

BC Disaster Risk Reduction Hub

Working Together to Build Resilient Communities in British Columbia

Design Concept Note

Sahar Safaie¹, J. Murray Journey², and Malaika Ulmi²

This document outlines the proposed design for an institution in British Columbia that would facilitate connections and collaboration between science and policy actors for the common goal of disaster and climate risk reduction in BC. The role of this entity, for now called BC Disaster Risk Reduction (DRR) Hub, includes 1) responding to priority demands of practitioners and policy designers for risk data management and production of relevant risk information and 2) enabling the use of risk information in design of policies and investments that build resilience of the communities in BC. The design of the entity will evolve over time, but the core concepts will remain, and this document provides a basis from which to build.

Overview

BC DRR Hub is an independent entity that coordinates science and policy partnerships to strategize and efficiently use available resources capabilities to respond to priority demands of stakeholders in building resilient communities. The focus is on production of multi-hazards and risks data that are relevant and the development of methods for using risk information in disaster risk reduction (DRR) and climate change adaptation (CCA) across the province. Supporting open risk data management and effective sharing of information and capacity development are also part of its core functions.

BC DRR Hub serves practitioners, decision makers, and researchers active in understanding disaster and climate risk and risk management in public and private by direct interactions as members and users of the Hub services. It serves the whole of society as the ultimate beneficiaries of disaster and climate risk management in BC.

BC DRR Hub intends to tackle the following challenges:

- Risk data accessibility and data sharing modalities
- Understanding and using risk information in DRR and CCA
- Coordination and collaboration across projects, hazards, and sectors
- Identifying priorities and common needs for effective disaster and climate risk management across hazards and sectors

BC DRR Hub enhances understanding disaster and climate risk for risk management (DRR and CCA) across the province and improves efficiency in the use of financial resources and expertise by:

- Avoiding duplication of efforts in conducting risk assessments across projects, hazards, and sectors
- Gaining more from hazard and risk assessments by transforming reliable data into actionable information for use by a wide range of users beyond the scientific community
- Ensuring research, modeling, and tools are relevant to serve priority topics for disaster risk reduction by enabling a space for co-design and co-development by scientific researchers and practitioners.

¹ Sage on Earth Consulting Ltd.

² Geological Survey of Canada, Natural Resources Canada

Background

Understanding disaster risk with all its dimensions is fundamental for designing effective risk reduction measures. The Sendai Framework for Disaster Risk Reduction 2015-2030, identifies understanding disaster risk as the first priority for action and the basis for the other priorities of action for risk governance, investing in disaster risk reduction (DRR) and managing residual risk by emergency preparedness, recovery planning, and build back better.

“DRR governance and risk assessments tend to lack the necessary links and this fragmentation increases the price tag of each new risk assessment, keeps risk assessments within the scientific community and isolated from policy processes, and impedes the use of risk information in policy design, capability development and for shaping investments.”³ A provincial center (notionally called the BC DRR Hub), would collaborate with a wider range of partners to ensure risk information is relevant in context and format, robust in scientific methodologies, but also flexible in the approach to effectively meet the disaster risk reduction (DRR) and climate change adaptation (CCA) user needs within the limitation of available resources. Coherence between disaster risk reduction and climate change adaptation both at the science and risk information side and at the policy and implementation side are crucial for holistic risk management and efficient use of resources. The proposed Hub would design its services to support coherence between DRR and CCA.

The need for a systematic approach in understanding risk was identified by the broad provincial community of practice at BC Understanding Risk symposiums in 2017 and 2018 (see the outcomes document of [UR+2017](#)). Since early 2019, through the DRR Pathways Project⁴, an NRCan-led initiative, which has the enhancement of science and policy connection at its core, more deliberation has taken place among the core partners of the project as to what the BC DRR Hub should be. The key components of the Hub have been identified as part of a theory of change exercise. This document provides high-level information on the goals and objectives, value proposition, key components and activities, proposed institutional setup, and timeline for establishing the Hub.

The Vision Statement

The Hub will enable collaborations and connections between science and policy researchers, designers, and decision makers to work together in enhancing the governance of disaster and climate risk information and building resilient communities in BC.

³ From “Understanding Risk System (URS): An essential foundation for implementing the Sendai Framework“, Safaie. S., Alfonso Santamaria. N., Houdijk, R., Onur. T., 2018. See the Sage On Earth Consulting Projects and Publications at [SageOnEarth.ca](#) or click [here](#).

