology and innovation and raising awareness of the challenges and opportunities for Northern Canada.

Kevin Page

Kevin Page is the current Chief Executive Officer of the New Institute of Fiscal Studies and Democracy at the University of Ottawa. Prior to this, he was the Jean-Luc Pépin Research Chair in the Faculty of Social Sciences at the University of Ottawa from 2013 to 2016. Mr. Page was Canada's first Parliamentary Budget Officer from 2008 to 2013. He has 27 years of experience in the federal

public service with most of those years spent at three central agencies responsible for budgeting: the Department of Finance, the Treasury Board Secretariat and the Privy Council Office. He was the Assistant Secretary to Cabinet for Macroeconomic Policy before becoming Canada's Parliamentary Budget Officer.

Robert Phillips

Robert Phillips is a member of the Northern Secwepemc te Qelmucw (Shuswap) of the Canim Lake First Nation. He holds a Bachelor of Arts degree from the University College of the Fraser Valley. Mr. Phillips was previously elected by First Nations Summit delegates to three two-year terms as a Commissioner of the British Columbia Treaty Commission (2007-2013). He also previously served as Chief Negotiator and, prior to that, as Self-Government Director at the Northern Shuswap Tribal Council (1998-2007). Mr. Phillips has an extensive background in aboriginal justice and economic development. He was elected in June 2019 for a third consecutive three-year term on the First Nations Summit Political Executive, which is mandated to carry out specific tasks related to Aboriginal Title and Rights negotiations with British Columbia and Canada and other issues of common concern to First Nations in British Columbia.

Veronica Scotti

Veronica Scotti has been the Chairperson, Public Sector Solutions, for Swiss Re Group and Group Managing Director since July 2018. After joining Swiss Re Group in 1999, Ms. Scotti was appointed President and CEO of Canada and the English Caribbean, held client-facing positions in Zurich as Head of Business Development for Europe, Middle East and Africa (EMEA) and Key Account Manager Globals before moving to New York to become Client Executive, with global responsibility for some of Swiss Re's largest reinsurance clients. She entered the reinsurance sector in 2002, with early roles in asset management, strategy, risk management and products functions, in addition to seven years in investment banking with UBS, Paribas and Fox Pitt Kelton based in London and as a researcher with Banco Di Napoli in Italy. She holds an MBA from the SDA Bocconi School of Management in Milan and a Master's degree in International Commerce from the Naval University Institute, Naples, Italy. Her external appointments include Member of the Bretton Woods Committee Advisory Council, Corporate Member of the Women's Leadership Board of Harvard Kennedy School, Member of the World Economic Forum CEO Action Group for the European Union Green Deal, Member of the International Women's Forum UK, and Member of the Advisory Committee of the Intact Centre for Climate Adaptation, University of Waterloo, Canada.

Annex B: Session Summaries

Session 1: Emergency Management in Canada

May 4th, 2022

Session Overview

The cost of disasters continues to rise in Canada, driven by factors such as the rapid rate of climate change and global warming, which affects Canada's north at approximately three times the global average, demographic changes, aging and increasingly interconnected infrastructure, and the concentration of people and assets in urban centers.

The direct and indirect impacts of disasters are increasing the costs borne by individuals, businesses and governments. Government-funded disaster financial assistance plays an important role in this system.

Discussion Themes

- Alignment between disaster financial assistance, the Sendai Framework, and Canada's Emergency Management Strategy
- Role of digitization and technological changes and innovations
- Importance of effective risk communication and incentive structures that encourage and enable disaster risk reduction
- Integration of climate modelling and risk assessments during recovery and reconstruction
- Balancing solidarity and support with accountability and responsibility
- Clarifying roles and responsibilities, building effective partnerships and collaboration models
- Community leadership and capacity

Session 2: Disaster Recovery in a Multi-jurisdictional Context

May 16th, 2022

Session Overview

In Canada, emergency management is a shared responsibility across governments, with provinces and territories (PTs) holding primary authority for disasters and hazards within their jurisdictions. The current structure is based on a "bottom up" model where municipalities take the lead during the initial response and recovery, with support from PTs if municipalities exceed their capacity. The federal government provides assistance upon request if PTs require additional support. However, the breadth of emergency management intersects all aspects of society (from health to economic development to land use management) and involves multiple and overlapping domains and jurisdictional authorities. Disaster financial assistance functions in a multi-jurisdictional context.

