STRATEGIC PLANNING FOR PLANETARY HEALTH AND SUSTAINABLE CARE

Why • The Case for Change
What • The Tools for Change
How • The Strategy for Change

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Canada

CASCADES

NAVIGATION

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INTRODUCTION

This playbook identifies practices for incorporating climate change considerations and planetary health into organizational strategic plans to support the transition to sustainable, equitable health systems.

We acknowledge that these recommendations are grounded in the same paradigms that have led to our current environmental crises. A roadmap to planetary health and a sustainable care system requires respect for, a true understanding of, and appropriate integration of Indigenous Knowledge Systems, with appreciation for the interconnectedness between human and more than human health and well-being.

We view this playbook as an opportunity to work towards a roadmap for a sustainable health system, while making immediate and impactful changes to the way we deliver care.

This playbook includes a synthesis of evidence, focusing on key action areas and implementation strategies, addressed in international health system action plans and roadmaps as well as in Canadian leader organization strategies and mandates that aim to advance sustainable, low-carbon, climate-resilient, and equitable healthcare.

The action plans and roadmaps included in our analysis met the following criteria:

- Country's official language includes English and/or French
- Country participates in the Alliance for Transformational Action on Climate and Health (ATACH) as of December 13, 2023.
- Country has an official and publicly accessible national healthcare action plan or roadmap (or dedicated section) related to climate and health and/or planetary health. The action plan did not need to be developed as a result of the ATACH commitment.

Additionally, health system leaders from across Canada have contributed their expertise to inform this playbook, providing evidence-based examples and best practices to support and exemplify its content.

Suggested citation

Cruz, A, Devitt, KS, MacNeil, J, Miller, F. Strategic Planning for Planetary Health and Sustainable Care. 2025. Version 1.0. [Internet]. CASCADES (Creating a Sustainable Canadian Health System in a Climate Crisis). [Cited DATE]. Available from https://cascadescanada.ca/resources/strategic-planning-for-sustainable-healthcare-playbook/

EXECUTIVE SUMMARY

Climate Change and Planetary Health

Climate change terminology is often prioritized as it is an urgent environmental concern with immediate and tangible impacts. However, a transition to a sustainable, resilient, and equitable health system requires a wider environmental and social lens beyond climate change. In this playbook, we encourage strategic planning to adopt a broad perspective that emphasizes planetary health impacts as well as challenges that are specific to climate change.

Climate Action and Sustainable Care for Health Systems

National plans for climate resilient, low-carbon, and sustainable health systems are typically "system-wide"—spanning organizations, professions, services, clinical or disease areas, communities, and so on. While this playbook focuses on the strategic efforts of health delivery organizations, we identify four important elements of national efforts to deliver equitable, resilient, and sustainable health systems.

1. System-level monitoring and performance frameworks
2. Strategic planning
3. Health workforce training
4. Clear funding mechanisms

The Importance of Strategic Planning for Planetary Health and Sustainable Care

Healthcare organizations operate within highly complex and uncertain ecosystems, underscoring the importance and challenges of strategic visioning for sustainability. A standardized, one-size-fits-all approach is impractical due to the diversity of organizational contexts, strengths, and priorities. Each institution must develop tailored strategies that address its unique circumstances, including supply chains, clinical workflows, interdepartmental coordination, and localized climate risks.

Figure 1: Seven organizational practices to guide and advance strategic planning for planetary health and sustainable healthcare.

OPERATIONALIZING THE SEVEN PRACTICES

To support organizations in advancing strategic planning for planetary health and sustainable care, the following list outlines key activities aligned with each organizational practice (Figure 1).

1 Engage board and senior leaders

- [ ] Formalize an organizational commitment to climate action from senior leaders and board members.
- [ ] Designate accountable senior executive leaders and/or board members to oversee and sponsor the sustainability agenda.
- [ ] Articulate and embed the relevance of the sustainability agenda across all organizational portfolios.
- [ ] Ensure senior leaders and board members have a baseline understanding of the importance of sustainable health systems and their role in advancing this agenda.

2 Embed sustainability into the organization's strategic frameworks

- [ ] Conduct internal and external environmental assessments to identify and prioritize sustainability and climate-related risks and opportunities for the organization and the communities it supports and serves.
- [ ] Develop or integrate a planetary health action plan or sustainability strategy that outlines a vision, goals, priorities, and timelines, ensuring alignment with organizational mandates, vision, mission, and broader strategic priorities.
- [ ] Translate and cascade sustainability goals across all different levels of the organization to foster alignment, shared understanding, and effective implementation.

3 Establish a multi-functional sustainability team, working group, or task force

- [ ] Establish a multidisciplinary team that can inform, draft, and operationalize the organization's sustainability agenda, mandates, and initiatives, drawing on internal or external expertise as needed.
- [ ] Leverage and expand traditional expertise in facility-based GHG reduction and waste management, while incorporating knowledge and multi-functional connections in emerging areas such as clinical and community care operations, procurement, infection prevention and control, food services, financial services and more.
- [ ] Establish a clear communication mechanism with senior executive leaders and board members for feedback and endorsement of the strategic direction and recommended actions.

4 Strengthen internal organizational capacity

- [ ] Create new dedicated structures to advance sustainability initiatives, or integrate the sustainability agenda into existing frameworks or structures to promote cross-functional collaboration and leadership, while leveraging existing efforts and resources. Existing structures that can be mobilized to support sustainability initiatives may include but are not limited to: Quality Improvement, Quality Assurance, Accreditation, Diversity, Equity, and Inclusion; Finance, Indigenous Health, Energy and Facilities, and Research and Innovation.
- [ ] Deepen capacity in traditional sustainability areas (e.g., re/development, facilities management, environmental services, etc.).
- [ ] Strengthen capacity in newer sustainability areas (e.g., clinical operations, procurement, infection prevention and control, food services, etc.).
- [ ] Develop and implement onboarding and induction modules, resources, and training materials aimed at promoting planetary health and sustainable care literacy throughout the organization.
- [ ] Facilitate opportunities for staff to develop and share knowledge and skills, including through continuing professional development programs.
- [ ] Identify and map existing high-impact environmental sustainability efforts, initiatives, and funds across the organization, and provide support to ensure their sustainability and expansion for greater impact.
- [ ] Allocate resources for the organization to effectively carry out the sustainability agenda and achieve its goals.

OPERATIONALIZING THE SEVEN PRACTICES

Explore **CASCADES' Readiness Tool** to assess these 7 practices in your context

5 Establish external partnerships and networks for greater impact

- [ ] Establish or join networks to enable local learnings and the exchange of best practices, with a continued sectoral emphasis on promoting high-quality, low-carbon, climate resilient, equitable, and sustainable health services and systems.
- [ ] Strengthen cross-sectoral collaboration and synergies to encourage cohesive and coordinated action.

6 Implement organizational-level measurement and reporting systems

- [ ] Define organizational sustainability goals and performance indicators that align with overall priorities and address the climate-related risks and opportunities relevant for the organization.
- [ ] Ensure that the selected metrics and targets adhere to applicable federal, provincial, and local regulations (e.g., Climate Change Accountability Act and British Columbia's CleanBC plan and roadmap) as well as relevant sustainability and climate disclosures.
- [ ] Develop an integrated measurement strategy and data collection plan that incorporates various sustainability performance areas (e.g., energy emissions, waste management, clinical services, procurement, climate change adaptation, emergency management, etc.). Recognize the importance and limitations of the chosen metrics.
- [ ] Prepare and publish reports on progress related to sustainability metrics and targets for both internal and external stakeholders. Ensure that updates are consistently provided across all organizational levels to maintain awareness and accountability.

Note: These practices are interdependent and mutually reinforcing. The order and progress in which each is addressed will depend on the organization's readiness and unique context.

7 Develop strategies to communicate and engage with patients, caregivers, and communities

- [ ] Establish mechanisms to meaningfully engage and partner with patients, caregivers, and communities throughout the care-delivery process.
- [ ] Develop resources that help healthcare staff guide conversations with patients, along with tools for patients and families to make clinically appropriate decisions that can also minimize healthcare emissions.
- [ ] Co-design a strategy for ongoing and meaningful engagement with Indigenous Peoples guided by principles of reconciliation and respect.

Enablers for Advancing Planetary Health and Sustainable Care

Embedding sustainability into healthcare organizations requires clear, intentional strategies, strong leadership commitment, and broad engagement across all levels. To support the successful implementation of the seven organizational practices, it's crucial to focus on the seven key enablers (Figure 2) that drive alignment, foster momentum, and promote lasting impact.