⁴ The project “DRR Pathways Project: Disaster Risk Reduction (DRR) Pathways: Incentives for Mitigation & Adaptation Investments” is funded by Canadian Safety and Security Program and is led by Geological Survey of Canada, Lands and Minerals Sector, NRCan. Project timeline is January 2019-June 2021. See [DRRPathways.ca](#)

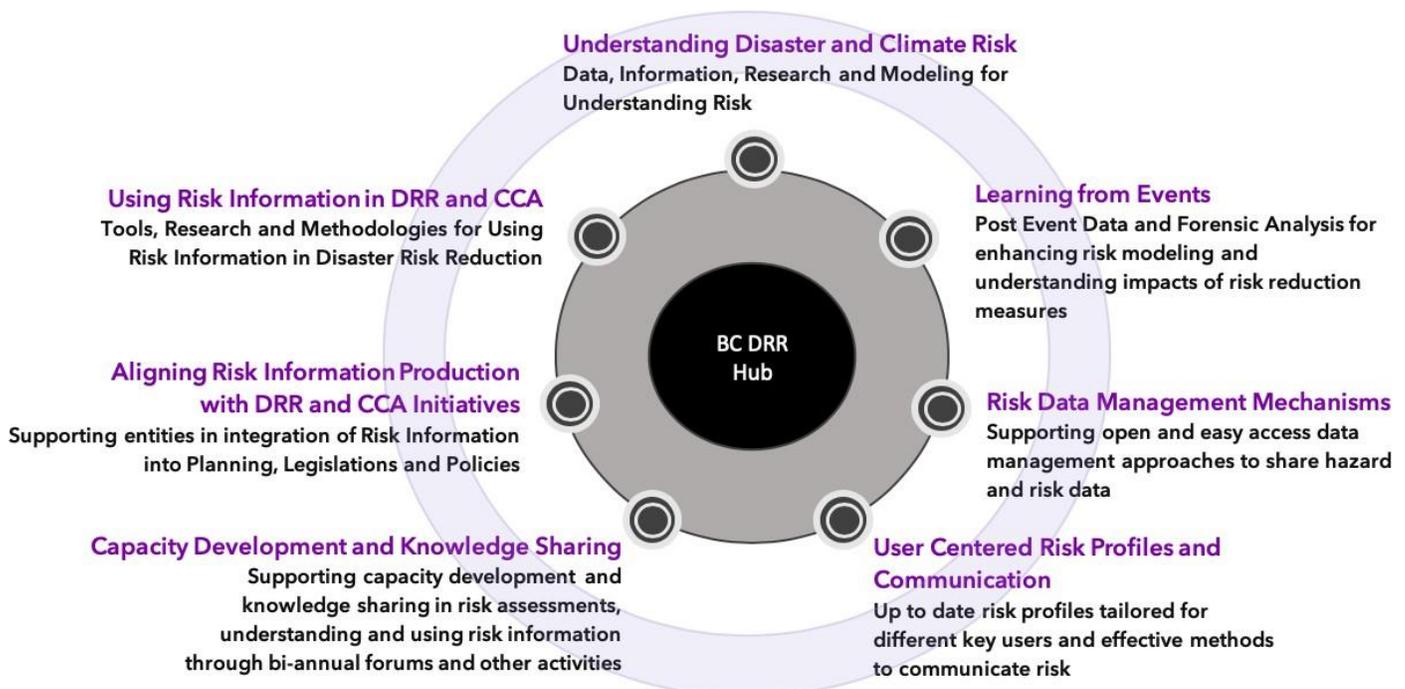
The Objectives

DRR Hub will create a collaborative space to empower connection and collaboration between science and policy partners to identify the priority topics, co-design solutions, and provide policy recommendations.

Enabling use of risk information in policies for resilience	Researching and developing analytical tools and methodologies for using risk information in the design and implementation of legislations, policies, investments, and projects
Advancing understanding risk	Improving data and scientific methodologies for multi-risk assessments to support policies that include disaster and climate resilience in a more harmonized and strategic way
Enhancing access to data, information, and knowledge	Designing and promoting data management mechanisms to enhance access to exposure, hazard, and risk data through open data agreements, common data standards, data sharing protocols, and maintenance mechanisms

The Core Components and Activities

Designed and Implemented by the Partners and the Hub



Guiding Principles for Governance and Institutional Setup

The Hub's governance design and partnerships should empower the Hub with the following:

- Legitimacy for its mandate
- Strong convening power Scientific credibility Oversight for accountability
- Culture and capacity for innovation
- Flexibility and agility to adapt and adjust to ongoing changes and needs of DRR and CCA in BC
- Financial support and sustainability
- Benefit from existing networks and mechanisms

About the Secretariat

The secretariat is the core team of the DRR Hub who will manage the programs and convene and coordinate the partners. Ensuring that the secretariat is equipped with the right expertise and talent is fundamental for success of the Hub. The secretariat would need the following roles and expertise:

- Executive and management
- Technical expertise on risk assessment and policy for resilience (DRR and CCA) and the interface between the two
- Outreach and communication
Accounting and Finance
Human Resource Management

About the Governing Board

Success and sustainability of BC DRR Hub depends on the commitment and support from key entities with relevant mandate, role, and capacity in understanding disaster risk and reducing disaster risk in BC. The governing board is the mechanism to anchor the key institutions as it has the governing authority of the organization and is responsible for directing, influencing, and monitoring the organization's work plan, financing, and long-term success.

