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Rethinking Resilience: Perinatal health and health systems in climate-related natural disasters in Canada

Waterloo Climate Institute Policy Brief

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Abstract

The global community is faced with the glaring reality of increasing climate change emergencies and the urgent calls for response by global organizations and local communities. This has become evident in Canada where, in 2023, it is estimated that the wildfire season required the evacuation of over 230,000 people from their communities in 282 events. Research has shown links between climate change and health, especially during the perinatal period that includes the period during and following pregnancy. This period is recognized for its biological vulnerability, need for consistent health services and intergenerational impacts, with exposure to climate hazards increasing the risk for physical and mental health complications during pregnancy, postpartum and early childhood development. These poorer health outcomes are disproportionately experienced by Indigenous Peoples, racialized communities and gender diverse individuals. However, the critical intersection of structural discrimination, climate hazards and perinatal health is poorly understood in current climate emergency planning. This policy brief synthesizes findings from a scoping review (publication forthcoming) and proposes transdisciplinary policy action rooted in equity, that strengthens community and health system resilience and promotes climate justice.

Key Concepts and Acronyms: Climate change; Disaster (Natural); Climate-related emergency; Emergency Management; Climate Justice; Perinatal health; Perinatal health care; Infant feeding; Sexual and Reproductive health; Sexual and Reproductive health services; Equity-oriented; Family-centered

Key Messages

- Climate change is a public health emergency and climate hazards requiring emergency response and evacuation are increasing in frequency and intensity across Canada. However, these impacts are not the same for everyone.
- The consequences of climate change and climate-related natural disasters are disproportionately experienced by people during the perinatal period, including infants and children.
- Structural inequities including, racism, discrimination, and poverty, intersect with climate events, acting as threat multipliers that amplify health disparities.
- Transdisciplinary approaches to the emergency management continuum are needed that are equity-oriented, family-centered and gender-inclusive.

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Land Acknowledgements

We respectfully acknowledge that the development of this policy brief took place on the lands of First Nations, Inuit, and Métis Peoples. Specifically, writing took place in:

- Sòmbak'è (Yellowknife) on Chief Drygeese Territory of the Yellowknives Dene First Nation and North Slave Métis Peoples
- Rádeyíllikóé (Fort Good Hope) on the Territory of the K'ahsho Got'ine Dene and the Métis Peoples

Since time immemorial, Indigenous Peoples have been stewards and guardians of the lands and waterways and recognize the interconnectedness of the health of people with the health of the land. Indigenous Peoples and their distinct knowledge systems must be centered in all attempts to address climate change and climate-related natural disasters. This policy brief recognizes the erasure, exclusion and absence of Indigenous voices and Worldviews in the research, policy and practice related to emergency management and natural disasters have direct impact on resilience of communities locally and globally. As reflected in Redvers et al. (2024):

"when you homogenize knowledge, as has been done through ongoing epistemicide, our resilience as a human species declines just like a monoculture farm starts to lose its ability to buffer stresses from environmental changes. Epistemicide has therefore resulted in decreased resilience and wellbeing as a human society when looked at from an Indigenous worldview"(1, p3).



A Note on Language

This policy brief adopts approaches to gender-affirming and inclusive language around perinatal and reproductive health. Existing research and evidence continue to use sex- and gender-binary terminology and when citing these sources, the original language was maintained to accurately reflect the outcomes in the data. This demonstrates a limitation of current research in reflecting the diversity of people who experience pregnancy and perinatal health outcomes.

Introduction

Climate change is a public health emergency and climate hazards requiring emergency response and evacuation are increasing in frequency and intensity across Canada (2). The impacts are not the same for everyone (3). As a ‘threat multiplier’ (4,5), climate change amplifies inequities, including those related to perinatal health (4,6–8). Despite being a time of vulnerability, approaches to climate-related emergency management fail to account for the needs of pregnant and postpartum people, their infants and children (6). United Nations (UN) agencies call for urgent policy response, research and health system action to address the health risks to pregnant people and children due to climate catastrophes (9).

This policy brief synthesizes findings from a scoping review (publication forthcoming) conducted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (5), which examines the challenges and opportunities for climate emergency management and the delivery of perinatal and infant-feeding health services by applying an intersectional lens and equity orientation. Findings from the review highlight broad implications for the approach to emergency management taken by governments, health systems, and non-governmental organizations and builds on the conclusions of the report of the Chief Public Health Officer (2), recommendations within the National Adaptation Strategy (10), and the Gender and Emergency Management Framework for Action (11) with a focus on perinatal health. The policy brief seeks to identify gaps in current models for perinatal health service access and delivery during climate-related emergencies and natural disasters and identify areas for policy action and implementation. A discussion of perinatal health outcomes related to exposures to climate hazards and review of epidemiological evidence is not within the scope of this policy brief.

Issue Statement

Climate-related natural disasters have profound, acute and far-reaching impacts on the physical, mental, and emotional health of pregnant and postpartum people, infants and children. During the perinatal period, physiological and socio-cultural factors create distinct vulnerabilities and disproportionate impacts on health outcomes (12,13). These events disrupt access to essential health services, social supports and basic needs while also damaging critical community infrastructure (13).