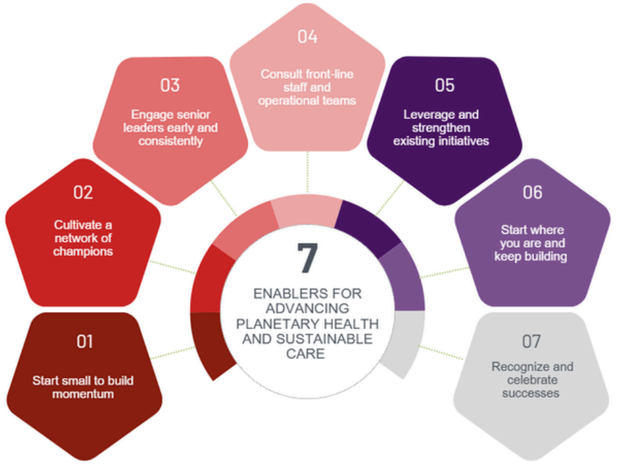


Figure 2: Seven enablers for advancing planetary health and sustainable care

PLAYBOOK STRUCTURE

WHY

The Case for Change

The Case for Incorporating Climate Change and Planetary Health into Organizational Strategic Plans

WHAT

The Tools for Change

Seven Organizational Practices to Advance Strategic Planning

HOW

The Strategy for Change

Seven Enablers for Advancing Planetary Health and Sustainable Care

WHY

The Case for Change

Climate Change and Planetary Health → Health Impacts of Climate Change and Climate Action → Commitments to Climate Action in the Healthcare Sector → Climate Action and Sustainable Care for Health Systems

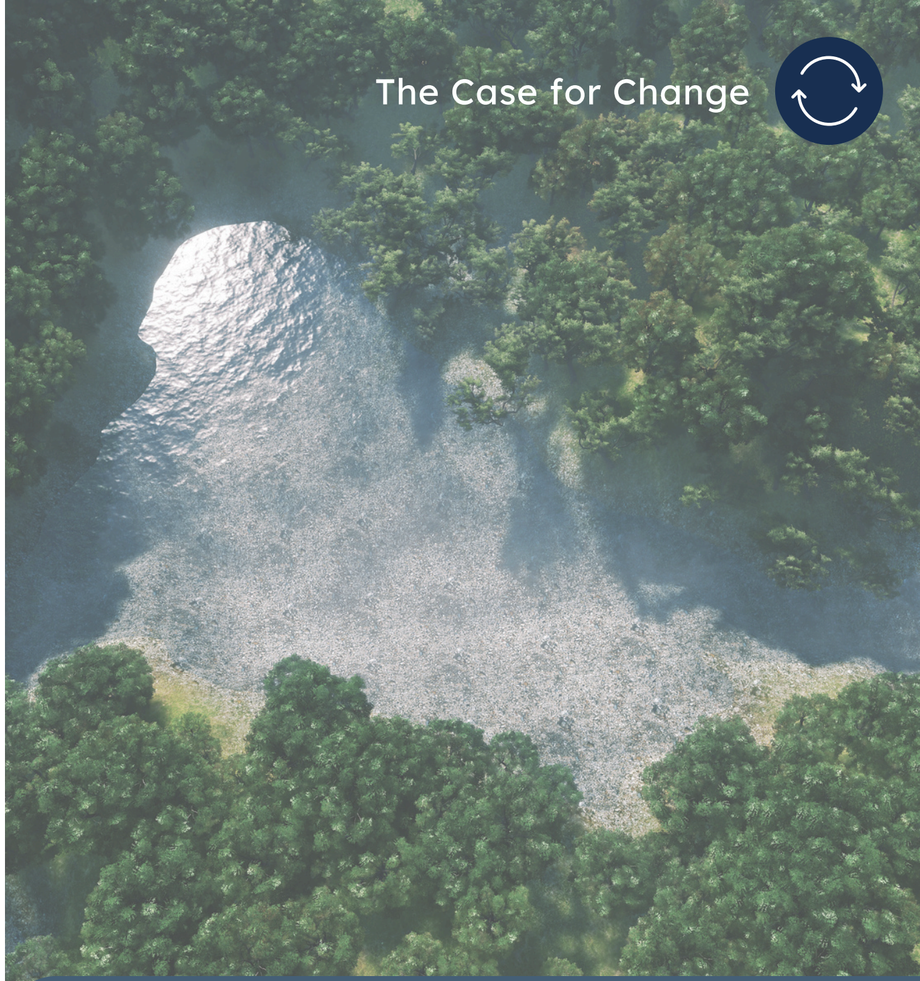
Climate Change and Planetary Health

"A vision for an environmentally sustainable health system is put forth, as being a health system that improves, maintains, or restores health, while minimizing negative impacts on the environment and leveraging opportunities to restore and improve it, to the benefit of the health and well-being of current and future generations." - World Health Organization (2, p. 3)

Climate change and planetary health are interconnected, but they have different environmental targets. Planetary health represents the interdependence of human health and the health of the planet and references a broad set of planetary boundaries (or earth system boundaries) that include climate change as well as biodiversity, health of ecosystems, land degradation, air and water pollution, resource depletion, and social inequalities (1). Climate change terminology is often prioritized as it is an urgent environmental concern with immediate and tangible impacts. However, a transition to a sustainable, resilient, and equitable health system requires a wider environmental and social lens beyond climate change (2).

The Planetary Boundaries framework (3), the Donut concept (4) and more recent work on safe and just earth system boundaries (5,6) provide important insights into pathways to a more sustainable and equitable future. However, much of the work in Canada and internationally focuses on climate—climate resilient, low carbon, sustainable health systems—though the concern with sustainability connects to broader planetary health, justice, and equity concerns.

In this playbook, we encourage strategic planning to adopt a broad perspective that emphasizes planetary health impacts as well as challenges that are specific to climate change.



RESOURCES:

- The Determinants of Planetary Health, Redvers, N.
- The Determinants of Planetary Health: An Indigenous Consensus Perspective, Redvers et al.
- Health, Wellbeing and the Changing Structure of Communities, IPCC Sixth Assessment Report
- Sustainable and Resilient Health Care in the Face of a Changing Climate, Sherman et al.

INDIGENOUS KNOWLEDGE SYSTEMS

Indigenous Knowledge Systems provide critical guidance for holistic perspectives about planetary health and sustainable care, encouraging a rethink of mindsets and practices that led to the current unsustainable state and to pursue a more holistic approach to health, well-being, and care (7).

A term closely aligned with the concepts found in Indigenous Knowledge Systems is “regenerative sustainability,” which offers a pathway to address the challenges of planetary health and human health. Regenerative sustainability aims to produce positive human and environmental outcomes instead of focusing solely on ways to reduce the negative impacts (8).

However, a critical gap exists in western resources and tools to guide the transition to such a comprehensive health system approach. Few existing published international health and climate change strategies substantially incorporate Indigenous Knowledges or provide the level of specificity needed to inform strategic planning for sustainable health systems. Thus, the resources and evidence relied upon in this playbook are based on Western Knowledge Systems. However, Indigenous Peoples’ traditional knowledge and ways of doing must be integrated into strategic planning to ensure these efforts reflect an appreciation for the interconnectedness of our health, the health system, and the natural environment.

“Ecocentric approaches to planetary health have existed for thousands of years in Indigenous communities and are necessary to achieve long-term sustainability of the planet. [...] We cannot solve complex problems from the same worldview that created them in the first place, as it will continue to perpetuate a disconnect between us and the planet as ‘relatives.’” -Dr. Nicole Redvers (7, p. e111)

RESOURCES:

- Climate Change and Indigenous Peoples’ Health in Canada, National Collaborating Centre for Indigenous Health
- The Climate Emergency & the Colonial Response, Yellowhead Institute
- Bad Forecast: The Illusion of Indigenous Inclusion & Representation in Climate Adaption Plans in Canada, Yellowhead Institute
- From Risk to Resilience: Indigenous Alternatives to Climate Risk Assessment in Canada, Yellowhead Institute

Health Impacts of Climate Change and Climate Action

HEALTH RISKS OF CLIMATE CHANGE

Climate change and environmental degradation pose accelerating and complex threats for health and 21st-century health systems. Climate change not only threatens human health and well-being but also the capacity of health systems to deliver care. It also threatens health equity by exacerbating existing health disparities and by intensifying pre-existing social, economic, and health inequities. As such, climate risks are compounded by the "increasingly severe, interconnected and often irreversible impacts of climate change on ecosystems, biodiversity, and human systems" (10).

"Climate change not only impacts the health of individuals but also threatens the capacity of the health systems they rely on to provide care when it is needed." -Environment and Climate Change Canada (9, p. 25)

CLIMATE CHANGE THREATENS HUMAN HEALTH & WELL-BEING

- Increasing frequency of chronic and extreme heat waves leads to higher incidence of heat-related illness (e.g., heat stroke), exacerbation of chronic conditions (e.g., heart disease, respiratory issues) and death
- Warming temperatures degrade urban air quality, exacerbating cardiovascular and respiratory conditions, as well as lead to an increase in the frequency of extreme weather events (e.g., hurricanes, tornadoes, floods, wildfires) causing physical harm and putting a strain on emergency medical services.
- Warming temperatures impact conditions in the north, melting permafrost and ice roads, impacting living conditions and livelihoods as well as access to food and health services.
- Longer and more severe droughts result in water scarcity, which can lead to dehydration, malnutrition, and the spread of waterborne diseases, as well as other dehydration-related conditions. Climate change shifts the ranges that vectors find habitable, exposing new populations to vector-borne diseases, such as Lyme disease, West Nile Virus, and Dengue.
- Food systems and nutrition are affected by extreme temperatures, droughts, and changing precipitation patterns, which reduce agricultural productivity, increasing food insecurity and the risk of food-borne illness, especially for vulnerable populations.
- Mental health can be impacted by extreme weather events given the potential loss of homes, livelihoods, loved ones, or social support systems.
- Climate change interacts with and compounds ecosystem degradation and biodiversity loss, threatening the well-being of many individuals and communities.