Municipalities and indigenous communities in BC play the main role in managing emergencies and reducing disaster risk. They would be the main users of DRR Hub services. Having representation at the early stages of DRR Hub design and later as members of governing board is quite important.

The Hub will function at provincial level, which means the role of provincial entities is critical in defining its scope and guiding its services for building resilience in BC. Meanwhile, the support from federal entities in the forms of financial and technical resources is key for success of BC DRR Hub but also for ensuring the connection with relevant federal programs and policies and for exporting the DRR Hub model and success story to the other regions across Canada.

At provincial level, Emergency Management BC (EMBC) is the main entity responsible for leading and coordinating emergency management and disaster risk reduction in BC. EMBC is modernizing the emergency management act to shift towards disaster risk reduction as a holistic approach instead of only focusing on managing emergencies. Other key provincial entities are 1) Ministry of Forests,

Lands, Natural Resource Operations and Rural Development with legislative leverage and mandate for managing floods and wildfires in BC, 2) Ministry of Municipal Affairs and Housing as the lead in supporting local governments, not-for-profit organizations, and residents to build resilient communities, and 3) Ministry of Environment as the lead in climate change adaptation in BC. It is important to identify approaches to leverage the existing operational and governance mechanisms for collaboration across ministries in BC such as Deputy Ministers' Committee on Emergency Management (DMCEM) and Assistant Deputy Ministers' Committee on Emergency Management (ADMCEM).

The scientific, engineering, and research entities, including the professional associations, are the other important group of entities that DRR Hub success depends on. Representatives of key institutions in BC should be engaged at early stages of DRR Hub design and be present on the governing board once the DRR Hub starts its function. Natural Resources Canada recognizes that an entity such as this would provide an effective mechanism to bridge science to policy for their hazard and risk research, and inform future research based on the needs of the practitioner community.

The other critical stakeholders are the private sector and community organizations who will all contribute to the Hub with knowledge and expertise and will benefit from its services.

The institutions that have put energy, resources, and insights to the conceptual design of the BC DRR Hub are the following:

- Natural Resources Canada
- Public Safety Canada (Pacific regional office) Emergency Management BC
- BC Ministry of Municipal Affairs and Housing (Building and Safety Standards Branch, Planning and Land Use Management Branch, Local Government Infrastructure and Finance Branch)
- BC Climate Action Secretariat