Emergency planning, mitigation, response and recovery often overlook sexual and reproductive health (SRH), including perinatal health and infant feeding. Structural inequities- including, racism, discrimination and poverty- intersect with these climate events, acting as threat multipliers that worsen disparities during and after climate-related natural disasters (8).

Background

Natural disasters and climate change

Climate-related natural disasters include floods, wildfires, extreme heat, hurricanes, tsunamis, landslides, drought and storms/typhoons (2). Climate emergencies have required evacuation and mass sheltering of entire communities (14). In 2023, it is estimated that the wildfire season in Canada required the evacuation of approximately 232,000 people from their communities in 282 events (14). The experience of internal displacement is disproportionately experienced by Indigenous Peoples. In that same year, the Internal Displacement Monitoring Centre reported that although Indigenous Peoples represent 5 percent of Canada's population, over 16 percent of people internally displaced were Indigenous Peoples living in reserve communities (14). Even with mitigation efforts, a degree of global warming is now unavoidable having passed seven of nine planetary boundaries (15,16). Governments and health systems can no longer ignore climate change and the threat of increased emergencies. It is imperative that we come together to develop evidence-based, intersectional approaches to emergency management and climate adaptation that include those most impacted and begin with communities; recognizing that "the units of survival are going to be local communities" (16, p6).

The emergency management continuum

In Canada, climate-related emergencies and natural disasters are managed locally by municipalities and communities, or at the provincial/territorial level (17). Most have

a central emergency management statute that delegates roles and responsibilities, establishes the process for declaring an emergency and using emergency powers (2). In some cases, the emergency exceeds the capacity of the local area and assistance is requested from the federal government and national emergency response organizations. Responsibility for emergency management, therefore, includes all levels and requires cross-sectoral action and collaboration (2).

The Emergency Management Framework for Canada-Third Edition (17) uses an all-hazard approach across four interdependent components:

Prevention and mitigation: to adapt, eliminate, or reduce disaster risks to protect life, property, environment and the economy.

Preparedness: to develop readiness for disaster response and recovery prior to an event.

Response: to act during or immediately before or after a disaster to reduce harm.

Recovery: to repair or restore conditions to an acceptable level and support long-term and sustainable recovery.

Perinatal health during climate-related disasters

Emergencies caused by climate hazards are also health care emergencies (18). They produce significant strain on the health care system and workforce, disrupt medical services and infrastructure, and amplify existing barriers and inequities (10,18). Infants, young children, pregnant and postpartum people have distinct health needs during disasters. The perinatal period is vulnerable to environmental influences (19). Exposure to natural disasters has important immediate and lasting impacts on the health outcomes of this population, including increased risk of miscarriage, premature delivery, low birth weight, infectious diseases, communicable diseases, respiratory diseases, heat stress, along with infant and child undernutrition, perinatal mental health disorders and gender-based violence (4,9,20–22).



Three international guidelines are foundational to guide emergency management considerations during the perinatal period:

- 1. Operational Guidance (OG) on Infant and Young Child Feeding in Emergencies (IYCF-E)** requires that policies on infant and young child feeding be developed, that emergency relief and management staff be trained on these policies, and that interventions be planned and implemented to support breastfed, formula fed and complementary fed children (23).
- 2. Minimum Initial Services Package (MISP)** developed by the Inter-Agency Working Group for Reproductive Health in Crisis (24). The MISP describes a set of minimum lifesaving sexual and reproductive health (SRH) services that should be ensured at the onset and aftermath of a humanitarian crisis, with a focus on low- and middle-income countries. Services include providing family planning services and education to prevent unintended pregnancies, ensure antenatal and emergency perinatal care to reduce maternal and newborn morbidity and mortality and prevent and respond to the needs of victims of sexual violence (25).
- 3. International Code of Marketing of Breastmilk Substitutes (WHO Code)** was developed by the World Health Organization (WHO) and adopted by the World Health Assembly in 1981 in response to global decline in breastfeeding rates due to unethical promotion of infant formula, follow-up formulas and toddler milks and foods (26). Updated in 2017, it aims to ensure safe nutrition for infants and children by regulating the appropriate application of breastmilk substitutes, including infant formula and toddler milks, protecting chest-/breast-feeding and appropriate complementary feeding (27).

International guidelines and frameworks provide a shared vision and approach to addressing the needs of pregnant people, their infants and children, however, the process of implementation in different contexts, who is responsible, and how success is measured remains unclear. Approaches to emergency management at all levels, from international to local, continue to reflect a colonial model that does not recognize or address the root causes of inequitable outcomes (8).

Colonialism, structural discrimination, and burden of harm

Emergency management remains a male-dominated field and often relies on heteronormative, one-size-fits-all approaches focused on individual biomedical needs while excluding community voices (6). Historical and current approaches to emergency management have failed to consider the many forms of discrimination and

their cumulative and intersecting impact on access, experience, and outcomes across the continuum of emergency management.