CLIMATE CHANGE THREATENS HEALTH SYSTEMS

Acute, compounding, and chronic climate shocks threaten health systems not only by reducing the capacity of systems to deliver care but also by increasing care needs of the population and thus the demand for health services.

REDUCES SYSTEM CAPACITY TO DELIVER CARE

- Health infrastructure, such as building envelopes, can be damaged or destroyed by windstorms, floods, wildfires, or can experience power outages or other service disruptions.
- Service comfort and operation may be compromised by increased heat, including challenges to heating, ventilation, and air conditioning (HVAC) systems.
- Access to critical support services, including transportation, power, water supply, and telecommunications may be disrupted.
- Access to supplies and services, such as medications, devices, food, linen, waste disposal, may be reduced by severe weather events occurring locally or globally.
- Capacity or availability of the health workforce may be compromised by physical or mental health impacts or by disruptions from extreme weather events.
- Clinical outcomes and quality of care may be negatively impacted and compromised by disrupted access to health services (e.g., surgery, radiation therapy, dialysis, medications).

INCREASES CARE NEEDS & DEMAND FOR HEALTH SERVICES

- Healthcare service utilization may increase in response to climate-related shocks, such as heat emergencies, wildfires, and flooding.
- Heat stress, cardiovascular disease, and mental health consequences may increase.
- Healthcare use, emergency services, and hospital admissions may increase due to climate-related shocks (e.g., heat emergencies, wildfires, flooding).
- Healthcare buildings may need to serve as refuges for community members (e.g., for cooling or warming).
- Health inequities may be exacerbated.

Figure 3. Impacts of climate shocks on health systems

RESOURCES:

- Health, Wellbeing and the Changing Structure of Communities, IPCC Sixth Assessment Report
- Climate Maps for Health, Climate Atlas of Canada
- Key Topics, Climate Atlas of Canada
- Connecting Climate Change and Health: A Guidebook Health and Climate Change Content on the Climate Atlas of Canada, Prairie Climate Centre

CLIMATE CHANGE THREATENS HEALTH EQUITY

Risks to health are not distributed equally or equitably. Climate change is a “threat multiplier”—exacerbating existing health disparities, intensifying and magnifying pre-existing social, economic, and health inequities (Figure 4).

Vulnerability, exposure, resource distribution, and capacity to recover from a climate-related event differ across individuals and communities (9,10).

- Climate hazards, such as heat, drought, floods, storms, and vector spread contribute to increasing adverse health outcomes and other climate sensitive outcomes.
- Exposure to hazards varies across and within regions and level of risk is determined by individual and community characteristics, such as outdoor employment, housing quality, location/local geography, and livelihood type.
- Vulnerability to climate change and health and well-being hazards varies across individual and community characteristics including age, gender, mobility, access to care, socio-economic status, pre-existing conditions, mental health conditions, and characteristics of health systems.

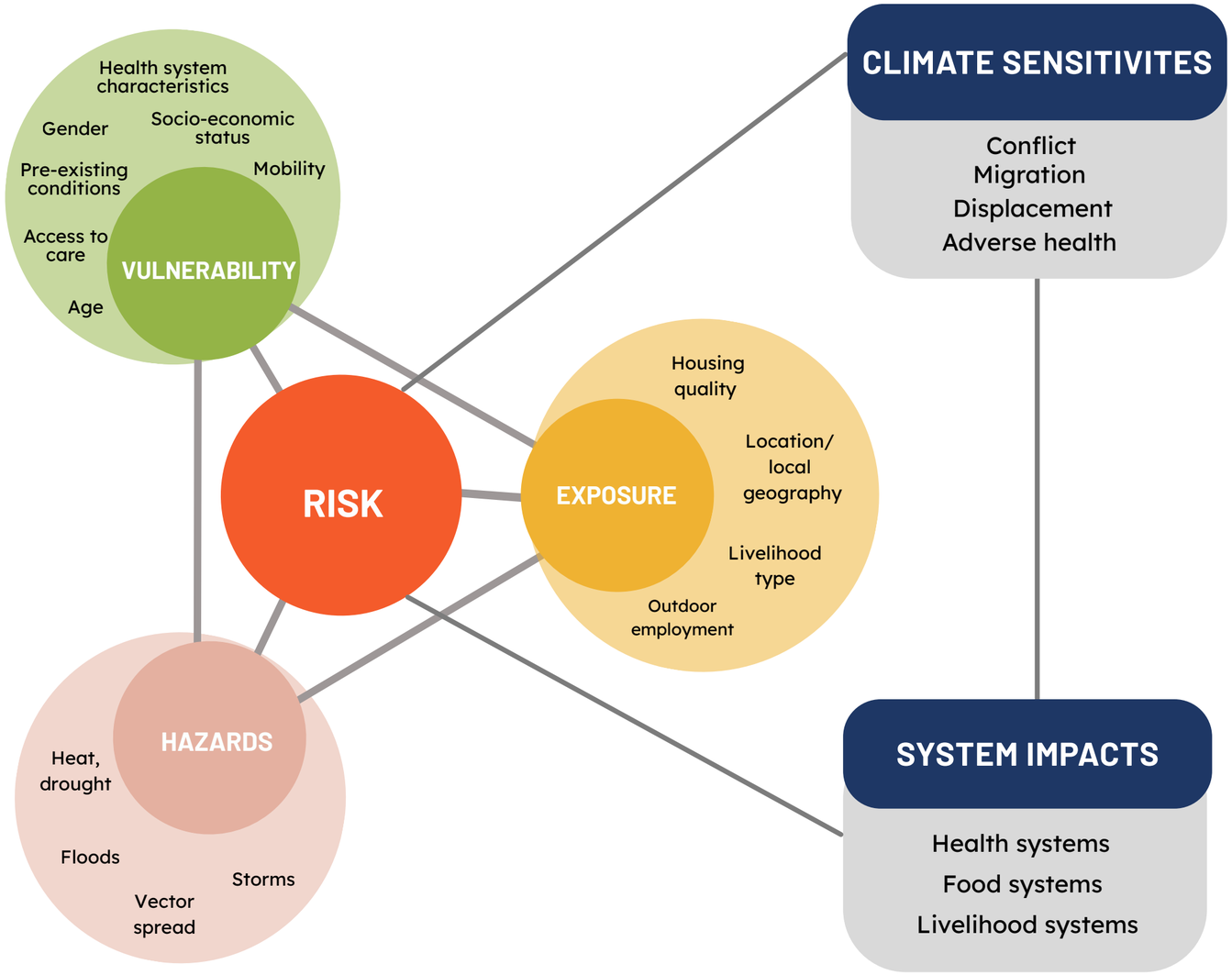


Figure 4: Climate-Health Risk Matrix adapted from the Figure 1 Interactions between exposure, vulnerability, and hazards of the IPCC Sixth Assessment Report (10)

- Indigenous Peoples' health and well-being is further challenged by decreased access to traditional foods and medicine, by existing barriers to the implementation of their traditional strategies to mitigate the impacts of climate change, and by barriers to access care during extreme weather events.

- Ecosystem degradation can undermine traditional ways of life and disrupt food and water security, leading to negative health outcomes. Such communities, which are often rural or remote, may also face barriers to healthcare and lack political representation, making it harder for them to advocate for the resources and protections they need.

- Economic disruptions from climate-related events can result is loss of livelihoods, food insecurity, and poverty, which lead to poor health outcomes.

"Climate resilient healthcare systems that are responsive to the needs of vulnerable populations are essential to achieve health equity and to reduce health disparities." -Healthcare Without Harm (17, p. 2)

RESOURCES:

- Publications, National Collaborating Centre for Indigenous Health (NCCIH)
- Climate Change and Health Equity, Health of Canadians in a Changing Climate: Advancing our Knowledge for Action, Health Canada
- Tools and Methods for Integrating Health into Climate Change Adaptation and Mitigation Policies and Strategies, National Collaborating Centre for Healthy Public Policy
- Health Hazards, Exposures, and Impacts (2024), Lancet Countdown
- HealthyPlan.City Tool, Dalla Lana School of Public Health, University of Toronto
- Special Report: From Risk to Resilience: Indigenous Alternatives to Climate Risk Assessment in Canada and Fact Sheet, Yellowhead Institute
- Environmental Racism and Climate Change: Determinants of Health in Mi'kmaw and African Nova Scotian Communities, Waldron
- Climate Change and Health Equity, Video, Public Health Ontario

HEALTH BENEFITS OF CLIMATE ACTION

Healthcare is a highly resource-intensive and polluting service industry and a significant contributor to climate change, estimated at 4.6% of global greenhouse gas (GHG) emissions (11). A large proportion of healthcare's emissions reside in the supply chain—in the manufacturing, transportation, use and disposal of the products, materials, and services used—and thus, in the design and delivery of health services and systems.