Discussion Themes

- Alignment within and across governments and other societal actors around a common set of goals and objectives for disaster risk reduction

- Policy cohesion and funding programs oriented towards the same goal of climate change adaptation and disaster risk reduction
- Importance of transparency and accountability
- Alternatives to a government-centric delivery model, building strategic partnerships
- Making risk data accessible and embedding it in key processes and decision-making frameworks
- Incentivizing the reduction of existing disaster risk and prevention of new disaster risk
- "Two-eyed seeing" approaches that integrate western scientific knowledge with Indigenous and traditional knowledge
- Streamlining and digitizing processes to increase efficiency and transparency

Session 3: Disaster Mitigation and Resilience

May 27th, 2022

Session Background

Research and policy have long recognized the importance of pre-disaster investments in mitigation and resilience, but the recovery period also provides opportunities to strengthen mitigation measures, integrate disaster risk reduction and ultimately build resilience to future events. The current disaster financial assistance program is primarily oriented towards returning structures to pre-disaster conditions.

Discussion Themes

- Coordination among federal programs across the spectrum of disaster risk reduction
- Blending top-down and bottom-up approaches
- Importance of regional and cross-jurisdictional risk reduction to complement local actions and priorities
- Progressive improvement and adaptive capabilities
- Common language, terminology, metrics, objectives, and targets
- Co-financing and co-development models of collaboration and partnership

Session 4: Insurance and Financial Risk Transfer

June 7th, 2022

Session Background

Financial risk transfer is a key mechanism for distributing the financial risk of disasters among a broad number of stakeholders. Currently, disaster financial risk is shared among the public sector, private sector and individuals, although this burden is not shared equally and does not necessarily account for ability to pay or for equitable responsibility for risk, and different perils have different distribution of financial risk. Government-funded disaster financial assistance is only one model of financial risk transfer.

Discussion Themes

- Different risk transfer models needed for different situations and circumstances

- Integration of greenhouse gas emissions into calculations of risk transfer, taking the long-term view of risk
- Subsidized risk transfer models and phased approaches that align with investments in disaster risk reduction
- Quantifying direct and indirect disaster costs
- Funding streams for different activities and outcomes
- Public-private partnerships
- Delivering services to under-served communities and populations

Session 5: First Nations Emergency Recovery

Session Background

Indigenous peoples and communities face disproportionate impacts from disasters due to a number of social factors in addition to the impacts of climate change. For First Nations communities, the ongoing legacy of colonization and close connections to the land and water mean disaster risk reduction and recovery efforts in First Nations communities may differ from other communities. First Nations across Canada have unique and diverse needs, cultures, geographies, and experience with disaster risk management.

First Nations on reserves receive disaster financial assistance through the Emergency Management Assistance Program administered by Indigenous Services Canada, not the DFAA.

Discussion Highlights

- Importance of hearing directly from rights holders on issues related to disaster risk and disaster response/recovery experience as there are more than 600 First Nations in Canada
- Institutional relationships and governance structures
- Respecting cultural heritage and provide culturally appropriate supports
- Co-development of funding programs

Session 6a: Métis Emergency Recovery

Session Background

Métis peoples face unique challenges with regard to disaster risk management and recovery efforts, which may differ from non-Indigenous communities and other Indigenous peoples. Living along the rivers and lakes of historical Métis communities within the Métis Homeland as well as in large urban centres, many Métis communities face jurisdictional challenges with disaster risk reduction and recovery.

Discussion Highlights

- Equitable access to funding and services for Métis communities
- Resourcing and support actions on disaster risk reduction
- 'Whole of being' approach to resilience
- Cultural identify and culturally appropriate support and services
- Building effective partnerships
- Landscape-based knowledge to inform disaster resilience

Session 6b: Provincial and Territorial Perspectives

Session Background

In Canada, emergency management is a shared responsibility across governments, with provinces and territories holding primary authority for disasters and hazards within their jurisdictions. The DFAA program was designed to provide financial support to provinces and territories for large-scale disasters that exceed what can provinces and territories can reasonably be expected to handle on their own. Currently, the program's funding calculation uses per capita disaster costs to determine eligibility for disaster financial assistance.

Provinces and territories are responsible for developing and implementing disaster financial assistance within their respective jurisdictions to deliver support to municipalities, individuals, and small businesses. Most provincial/territorial programs are designed to maximize reimbursement from the federal government through the DFAA program; however, there are regional variations in how the programs operate, driven by each province and territory's vastly different geography, topography, risk landscape, population, and administrative capacity.

Discussion Highlights

- Alignment and coordination between governments and the insurance sector
- Programmatic gaps and shortcomings in the DFAA and EMAP
- Importance of predictable and transparent funding
- Mitigation funding in the post-disaster context
- Flexibility and supporting different jurisdictional needs, priorities, and contexts
- Building capacity for sharing knowledge, case studies, successes, and best practices