Despite being disproportionately impacted by emergencies and natural disasters, Indigenous, Black, Queer, and young children's voices are notably absent from emergency management and related research (19). The result is inequity, with the greatest impact and poorest outcomes experienced by groups that are under-resourced and under-served (7,8). This is a product of how the system of emergency management was designed, where continued processes of colonization and racism are embedded in social policy and structural processes (8).

Policy Implications

Climate-related emergency management is a complex field with many interconnected interest- and rights-holders with unclear jurisdictional authority and decision-making. Over the last two decades, there have been numerous and repeated calls for action, guidance frameworks, and recommendations. Despite this, perinatal health continues to be an overlooked and invisible aspect of emergency management (6).

The studies included in the scoping review each identify opportunities for action, from policy to practice, by centering the needs of pregnant and postpartum people, infants, and children. They are discussed here in alignment with the emergency management continuum; from prevention to recovery.

Prevention and Mitigation

Population and community needs, strengths and vulnerabilities

Emergency prevention and mitigation cannot be separated from understanding the preexisting needs and health status of the population- including physical, social and cultural environments and factors that convey risk or resilience.

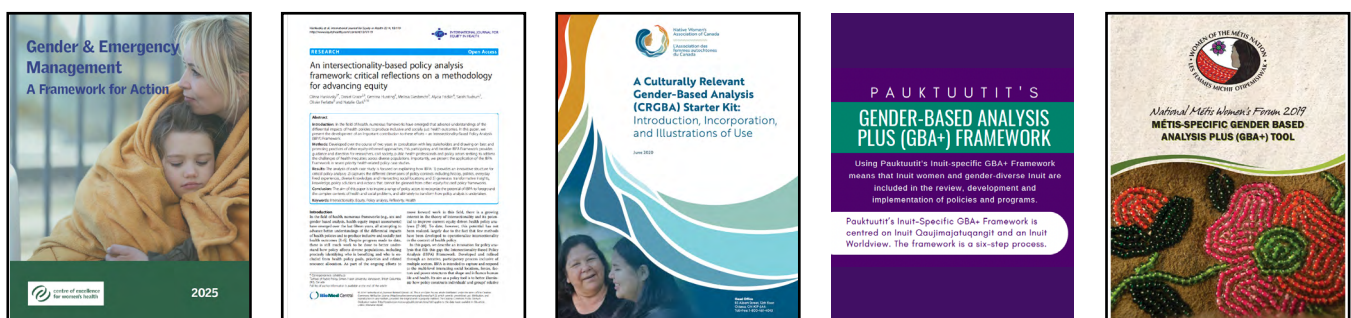
Regions prone to climate hazards often have poor access to health facilities and providers (28) resulting in poorer health outcomes, including for infants, when compared to wealthier groups that do not live in disaster prone areas (29). Fragmented service delivery before a disaster will be further compromised during disaster response and recovery. Ensuring comprehensive service delivery before disasters occur is essential, especially in climate-vulnerable locations (25).

Similarly, community-based support resources for infant feeding and the Baby-Friendly Initiative (BFI) designated facilities within Canada are often concentrated in urban areas (30). Analysis of location-based chest-/breast-feeding initiation rates in the United States Gulf Coast reveals distinct urban-rural patterns; where resources cluster

in urban, majority-white areas while Black communities have fewer supports (30). This limits access to community expertise and increases reliance on infant formula during disasters for those living in remote areas (30).

In Canada, the BFI applies to both hospitals and community health services, which allows for greater integration of these best practices in rural and remote health settings. Based on the 2024 annual report from the Breastfeeding Committee for Canada, the authority for BFI in Canada, a total of 16 hospitals, 9 birth centres, 100 community health facilities, and 0 Indigenous health centres have received designation as of December 2024 (31). According to current national estimates of the number of community health centers (n=~300) and hospital facilities (n=1,087) (32,33), this represents at most a possible 9% coverage, with 7.9% of those facilities located in Quebec. This illustrates the disproportionate access to facilities implementing Baby-Friendly policy and best practices in maternity and newborn care services.

Equity-based needs assessments and community asset mapping are essential tools to inform service distribution, investments and planning efforts. The Gender-Based Analysis Plus (GBA+) tools (34), Gender and Emergency Management: A Framework for Action (11) and Intersectionality-Based Policy Analysis Framework (35) can provide a systematic process that can be used to learn more about the impacts of policies, programs and services on the experiences and outcomes on a diverse group of people that hold multiple identities. Distinctions-based tools (see below) have been developed for First Nations, Inuit, and Métis Peoples (34,36,37) and provide an important starting point for centering equity along the emergency management continuum.