High emissions do not equate to high quality care. While there is a correlation between higher GHG emissions and higher life expectancy at birth, this association is most relevant to low- and middle-income countries. According to the 2024 Report of the Lancet Countdown, this correlation plateaus when per capita healthcare emissions exceed 400kg C02e (this is less than half of the per capita emissions from Canada's health system) (12). See Figure 10: UHC index scores and healthy life expectancy at birth in relation to greenhouse gas emissions by HDI in the 2024 Report of the Lancet Countdown for more information (11).

SUSTAINABLE HEALTHCARE IS HIGH QUALITY CARE

Climate-resilient, low-carbon, sustainable healthcare:

- is quality care that is person-centred and appropriate
- ensures that health services remain operational during extreme weather events, reducing the negative health outcomes caused by disruptions in care (11, 15)
- strengthens the capacity of patients, clients, and communities to support their own health and well-being in the context of extreme events
- reduces demand for care through effective chronic disease management, primary prevention, and health promotion
- stewards resources and facilitates coordinated and efficient care pathways
- fosters the use of low-pollution alternatives (e.g., low-carbon medical and anaesthetic gases, reusable devices and supplies, etc.)

"One of the biggest takeaways in the emerging field of sustainable health care is that what is good for the environment is good for patients." -Dr. Karina Spoyalo (16)

HEALTH CO-BENEFITS OF CLIMATE ACTION

Actions to reduce climate change impacts on health and health systems can have immediate positive impacts on population health and health equity and can support efforts to build more resilient health systems—that is, systems that are "better able to anticipate, prevent, prepare for, and manage climate-related health risks" (13, p. vii).

Examples of climate actions that benefit both human health and the environment include:

REDUCED AIR POLLUTION

- Reducing air pollution reduces risks from a wide range of health conditions, such as asthma, chronic obstructive pulmonary disease (COPD), heart disease, and stroke.

INCREASED ACCESS TO GREEN OR BLUE SPACES

- Access to green or blue spaces improves air quality, reduces the urban heat island effect, promotes well-being (10), and supports biodiversity which can also help protect agricultural/food systems (i.e., pollinators)

ENCOURAGING ACTIVE TRANSPORT

- Active transport (e.g., walking, cycling, wheeling) can help reduce the incidence or severity of chronic diseases (e.g., obesity, diabetes, heart disease) and promote mental health (10).

ENCOURAGING LOW-MEAT DIETS

- Low-meat diets can help lower risks of heart disease, diabetes, and certain cancers (10,11).

"Climate action across all sectors promotes good health and prioritizes measures that have multiple benefits (e.g., protecting health and improving environmental sustainability)." -Environment and Climate Change Canada (14, p. 23)

Commitments to Climate Action in the Healthcare Sector

The healthcare sector is beginning to take action to address its contributions to the climate crisis and to help mitigate future impacts.

The following pages highlight key commitments and actions that different healthcare sector actors are taking towards climate-resilient, low-carbon, and sustainable healthcare.

GLOBAL COMMITMENTS

CANADA'S COMMITMENTS

GLOBAL COMMITMENTS

The climate and health conversation is global, with important commitments made through UN Climate Change Conference of Parties or “COPs”. These global commitments have been motivated by—and in turn help to motivate—national action.

The 2021 UN Climate Change Conference (COP26) was pivotal, with a call for countries to commit to deliver climate-resilient, low-carbon and sustainable health systems. At COP 26, Canada’s then-Minister of Environment and Climate Change Canada, Steven Guilbeault, confirmed Canada’s commitment to developing a climate-resilient, low-carbon, and sustainable health system.

The health programme commitments included reducing the GHG emissions of the health system—including those from supply chains which is where the majority of healthcare emissions reside; enhancing the resilience of the health system to climate-related impacts, including through climate vulnerability and adaptation assessments, and providing financial support for innovative projects. The COP26 commitments resulted in the WHO-led program Alliance for Transformative Action on Climate and Health (ATACH) to use the collective power of countries that signed this commitment (currently 85) to move the climate agenda forward.

In 2023, COP28 hosted the first Health Pavilion and Health Day. Over 120 countries, including Canada, committed to a Climate and Health Declaration to stress the importance of addressing the interactions between climate change, health, and well-being and to better prepare communities, especially vulnerable populations, for the impacts of climate change, in an attempt to accelerate the development of climate-resilient, sustainable and equitable health systems.

ALLIANCE FOR TRANSFORMATIVE ACTION ON CLIMATE AND HEALTH (ATACH)

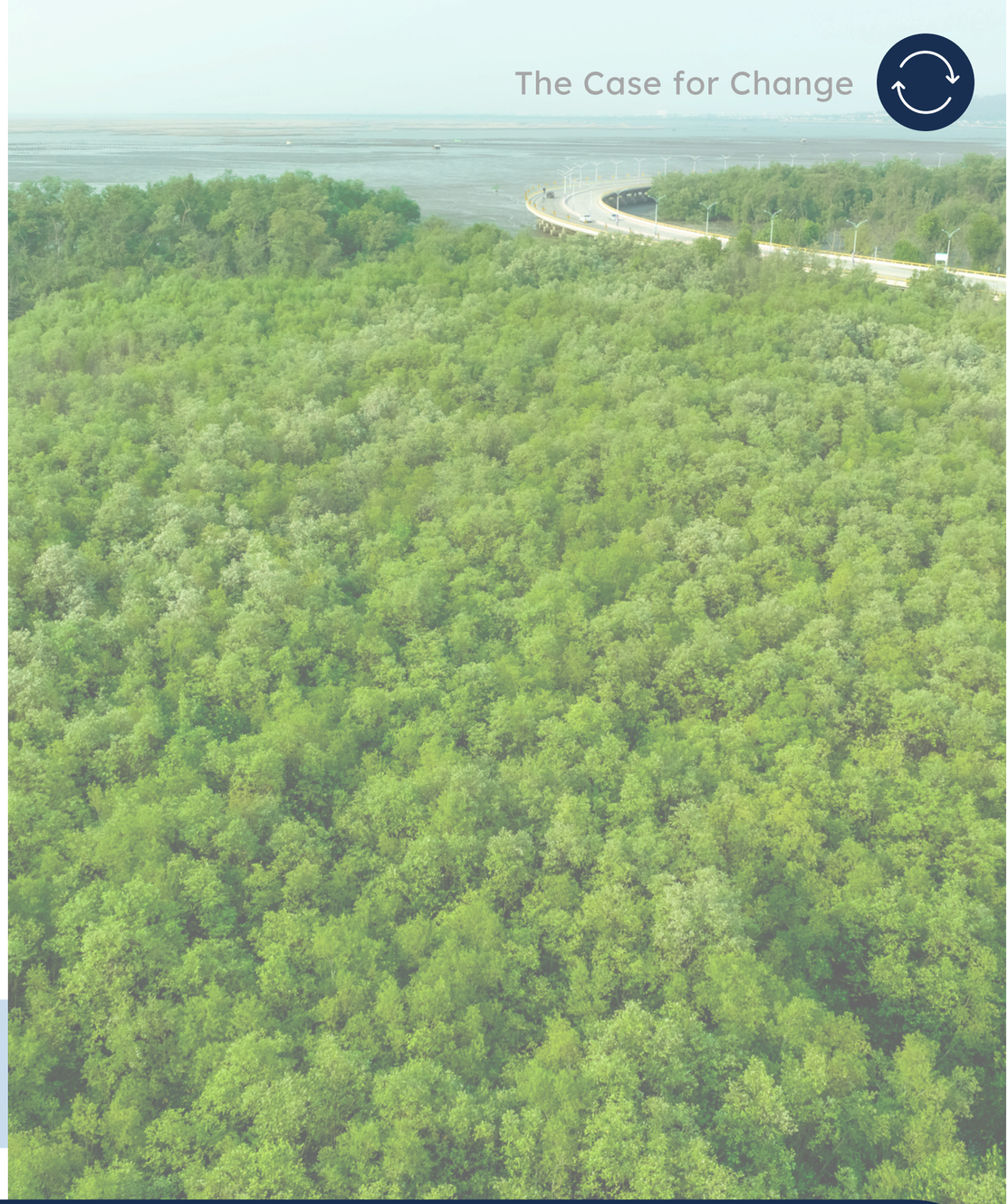
ATACH was established to provide knowledge, expertise, and guidance to help countries conduct baseline greenhouse gas emissions assessments, including supply chain emissions, and develop action plans to realize net-zero health systems by 2050. In 2021, Canada committed to deliver climate-resilient, sustainable, low-carbon health systems and, in 2024, to reach net zero by 2050.