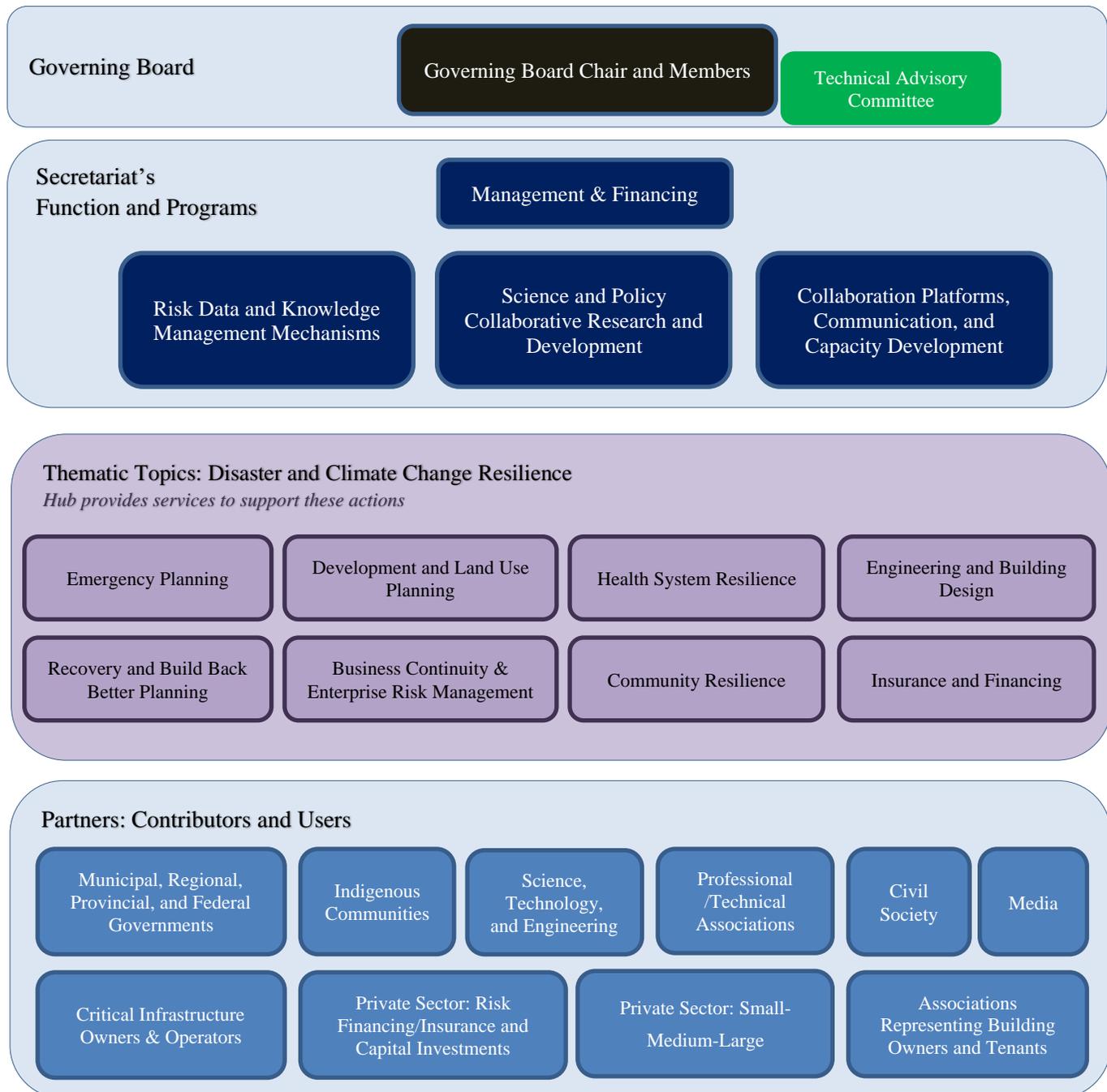
Other important entities will need to be engaged in the near future in order to join the efforts in designing and establishing the Hub. The terms for joining the governing board will be one of the first items to be defined as part of the Hub establishment.

Anchor Initiatives

The Hub connects with key policies, strategies, and programs related to disaster and climate resilience. At the time of authoring this Design Concept Note, the relevant initiatives include the following:

- Municipal DRR policies and plans including Official Community Plans and Landuse plans, Asset Management, Emergency Management Plans, and Resilience Strategies
- Metro Vancouver Regional Growth Strategy and Climate 2050 Planning
- Emergency Program Act Modernization
- BC Climate Change Adaptation Strategy
- BC Flood Risk Strategy
- Lower Mainland Flood Management Strategy
- Update to BC Existing Buildings Regulation
- NRCan's Public Safety Geoscience Program
- The National Emergency Management Strategy
- National DRR Roundtable and Platform

Notional Organization Setup and Function



Establishing BC DRR Hub

There are ongoing dialogue and efforts by the core partners and supporters of BC DRR Hub to explore different mechanisms for establishing the Hub officially. Meanwhile, through *DRR Pathways Project*, a major initiative called *Resilience Pathways Report* is underway which has been identified as one of the core activities of the Hub under Capacity Development and Knowledge Sharing. *Resilience Pathways Report* will be a comprehensive collection of articles that share

BC DRR Hub - Working Together to Build Resilient Communities in BC

Design Concept Note

knowledge and insights from organizations and individuals active in resilience planning in BC. Contributors to Resilience Pathways include a wide range (100+) of practitioners, researchers, and authorities across any and all sectors engaged with disaster and climate risk. See DRRPathways.ca for information and updates about this initiative and establishment of BC DRR Hub.

NRCan has been convening partners and stakeholders for consultations and co-design of the Hub concept as part of DRR Pathways Project funded by Canada Safety and Security Project.

Sage on Earth Consulting has been working closely with NRCan in this journey and have developed this design concept note.

Please provide comments to Sahar.Safaie@SageOnEarth.ca

Canadian Safety
and Security Program



Natural Resources
Canada

Ressources naturelles
Canada

Canada



SAGE ON EARTH CONSULTING
UNICE EXTENDING RISK AND RESILIENCE SOLUTIONS