References (left to right):

1. Huber, E., Muñoz Nieves, C., Poole, N., & Greaves, L. (2025). Gender and Emergency Management: A Framework For Action. Vancouver, BC Canada: Centre of Excellence for Women's Health.
2. Hankivsky, O. (Ed.). (2012). An Intersectionality-Based Policy Analysis Framework. Vancouver, BC: Institute for Intersectionality Research and Policy, Simon Fraser University.
3. Native Women's Association of Canada. A culturally relevant gender-based analysis (CRGBA) starter kit: introduction, incorporation, and illustrations of use. Ottawa, ON: Native Women's Association of Canada; 2020.
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5. Women of the Métis Nation. National Métis Women's Forum 2019: Métis-specific gender-based analysis plus (GBA+) tool [Internet]. 2019.

Accountable governance in climate change and emergency policy and planning

Emergency plans at community, municipal, provincial/territorial and national levels are technical documents that identify critical assets and services, governance structure, strategic priorities and considerations for each phase of the emergency management continuum (38). An audit of Australian emergency planning and preparedness documents identified several gaps and areas for improvement, inclusive of governance and oversight for perinatal health needs during times of emergency (39).

In Canada, authority for identifying and ensuring the safety of infants and children at times of emergency is alarmingly unclear. A national multidisciplinary committee responsible for Infant and Young Children Feeding in Emergencies (IYCF-E) with a mandate to integrate the needs of mothers, caregivers, infants and children at every phase of emergency management and at every level of government could be an important step (39). A committee, with membership inclusive of those most impacted, could strengthen existing approaches by leveraging best practices embedded in operational guidelines for IYCF-E and sexual and reproductive health and rights (SRHR), while also conducting regular and continuous audits of existing emergency plans.

Access to perinatal care and other reproductive and well child health services

Emergency planning must embed comprehensive and continuous SRH services, inclusive of perinatal care, well child health services and immunizations (39,40). Minimum Initial Services Package (MISP) has been the framework guiding essential SRH services in low- to middle- income countries within humanitarian settings. The conditions of disasters, including economic instability, food insecurity, and failing infrastructure, have also been found to increase experiences of sexual and gender-based violence for girls, women and gender minorities (41).

Beyond the unique physical health needs of perinatal populations, it is essential that mental and emotional health and social determinants are not overlooked (40). This should be prioritized in areas at risk for climate disasters, rather than adopting ad hoc service delivery responses during and after the event (25). This was echoed in evidence presented to the Standing Committee on Foreign Affairs and International Development, where it was recommended that SRH services be fully embedded into health systems and the foundation of primary care (42). Without this, “it is easily deprioritized when the system comes under stress or strain” (39, p18). Although Canada has expanded funding to support access to SRH especially within international humanitarian settings, the prioritization of this work domestically including the implementation of the MISP and other international guidelines has not been clearly described.

Delivery of SRH is not exclusive to the biomedical model with only physicians and

nurses. In fact, health system resilience can be improved when care is provided by various care professionals and community members who can provide trauma-informed and culturally relevant services and supports. Midwives are well positioned to provide comprehensive SRH services in communities when integrated as part of the formal health structure (25). As a trusted community resource, they can fill an important role as liaison with disaster planners at the local level while also providing essential person-centered services. Despite midwives being identified as a “cost effective way to prevent maternal deaths” (39, p18), there remains a global shortage of midwives (42). **In Canada, it is estimated that an additional 9,000 midwives are needed by 2030 in order to meet the SRH needs of communities** (43).

Preparedness

Relationships, social capital and partnering with communities in preparedness planning

Relationships are protective. Leveraging social supports and connections that provide culturally relevant and language appropriate care and services is imperative for populations that experience systemic discrimination placing them “at-risk” during natural disasters (44). Community members are equal partners in designing, planning, implementing and evaluating preparedness activities. It is only by partnering with communities, that a better understanding of community needs can be identified including strengths, assets, risks and vulnerability. Emergency plans and preparedness activities should be codesigned with, *for*, and *by* Indigenous Governments and other community organizations. Co-design, as an approach, can strengthen relationships and trust by centering Indigenous knowledges and sciences and respecting community-driven innovations and strengths. Several studies identified partnerships as an important factor in enhancing community and health system resilience, including:

Community-based supports and resources

- Leveraging community-based resources along the emergency management continuum, such as language justice collectives and infant feeding peer support training (45).
- Including community members in response and recovery efforts, such as crisis hotlines and culturally safe, trauma-informed communications in local languages (45).
- Supporting community-level mutual assistance and aid movements (45,46).
- Prioritizing relationship building between health care staff and the people they serve (25).

Health care providers and professional associations

- Leveraging health care providers as an important resource for providing

evidence-based information to the public related to climate change, climate hazards and emergency management (47).

- Working with health professional associations that have a role in advocacy, public engagement, and leadership (47).

Community is recognized as a unit of resilience (16); and efforts should be taken to value the role of community resources in supporting perinatal health and wellness, including by addressing social determinants of health such as food security, employment, housing quality, and accessing insurance (48). There is a need for greater investment in existing community resources, leveraging local community assets, as well as dedicated commitment and action to expand perinatal and infant health programming and supports to more rural and remote regions.