INTERNATIONAL ACTION PLANS

Both prior to and in response to these global efforts, a growing number of countries have developed national plans to help them realize their climate and health goals. We reviewed a number of these plans to synthesize key activity domains and priority action areas, including those from:

- Australia (2023)
- England (2022)
- Fiji (2016)
- France (2023)
- Ireland (2023)
- New Zealand (2022)
- Nigeria (2021)
- Scotland (2022)
- Wales (2021)

Most of these plans set net-zero emissions targets for the health system, with deadlines ranging from 2030 to 2050. In the pursuit of net-zero, some countries have also developed strategies for managing residual emissions, such as carbon offsets in Wales and carbon capture technologies in England, including the NHS Forest initiative, which increases green space and tree planting on NHS sites to improve air quality, mental health, and support social prescribing. While decarbonization is a central focus, these plans also address broader environmental factors, as well as adaptation and resilience commitments.



> "Transitioning towards equitable, low-carbon societies has multiple benefits for health and well-being." - Intergovernmental Panel on Climate Change (10, p. 1047)

MITIGATION ACTION AREAS PRIORITIZED IN INTERNATIONAL ACTION PLANS

The key action areas for mitigation efforts from across the reviewed plans fall into the following six categories:

Estates and Facilities

- Energy management
- Renewable energy
- Waste management and segregation
- Water consumption

Health Information Systems

- Improve accessibility for marginalized populations
- Use virtual care when clinically appropriate
- Access health information: reduce duplication of testing by improving access to medical records

Travel and Transportation

- Electric vehicle strategy
- Active travel promotion
- Transformation of public transport systems and infrastructures

Sustainable Quality Care

- Medicines: reduce or replace anesthetic gases and inhalers
- Appropriate care: reduce over treatment and low-value care
- Prescribing: optimize medication prescribing
- Right care: prioritize the right location, treatment, and provider

Food and Nutrition

- Quality, healthy, and low-carbon choices on food menus
- Health promotion to strengthen the social determinants of health

Procurement and Supply Chain

- Total life cycle cost of products
- Circular economy
- Reusable alternatives

ADAPTATION ACTION AREAS PRIORITIZED IN INTERNATIONAL ACTION PLANS

Key action areas for adaptation efforts from the reviewed plans fall into the following six categories:

Resilient Facilities

- Supply chain resilience (embedded in risk assessments)
- Sustainable, inclusive construction and design guides

Climate and Health Monitoring

- Early warning systems and surveillance of climate-sensitive health outcomes
- Track health impacts of extreme weather events

Climate-informed Practice

- Climate change risk assessments with special attention to most vulnerable populations
- Climate change, health vulnerability, and adaptation plans

Health Workforce Preparedness

- National emergency worker support services (e.g., mental health services for people affected by disasters)
- Ongoing training and education should include climate resilience, disaster response, and the specific needs of people with disabilities during climate-related emergencies

Disaster Response and Recovery

- Strengthen role of primary care in emergency response
- Seasonal readiness planning for programs and services
- Emergency preparedness and management

Community Collaboration and Integration

- Seasonal readiness planning with key partners, including local government & Indigenous communities
- Integration between municipal, provincial and federal partners in emergency planning and management

CANADA'S COMMITMENTS

NATIONAL ADAPTATION STRATEGY

Canada's National Adaptation Strategy (NAS) was released in 2023, with pan-Canadian support. Concurrently, the federal government released its own Adaptation Action Plan (AAP), which details federal commitments and actions in support of the NAS.

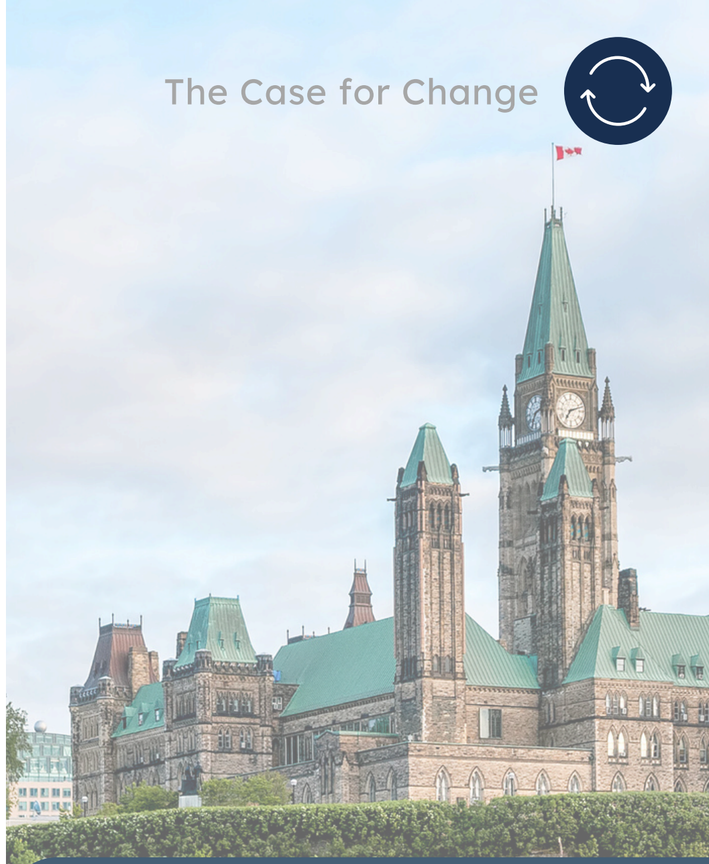
The NAS identifies the need for climate change resilience to support health and well-being, with the goal that "the health of all people in Canada is safeguarded and supported by a climate-resilient and adaptive health sector that has robust and agile systems and services that account for and support the diverse components of well-being" (14, p. 23).

Four targets were identified for a climate-resilient and adaptive health sector:

- By 2026, 80% of health regions will have implemented evidence-based adaptation measures to protect health from extreme heat.
- By 2030, health systems have identified risks, developed adaptation plans, and are measuring progress towards climate-resilience.
- By 2030, consideration of health impacts and benefits are integrated into key climate change tools, guidelines and standards.
- By 2040, deaths due to extreme heatwaves have been eliminated.

Health system mitigation is not mentioned in the NAS—though it is discussed in the AAP. The AAP describes a commitment for federal investments to renew and expand the HealthADAPT program to support health authorities to reduce emissions as well as adapt to climate risks to "simultaneously protect health, reduce costs, and improve sustainability" (14, Action 28, Annex 6).

"Health systems have the expertise, knowledge, and resources needed to identify climate change-related risks and take equitable, evidence-based action to protect health."
-Environment and Climate Change Canada (14, p. 23)



RESOURCES:

- Canada's National Adaptation Strategy (NAS), Government of Canada
- Adaptation Action Plan (AAP), Government of Canada
- Climate Resilient Health Systems Initiative (CRHS) to support First Nations and Inuit organizations in engaging health partners on the climate change gaps and needs in health services, Centre for Indigenous Environmental Resources

CANADA'S HEALTH SYSTEM PRIORITIES

In addition to the expressed commitments to climate action in Canada's health sector through the NAS and AAP, planetary health and sustainable care are arguably highly relevant to the four shared health system priorities, agreed upon in 2023 by the federal, provincial, and territorial governments, to improve the delivery of healthcare in Canada (18):

- Expanding access to family health services, including in rural and remote areas
- Supporting health workers and reducing backlogs for health services such as surgeries and diagnostics
- Improving access to quality mental health, substance use, and addictions services
- Modernizing the health care system with standardized information and digital tools so healthcare providers and patients have access to electronic health information

The implementation of a strategic plan for sustainable health systems not only advances ambitions for climate action, planetary health, and sustainable quality care but can also support these stated priorities to improve the quality of care delivery in Canada.

Climate Action and Sustainable Care for Health Systems

National plans for climate-resilient, low-carbon, and sustainable health systems are typically “system-wide”—spanning organizations, professions, services, clinical or disease areas, and communities. While this playbook focuses on the strategic efforts of health delivery organizations, we identify four important elements from existing national efforts to deliver equitable, resilient, and sustainable health systems:

- SYSTEM-LEVEL MONITORING & PERFORMANCE FRAMEWORKS
- STRATEGIC PLANNING
- HEALTH WORKFORCE TRAINING
- CLEAR FUNDING MECHANISMS

SYSTEM-LEVEL MONITORING & PERFORMANCE FRAMEWORKS

System-level monitoring and performance frameworks support coherent and systematic assessment of the whole, rather than just its parts. They are critical to the monitoring and evaluation of national climate and health plans. Importantly, performance frameworks conceptualize the building blocks or features of a health system and help to identify how climate and sustainability action fits in.