Health system emergency planning and coordination

Horizontal and vertical evacuation plans can improve regional team coordination, clarify incident command within units and health facilities, identify appropriate equipment and supplies for perinatal health needs (e.g. bassinets, medical sleds) and solidify infant identification processes to avoid misidentification or separation (49). Research undertaken to understand the disaster experiences of neonatal intensive care units (NICU) during the wildfires in Oregon and California revealed the need for NICU specific evacuation plans that were formalized in both policy and procedures, practiced with live drills, and consolidated with clear tools available for nurses (for example, a checklist on how to evacuate critically ill infants, equipment and supply lists, clear procedures for infant identification, and streamlined administrative pathways to rapidly deploy perinatal health staff at times of emergencies) (49). The Government of Canada provides an all-hazards planning framework (50) for the organized delivery of a health portfolio emergency response, yet detailed planning specific to the needs and context of NICUs and health facilities providing perinatal health services is needed.

Health professional training to meet the needs of perinatal populations during times of emergency

As trusted sources of information and knowledge, health system staff, especially primary care providers, obstetricians, gynecologists and pediatricians, play an important role in addressing misinformation and sharing relevant health promotion and guidance with the public (45,47,51). Part of preparedness for emergencies within health systems, requires that we allocate funding and prioritize training so that health professionals can deliver comprehensive care for vulnerable populations during times of emergencies. The associations representing nurses and midwives in Canada have developed position statements recognizing the critical role of these health professions, respectively, in climate crises and across the emergency management continuum (52,53). While existing approaches often focus on in-service training, there is a

growing need to embed this in core curricula as an opportunity to build a resilient and sustainable health workforce that can deliver a high quality of SRH services.

Training in IYCF-E and the WHO Code are specific to the needs of this population. Training should be inclusive of SRH services, and responsive to the impacts of climate emergencies, including the increased risk for gender-based violence, absence of family planning services, lack of access to basic needs and social capital during times of emergencies (54). Multisectoral approaches to staff training where many professions learn together can support shared understanding of roles and opportunities for collaboration (54). While most included studies spoke to technical training in SRH and maternal-child health needs, it is imperative that competencies related to cultural safety and trauma-informed care be embedded across all training as one aspect of addressing systemic racism and colonialism. This is aligned with the Truth and Reconciliation Commission (TRC) Calls for Action 23 and 24 (55), as well as the Missing and Murdered Indigenous Women and Girls Call for Justice 7.6 (56).

Health promotion information and resources for perinatal period

A breakdown of communication and lack of information relevant to the needs of caregivers with infants and young children was identified in several studies. Emergency kits rarely include information about caring for infants during times of emergency, and in some cases, contain information for the public without consideration of the needs of different population groups or ages (39). For example, at times of heat waves the general recommendation is to increase water consumption. This is not recommended and could be harmful to infants (39).

Knowing that caregivers and infants are particularly vulnerable at times of emergency, health promotion messaging and resources should be tailored for their needs using a variety of approaches and delivered by different health care professionals and other trusted community resources (45). Consideration for culturally safe, trauma-informed information available in appropriate languages can support access to appropriate and actionable information for the people that most need it.

Specific topics relevant to this population may include caring for infants and young children during heat waves, accessing and safely preparing infant formula in emergency settings, continued breastfeeding and re-lactation, safe infant sleep surfaces, access to clean water and access to mental health and gender-based violence supports (39,45,46). Globally, emergency grab bags or preparedness kits are understood to be an important disaster risk reduction strategy. There is an opportunity to prepare families with infants and young children to include items essential for survival. Safely Fed Canada has spearheaded efforts to keep families informed and prepared in the case of internal displacement and evacuation by providing clear, evidence-based resources on safe infant feeding (57).

Response and Recovery

Space, supplies and specialized assistance for families with infants and young children immediately and ongoing, especially during displacement and mass sheltering scenarios

Mass sheltering spaces must provide private, safe and family-centered spaces with access to clean water and food (28,54). Spaces should also be equipped with supplies and resources for caring for and feeding infants and children, various forms of infant formula for specific conditions, and infant feeding support counsellors (54). Emergency management organizations can include dedicated experts in perinatal health and infant feeding, such as lactation consultants, and other infant feeding supports (54). Including these supports can help adapt national guidelines to local needs and strengthen response strategies that prioritize the safety of pregnant and post-partum people, infants and young children.

Awareness of the harms of untargeted promotion of breast milk substitutes and maternal choice

Breast milk substitutes, while a critical and lifesaving medicine in certain conditions, are also part of a multi-million-dollar industry where marketing practices can increase risks for infants and children and compromise the decision-making of caregivers and families, particularly during emergencies. The untargeted promotion and availability of breast milk substitutes during emergencies create challenges, as continuous supply cannot be guaranteed, putting many families at risk of infant food and water insecurity.

It is imperative that human milk substitutes be distributed in alignment with global guidelines and existing policy frameworks, such as the WHO Code (40,45). Additionally, other dedicated supports to address infant food insecurity and to support lactation and safe infant feeding should be embedded in emergency response (54). This includes specialized supports around re-lactation, wet nursing and donor breastmilk (54).

A recent report from the WHO and UNICEF compared national implementation efforts of the WHO Code and subsequent World Health Assembly resolutions across countries (58). **It found that Canada is one of 48 countries that have no legal measures in place to implement some or all the provisions of the WHO Code (58).**

Even with legal measures, many countries fail to have any way of monitoring and enforcing these measures. This highlights significant gaps in protecting, promoting and supporting breastfeeding and safe infant feeding. Although the WHO Code is not legislated in Canada, health authorities have taken accountability by demonstrating how they are meeting and implementing actions to address each article of the WHO Code. For example, in 2024, Alberta Health Services released the resource, *The International Code of Marketing of Breastmilk Substitutes, Alberta Health Services Considerations* (59).

Limitations

The scoping review process for this policy brief identified limitations in the existing literature and opportunities for future research:

- Although the included studies often addressed the impacts of socioeconomic status and heteronormative gender experiences, there was limited discussion of the impacts of racism, colonialism and systemic inequity as drivers of poor health outcomes and experiences during climate emergencies.
- Although the included studies described the outcomes and experiences of climate-related natural disasters for cis-gender women during the perinatal period, there remains a critical gap in understanding and addressing the specific needs of 2SLGBTQIPA+ and gender diverse individuals.
- Across the included studies and the broader literature, there is a lack of Indigenous-led research and methodologies.
- Although an increasing number of studies discuss natural disasters and perinatal health outcomes and experiences, few explicitly identify or establish the relationship between natural disasters and climate change. This limits discussion of climate adaptation and mitigation efforts.

Recommendations

This policy brief aims to advance collaborative, transdisciplinary policy recommendations that recognize structural inequity, climate injustice and their impacts on perinatal health. This starts with an inclusive understanding of who needs to be part of conversations going forward, with clear acknowledgement of authority, decision-making and accountability that goes beyond geographic or political boundaries. This includes those most and disproportionately impacted by climate-related natural disasters, including pregnant and postpartum people, children, youth, Indigenous Peoples, racialized communities and gender diverse communities. While not exhaustive, the following figure identifies some of the key rights holders and stakeholders at all levels.

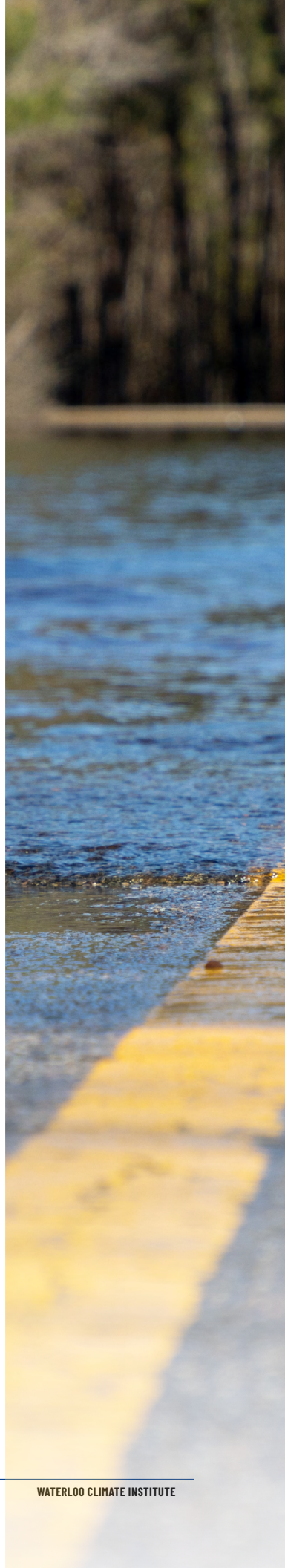
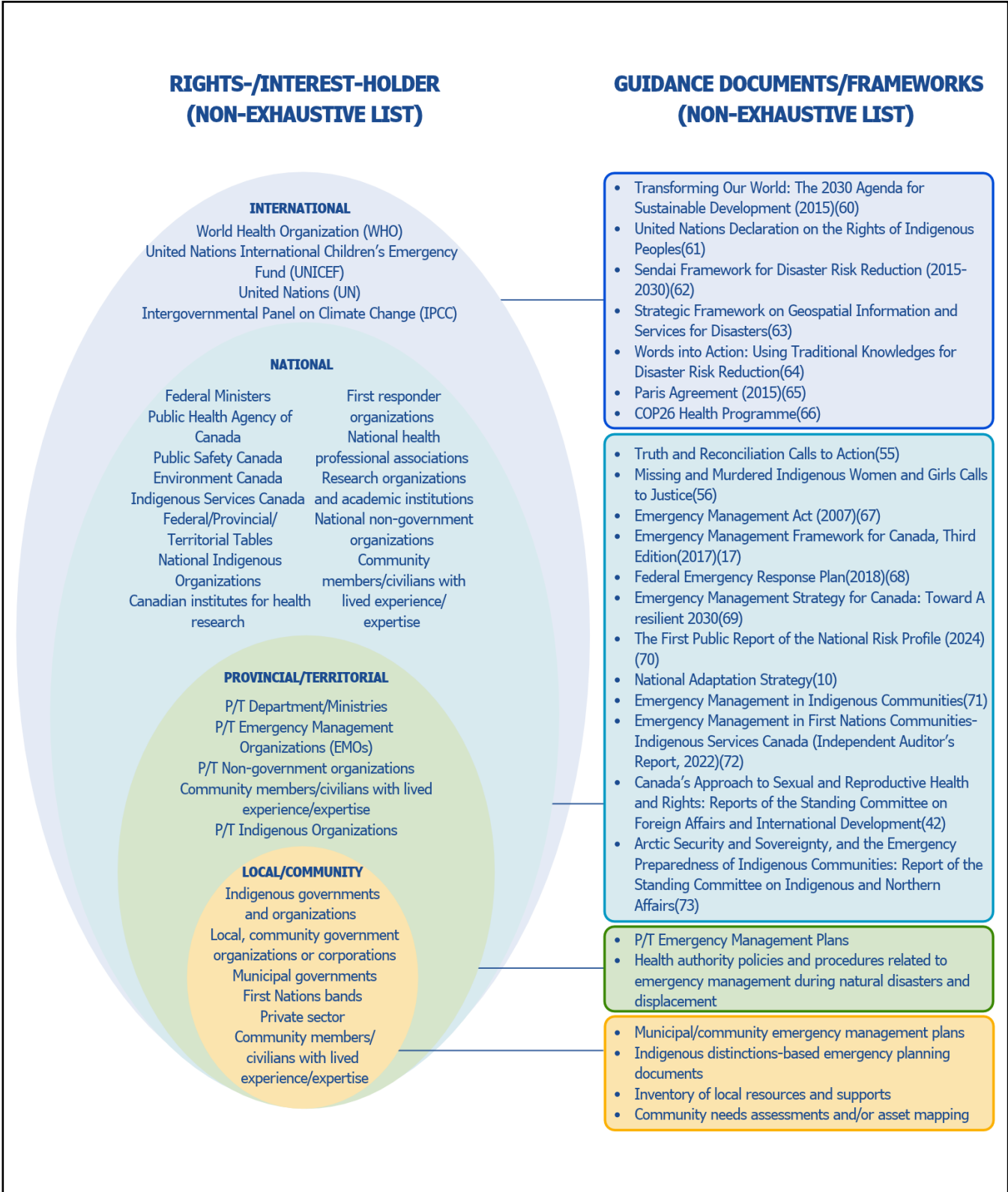