WORLD HEALTH ORGANIZATION (WHO)

The 2015 "Operational Framework for Building Climate Resilient Health Systems" leverages the widely used WHO health system performance framework to review how health systems can address the growing health risks and potentially severe impacts of climate change.

The 2022 "Measuring the Climate Resilience of Health Systems" provides a structured framework and approach for assessing the climate resilience of health systems, while also including some mitigation considerations. It emphasizes the need for clear criteria to evaluate resilience, to assess the effectiveness of adaptation efforts, and to prioritize actions.

The 2023 "Operational Framework for Building Climate Resilient and Low Carbon Health Systems" provides an approach for integrating climate resilience and low-carbon strategies into health systems.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

The OECD proposed a new health system performance framework in 2024: Rethinking Health System Performance Assessment. Unlike the WHO framework, which is climate specific, the OECD framework is concerned with the general performance of health services and systems. However, the revised framework brings new attention to people-centredness, resilience, and environmental sustainability, and to assessing interactions between health systems and environmental threats.

DATA COLLECTION MECHANISMS IN THE UK

NHS Scotland (2022) has introduced tools to effectively measure and monitor environmental indicators. These include eSight National Energy Management System, which tracks and reports on energy and water consumption across estates; the Sustainability Assessment Tool (NSAT), which enables boards to assess overall sustainability performance; and the RIO Waste Data Reporting Tool.

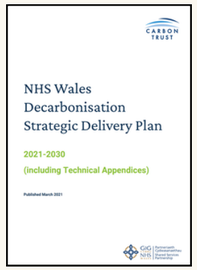
NHS England (2022) reports national sustainability indicators through the Greener NHS Dashboard, which includes key indicators on anesthetics, inhalers, and building energy use.

"The new health system performance assessment framework places people at the centre of health systems and incorporates new key health system objectives (such as sustainability, from both the economic and environmental perspectives), and more clearly stresses the interconnectedness and potential trade-offs across different health systems dimensions (such as balancing efficiency and equity, efficiency and people-centredness, or sustainability and resilience)."-OECD (19)

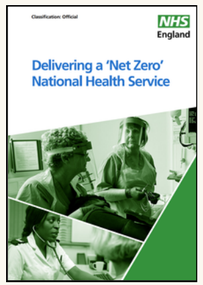
STRATEGIC PLANNING

Developing an actionable implementation or delivery plan is as critical as formulating the strategic goals. Such a plan should clearly outline the steps, required resources, timelines, and key milestones necessary to operationalize the strategy, with responsibilities assigned to appropriate roles or teams. Effective implementation planning may also incorporate communication strategies, as well as mechanisms for ongoing monitoring and evaluation to ensure accountability and facilitate adaptive learning.

STRATEGIC IMPLEMENTATION PLANS IN THE UK



NHS Wales set out a "Decarbonisation Strategic Delivery Plan" (2021) to address the climate emergency. In addition to setting out their commitments and targets, the plan detailed clear implementation steps, including leadership commitment, a "decarbonisation board" to oversee implementation, a program manager, action plans, and resources, as well as a commitment to a clear process for target and plan updates.



NHS England's Delivering a "Net Zero" National Health Service (2020) outlined a comprehensive framework to drive decarbonization across the health system. This included establishing the NHS Net Zero Expert Panel to guide implementation, assigning responsibility to executive leaders and boards, developing Green Plans at the trust level to operationalize national targets, and embedding carbon reduction into procurement, medicines, travel, and estate strategies. In addition, NHS England committed to transparent annual reporting and regular review cycles to refine targets and approaches based on evolving evidence and progress.

HEALTH WORKFORCE TRAINING

Across the plans, there were clear strategies to equip the health workforce to effectively identify, prevent, and manage health risks, while improving their understanding of the links between climate and health.

CANADA

The Academic Health Institutions' Declaration on Planetary Health from the Association of Faculties of Medicine of Canada (AFMC) urges healthcare institutions for immediate implementation of planetary health education and research and for the transition to climate-resilient and low-carbon health systems.

CASCADES and the Royal College of Physicians and Surgeons of Canada have co-developed an online course, Introduction to Sustainable Health Systems, that is designed for anyone who works in the Canadian health system. The course introduces learners to the relationship between climate change, health, and health systems; to the concept of sustainable health systems, and to strategies for incorporating climate action and sustainability into daily work/practice.

UNITED KINGDOM

NHS England (2022) is incorporating sustainable healthcare into curricula for all health professionals. This includes integrating climate change, health, and sustainable healthcare topics and courses into medical and allied health courses across England. NHS England also established regional sustainability networks to facilitate local learning and sharing of best practices, embedding net zero into healthcare processes through partnerships with Academic Health Science Networks.

NHS Scotland (2022) aims to develop climate literacy and sustainability training at the national level, mandating it for senior NHS managers. Additionally, NHS Scotland plans to establish an NHS Sustainability Network to provide opportunities for senior leaders and staff to engage in peer mentoring, support, and the sharing of best practices.

AUSTRALIA

The Australian Government's Department of Health and Aged Care (2023) is working to incorporate sustainable healthcare and climate resilience principles in health professional training curricula and accreditation processes, including through sustainability-focused quality improvement processes and embedding sustainability training into continuing professional development.

It also established the Health Net Zero Clinical Programs, enabling clinical leads to dedicate one day per week to lead net-zero projects within their service or specialty.

CLEAR FUNDING MECHANISMS

Across the plans, establishing funding mechanisms to support climate action and implement high-impact interventions was a central strategy to deliver equitable, resilient, and sustainable health systems.

CANADA

The HealthADAPT program, managed by Health Canada, has funded initiatives that can help the health sector prepare for and respond to the impact of climate change. The program encourages cross-sector collaboration and also supports research and data collection to address climate-driven health risks.

FRANCE

France's Government (2023) is leading and financing a European call for projects under the European Partnership on Transforming Healthcare Systems, with a budget of 4.5 million euros, aimed at enhancing the environmental sustainability of healthcare systems.

AUSTRALIA

The Australian Government's Department of Health and Aged Care (2023) and its National Health and Medical Research Council is planning a Targeted Call for Research focusing on climate-related health impacts, allocating $5 million over five years from the Medical Research Endowment Account.

WHAT

Tools for Change

Seven Organizational Practices to Advance Strategic Planning

The Importance of Strategic Planning for Planetary Health and Sustainable Care

Across Canada, healthcare delivery organizations are demonstrating leadership by developing ambitious agendas for planetary health and sustainable care. In many cases, these organizations are doing far more than the minimum required of them by governments or governing agencies because they see the vital importance of this work for health and health equity. Strategic planning is critical for doing this ambitious work well.

Strategic planning in healthcare helps establish a clear, unified direction that aligns organizational efforts toward specific objectives (20), including goals for low-carbon, sustainable, and resilient health systems. This process not only helps all key partners to understand priorities, but also offers a roadmap to guide efforts and allocate limited resources effectively within a dynamic healthcare environment. Moreover, strategic planning facilitates a comprehensive understanding of internal and external opportunities and challenges, enabling proactive responses to complex issues and fostering readiness for change—defined as a collective resolve and confidence to implement meaningful change (21).

Healthcare organizations operate within highly complex and uncertain ecosystems, underscoring the importance and challenges of strategic visioning for sustainability. A standardized, one-size-fits-all approach is impractical due to the diversity of organizational contexts, strengths, and priorities. Each institution must develop tailored strategies that address its unique circumstances, including supply chains, clinical workflows, interdepartmental coordination, and localized climate risks. This need for customization is heightened by varying provincial mandates and regulatory frameworks, which may not always provide consistent guidelines for environmental accountability. As healthcare organizations face increasing pressure to demonstrate sustainability leadership, strategic planning becomes essential for aligning efforts, ensuring compliance, and addressing both local and systemic challenges.

The next section provides seven organizational practices to guide and advance strategic planning for planetary health and sustainable healthcare.