Figure 1. Key rights holders and stakeholders at all levels



Prevention and Mitigation

All:

- Provincial, territorial and municipal governments report on equity-based key performance indicators, including access to and experience of language appropriate resources, availability of safe, family-centered spaces, implementation of gender-based violence assessment and tools and access to culturally safe and comprehensive perinatal health services during emergency response and recovery.
- Indigenous-led research and evaluation initiatives in climate and emergency management are prioritized and First Nations, Inuit, and Métis communities are supported to engage and lead within research governance and to advance Indigenous-driven research priorities and methodologies.

National

- The Government of Canada continues to advance work on distinctions-based Indigenous Climate Leadership agenda which builds regional and national capacity and progressively provides resources for climate action in the hands of First Nations, Inuit and Métis and representative organizations recognizing their distinct jurisdictions in matters of land, resource stewardship, climate change and the connection between land and body sovereignty (10).
- The Government of Canada works to establish a national advisory and governance forum with clear oversight and accountability for the integration of sexual and reproductive health and rights within health services and across the emergency management continuum in Canada. This inclusive and multisectoral forum would have mandated authority to understand, guide and implement international policy frameworks, including the Minimum Initial Services Package (MISP), Infant and Young Child Feeding in Emergencies (IYCF-E) and World Health Organization (WHO) Code, within a Canadian context and in alignment with the National Adaptation Strategy (75).
- The Breastfeeding Committee for Canada works collaboratively with all levels of government and health systems to expand coverage of the Baby-Friendly Initiative quality improvement program across hospitals and community health centers and prioritizes action in rural, remote and Indigenous communities across Canada with explicit considerations for infant feeding during times of emergencies and internal displacement.

Territorial/Provincial

- Provincial, territorial, and Indigenous health leadership should conduct equity and adaptation assessments. This involves a review of the distribution and access to existing sexual and reproductive health services, including perinatal and infant feeding services, by community and region. This can inform ways to strengthen access and integrated care pathways for perinatal care before, during and after emergencies.
- Territorial and provincial health systems need to acknowledge and strengthen the role of midwives and community-based health professionals, such as community health workers, in providing culturally safe, family-centered sexual and reproductive health care and support including the opportunity for them to act as liaisons with disaster planners.

Community/Local

- Community members, community organizations, private sector and non-government organizations are supported to engage in community asset mapping and needs assessment activities with consideration for the programs and services available for infants, children and people during the perinatal period, especially responsive to the needs of Indigenous Peoples, racialized and gender-diverse communities.
- Indigenous Peoples, racialized and gender-diverse communities are supported to engage, participate in and lead governance tables at all levels related to climate mitigation, adaptation and emergency management.

Preparedness

All:

- In partnership with Indigenous governments, national, provincial, territorial, and municipal governments integrate the needs of infants, children and people during the perinatal period in existing emergency management plans, climate agendas, and demonstrate alignment with global guidelines for infant and young child feeding and sexual and reproductive health services. This includes IYCF-E, MISP, and the WHO Code.

National

- A national advisory and governance forum for sexual and reproductive health at times of emergencies should be formed to conduct regular audits of emergency planning documents and apply equity-oriented, distinctions-based tools, such as Gender-Based Analysis Plus (GBA+) and Gendered Emergency Management Framework, with clear recommendations and authority for enforcement.

Provincial/Territorial

- Territorial and provincial emergency management organizations must review and strengthen governance and decision-making by adopting membership inclusive of community organizations and health care professionals serving people and families during the perinatal period, and individuals with lived expertise who are disproportionately impacted by climate-related natural disasters.
- Territorial and provincial emergency management organizations continuously work to build meaningful and trusted partnerships with Indigenous governments and communities, recognizing them as equal co-designers across the emergency management continuum, with specialized knowledges and land stewardship practices.
- Incident Command Centers and/or emergency management organizations embed distinctions-based, culturally relevant Gender-Based Analysis Plus tools and intersectional frameworks to guide activities, decision-making and evaluation within each phase of emergency management.
- Provincial and territorial governments support community-driven capacity building initiatives related to sexual and reproductive health, including perinatal and infant feeding services, through allocation of multi-year, core funding.
- Provincial and territorial health systems partner with emergency management operations staff and professionals, emergency responder volunteers, and community organizations to provide interdisciplinary training for health system and community staff on culturally safe, trauma-informed perinatal health services, during emergencies across all contexts: rural, remote and urban.
- Provincial, territorial, and municipal governments, along with health authorities, strengthen health promotion resources and public communications by providing culturally safe, trauma-informed and linguistically appropriate information for the perinatal population. Information is delivered through a variety of low-barrier, accessible approaches, including emergency hotlines, multimedia learning tools (podcasts, apps, virtual information hubs), emergency preparedness kits and through peer support networks.
- Provincial and territorial health authorities prioritize emergency management and evacuation planning during natural disasters, with comprehensive policies and procedures, consolidated through live drills. Best practices include consideration of roles/responsibilities, coordination with incident command, appropriate equipment and supplies for perinatal health needs, streamlined administrative pathways for rapid deployment of health staff and health facility privileges and clear infant identification processes.

Local/Community

- Local community members are supported to participate meaningfully and share lived experience and expertise in all emergency planning and preparedness activities, including governance and decision-making structures, training, and communications.
- Community organizations prioritize and strengthen existing resources for infants, children, and people during the perinatal period, including infant feeding peer support groups, language justice collectives, birth workers and doulas.

Response and Recovery

National:

- Public Safety Canada mandates dedicated access to family-centered spaces in all mass sheltering locations which includes access to private, clean spaces, safe sleeping arrangements, infant/child supplies and equipment, and access to perinatal and infant health supports and resources.
- The Government of Canada recognizes the WHO Code as a core obligation under the Convention of Rights of the Child and strengthens its implementation across Canada by taking action on the recommendations made in, Marketing of breast-milk substitutes: National Implementation of the International Code, status report 2024.

Territorial/Provincial:

- Emergency management organizations include perinatal and infant feeding health experts and community members in executing response efforts, including consideration of infants, children, and their families during episodes of displacement.
- Provincial and territorial health authorities and services identify how they address the provisions of the WHO Code, with explicit considerations for access to lactation and chest-/breast-feeding support, infant formula availability, clean water supply, and safe infant formula preparation conditions at times of emergency.

Local/Community:

- Community members are valued and enabled to participate as trained, trusted, and capable members of emergency response teams, with critical expertise and knowledge of local environments, histories, cultures and languages.

Conclusions

Climate-related natural disasters are becoming a common experience across Canada and globally. They have significant impacts on access to health services and on health and wellness outcomes, yet the impacts are not the same for everyone.

Existing heteronormative, one-size-fits all approaches to emergency management are no longer acceptable. The needs of people during the perinatal period cannot be overlooked, and care cannot be delayed. Intersectional and equity-oriented approaches to emergency management must be a priority of governments and health systems at all levels; national, territorial/provincial, and community. Starting with the community as the “unit of resilience” requires that we dismantle Western approaches, address power imbalances and partner with members of the community who are disproportionately impacted by disasters to plan, prepare, respond and recover.

The proposed recommendations in this brief aim to address existing gaps, enhance perinatal health system and community resilience, and prioritize equity-oriented, culturally relevant approaches to climate-related natural disasters. They are a first, but critical, step for embedding change in policy and practice across the emergency management continuum.



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