SUMMARY OF PRACTICES

Explore the the practices by clicking the titles

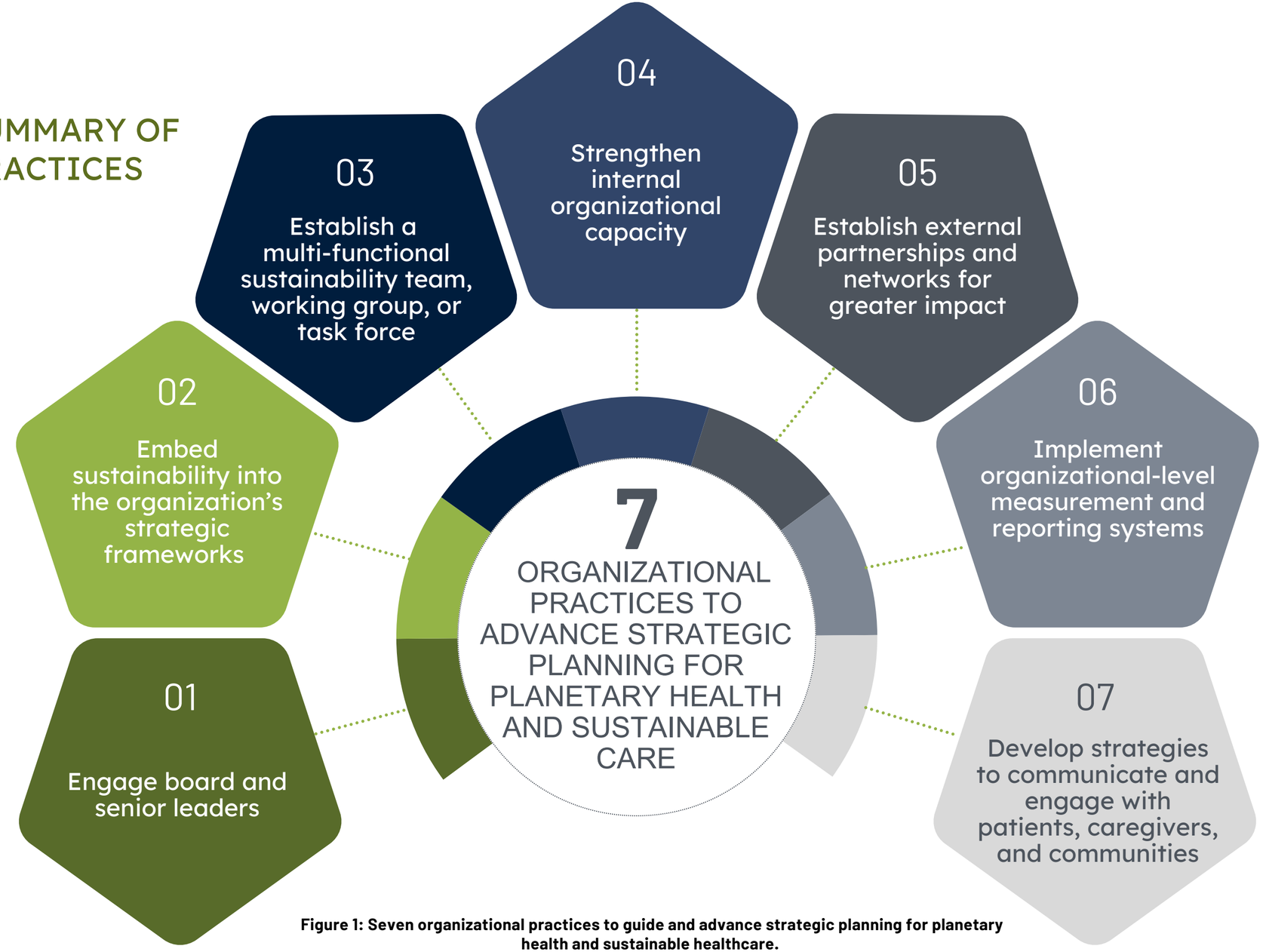
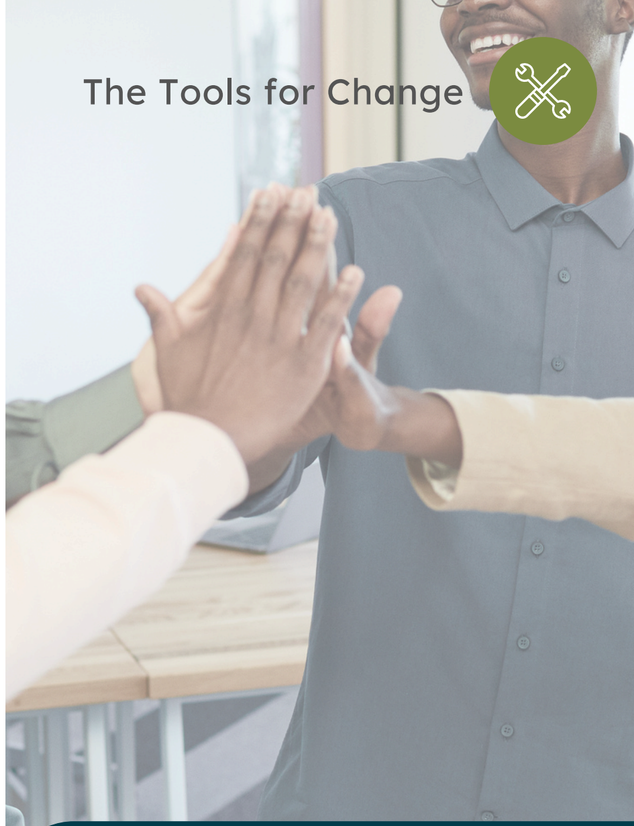


Figure 1: Seven organizational practices to guide and advance strategic planning for planetary health and sustainable healthcare.

Download the "Strategic Planning for Planetary Health and Sustainable Care: Readiness Assessment Tool".

This tool summarizes the recommended activities for each practice.

Practice #1: Engage board and senior leaders



A key factor in promoting organizational readiness for change is active, consistent commitment and action from executive leadership (21), including board members and senior executives. Their involvement in guiding and prioritizing the strategic planning process signals its importance across the organization (20). Effective leadership and governance in this context requires (22) a commitment to climate resilience and environmental stewardship, integrating sustainability as a core responsibility to foster alignment and support throughout all levels of the organization.

PORTFOLIOS AND EXECUTIVE LEADERSHIP ROLES ADVANCING SUSTAINABILITY

In terms of senior leadership engagement, two organizational portfolios have traditionally held the mandate to advance the sustainability agenda at the organizational level: Facilities and Maintenance, and Public Health.

Facilities and Maintenance
Energy and Environmental Sustainability and Corporate Services

The **Facilities and Maintenance** portfolio, with climate work typically led by an environment and sustainability team, is often directly accountable to senior leadership roles such as the Chief Operating Officer, Vice President of Facilities or Operations, or Chief Financial Officer. This alignment is particularly evident when sustainability initiatives intersect with capital projects or corporate services.

Public Health
Population and Public Health

The **Public Health** portfolio, overseen by a Chief Medical Officer and/or the Vice President of Population and Public Health, focuses on preparing and partnering with the public health sector to address the health challenges posed by a rapidly changing environment, with a particular emphasis on intersectoral action beyond healthcare (23). This public health portfolio is integrated within organizational strategic planning within most health authorities, but may be managed separately, as is the case in Ontario, where public health is largely coordinated at the municipal level.

Sustainable Clinical Services
Quality and Patient Safety

In recent years, accountability for sustainability has expanded to encompass additional portfolios, notably within **Sustainable Clinical Services**. This emerging perspective, which seeks to integrate sustainability considerations into health and care processes, is often managed by the Quality and Patient Safety Department in organizations that are advancing this agenda.

Executive leadership in sustainable healthcare is increasingly being integrated across various portfolios, and might require “senior leadership and oversight of delivery from a range of functions, which may include: chief medical, chief nursing, chief allied health professional officers and chief pharmacists, directors of estates and facilities, directors of procurement, chief information officers, directors of finance, and when considering future resilience, requesting oversight from the accountable emergency officer may also be appropriate” (24). This fosters a holistic, multidisciplinary approach to sustainability within healthcare organizations.

PRACTICE #1 ACTIVITIES

- [ ] Formalize an organizational commitment to climate action from senior leaders and board members.
- [ ] Designate accountable senior executive leaders and/or board members to oversee and sponsor the sustainability agenda.
- [ ] Articulate and embed the relevance of the sustainability agenda across all organizational portfolios.
- [ ] Ensure senior leaders and board members have a baseline understanding of the importance of sustainable health systems and their role in advancing this agenda.

RESOURCES:

- VIDEO: This one-hour session with senior leaders from Vancouver Coastal Health (Penny Ballem and Darcia Pope) explores implementation strategies and key priorities for transformative change.
- Environmental Stewardship: An Implementation Guide for Boards, Executive Leaders, and Clinical Staff. Meeting hospital standards and beyond, PEACH Health Ontario
- National Health Service (NHS) England expects that each NHS organization appoint a board-level net-zero lead responsible for advancing the greener NHS agenda.

WHAT DOES IT LOOK LIKE IN PRACTICE?
ENGAGING BOARDS AND SENIOR LEADERS FOR SUSTAINABLE HEALTHCARE

INTERIOR HEALTH (BC)
Interior Health (IH) has made addressing climate change and sustainability an organizational strategic priority, demonstrating a strong commitment to environmental sustainability and climate action. The Chief Financial Officer and Vice President of Corporate Services, along with the Chief Medical Health Officer, are the key senior executive leaders championing and sponsoring this agenda. IH recently hired a Medical Director for Climate Change and Sustainability to champion clinical aspects of this work.

VANCOUVER COASTAL HEALTH (BC)
Vancouver Coastal Health (VCH) established a pioneering senior executive role explicitly incorporating Planetary Health into its title and mandate, exemplifying a commitment to advancing the climate and planetary health agenda in healthcare leadership. The Vice-President Strategy, Innovation and Planetary Health has oversight of the planetary health agenda, in partnership with the Chief Medical Health Officer, the Vice-President of Quality and Patient Safety and the Chief Financial Officer. Additionally, VCH established a Regional Director of Planetary Health role in 2022 to help build and strengthen an organizational culture in sustainability.

IWK HEALTH (NS)
IWK Health's Strategy 2024-2027: The Road Forward outlines a key objective within its Responsible Stewardship organizational priority: reducing environmental impact and preparing the organization to respond to the climate crisis. Additionally, IWK Health has established a dedicated Health System Sustainability portfolio under the Vice President of Medicine, Quality, and Safety. To strengthen this commitment, an Executive Lead for Health System Sustainability role has been created to guide IWK Health's progress toward sustainability goals.

FRASER HEALTH (BC)
Since 2023, Fraser Health has maintained focus on social and environmental sustainability as an Organizational Objective and Key Result (OKRs). To advance this OKR, the health authority counts on the leadership of an Executive Director of Emergency Preparedness and Planetary Health as well as Regional Medical Staff Lead, reporting to the Vice President of Population Health and Chief Medical Health Officer.

PROVINCIAL HEALTH SERVICES AUTHORITY (BC)
In 2023, Provincial Health Services Authority (PHSA) identified planetary health as one of its north star priorities and guiding principles. In 2024, PHSA furthered this commitment by establishing a Planetary Health program, led by an Executive Director of Planetary Health, which reports to the Vice President of Finance and Business Operations and Chief Financial Officer, to support the integration and advancement of planetary health across all operations and service delivery.

HOLLAND BLOORVIEW (ON)
Holland Bloorview Kids Rehabilitation Hospital in Toronto has a Vice President of Communications, Strategy, and Sustainability. The "Sustainability" portfolio includes oversight of environmental sustainability, facilities, food, and environmental services. This organizational structure, combining communications and strategy, supports the alignment, awareness, and execution of environmental initiatives.

Practice #2: Embed sustainability into the organization's strategic frameworks

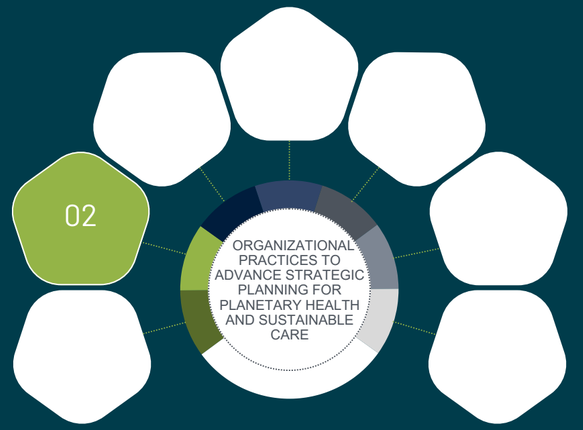
A strategic framework is vital for aligning an organization's overall efforts with its vision and goals, providing a structured approach to decision-making, prioritization, and resource allocation (20, 25, 26). By embedding planetary health and sustainability into these frameworks, organizations ensure that sustainability goals are consistently considered and integrated across all departments and operations. This alignment not only fosters coherence and maximizes impact but also facilitates resource allocation and prevents fragmented and siloed efforts that could undermine long-term success.

SUSTAINABILITY COMMITMENTS

Across the country, a growing number of health delivery organizations have made significant progress in integrating clear and explicit sustainability commitments into their strategic frameworks, priorities, goals, or pillars. In many health delivery organizations, significant opportunities exist to do more to advance the sustainability agenda, whether by adding new commitments or by leveraging existing aligned commitments (e.g., by making their sustainability dimensions more explicit).

PRACTICE #2 ACTIVITIES

- [ ] Conduct internal and external environmental assessments to identify and prioritize sustainability and climate-related risks and opportunities for the organization and the communities it supports and serves.
  - In-depth interviews or surveys: Gather insights from key internal and external partners.
  - SWOT Analysis: Assess internal strengths and weaknesses and external opportunities and threats.
  - PESTEL Analysis: Examine political, economic, social, technological, environmental, and legal influences.
  - Scenario Planning: Forecast multiple future scenarios to address uncertainties and inform strategic decision-making.
  - Vision statement: Define a core ideology and sustainability goals.
- [ ] Develop or integrate a planetary health action plan or sustainability strategy that outlines a vision, goals, priorities, and timelines, ensuring alignment with organizational mandates, vision, mission, and broader strategic priorities.
- [ ] Translate and cascade sustainability goals across all different levels of the organization, to foster alignment, shared understanding, and effective implementation.

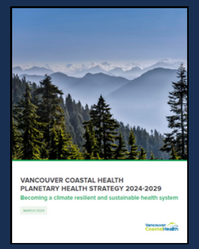


EMBEDDING SUSTAINABILITY INTO THE ORGANIZATION'S STRATEGIC FRAMEWORKS

SPOTLIGHT: BRITISH COLUMBIA HEALTH AUTHORITIES

Between 2023 and 2024, Fraser Health, Interior Health, and Vancouver Coastal Health developed Planetary Health organizational strategies aimed at guiding and informing each organization's efforts to create a climate-resilient, sustainable, and low-carbon health system.

These strategic frameworks identify key areas of impact with clear objectives, incorporating both mitigation and adaptation goals. They also emphasize the organizations' roles and responsibilities in building healthier communities. It is important to note that these roadmaps go beyond the provincial accountabilities mandated by the Climate Change Accountability Act, which sets legally binding targets for emissions reductions.



For more information, refer to CASCADES' resource, Organizational Strategic Planning and Roadmap Development for Sustainable Health Systems in British Columbia, developed in partnership with leaders from the three health authorities. This resource outlines key considerations for organizations undertaking similar efforts, grouped in four sections: governance and leadership, strategic alignment, measurement, and overall learnings.

Futhermore, Vancouver Coastal Health has elevated Planetary Health to an organizational strategic pillar alongside Indigenous Cultural Safety, Equity, Diversity, and Inclusion (EDI), and Anti-Racism. Additionally, Planetary Health has been integrated into Vancouver Coastal Health's broader organizational strategy to support the overarching goal of delivering "exceptional care" that balances high-quality outcomes with low-carbon healthcare.

RESOURCES:

- VIDEO: Listen to sustainability leaders from British Columbia and Nova Scotia (Amanda Mckenzie, Karen Reutlinger, and Mary Lynn VanTassel) discuss opportunities to advance the sustainability agenda through strategic frameworks.
- Organizational strategic planning and roadmap development for sustainable health systems in British Columbia, Canada, CASCADES

- VIDEO: Listen to leaders from British Columbia (Karen Reutlinger, Amanda McKenzie, Kady Hunter, and Breanna Gregory) discuss governance and leadership, strategic alignment, measurement and overall learnings.

EMBEDDING SUSTAINABILITY INTO THE ORGANIZATION'S STRATEGIC FRAMEWORKS

SPOTLIGHT: BC FIRST NATIONS CLIMATE STRATEGY AND ACTION PLAN

The BC First Nations Climate Strategy and Action Plan amplifies the voices of First Nations in climate planning, recognizing their role as the original caretakers of the land. To develop the Strategy, the First Nations Leadership Council (FNLC) collaborated with First Nations across the province to identify climate change challenges specific to their communities, as well as their needs and priorities for climate action. The Strategy incorporates input from First Nations leadership, staff, Elders, Knowledge Holders, youth, women, First Nations institutions and organizations, as well as climate experts and advocates.

The Strategy emphasizes the need for climate action that is co-created with First Nations, ensuring the protection of Title, Rights, and Treaty Rights, and the integration of Indigenous Knowledge, laws, and legal processes. Its vision reflects the collective aspirations of First Nations in BC for the future, addressing the ongoing global climate crisis driven by human activities.

The Strategy outlines four priority pathways:

1. Inherent Title and Rights
2. Capacity and Leadership
3. Land and Water Protection
4. Climate Response and Preparedness

Learn more

SUNNYBROOK HEALTH SCIENCES CENTRE

Sunnybrook Health Sciences Centre has an explicit organizational commitment to environmental stewardship and reducing the hospital's dependence on non-renewable energy and waste resources. In 2024, Sunnybrook was named one of Canada's Greenest Employers for the 16th consecutive year, highlighting its ongoing commitment to creating a more environmentally sustainable hospital environment.

RESOURCES:

- Newfoundland and Labrador Health Services (NLHS) has included an objective in its 2024-2026 Strategic Plan under the strategic pillar of Transformation to "Develop an environmental sustainability strategy that protects the environment and mitigates potential organizational risks."
- Island Health launched its Climate Change and Planetary Health Strategy in 2024, setting target for 2030 including: reducing greenhouse gas emissions by 50% and reaching a 70% waste diversion rate.
- CHEO and Providence Health Care identify sustainability as a foundational and guiding principle in their organizational strategic plans. Holland Bloorview has identified it as a commitment: Transformative Care, Inclusive World: Holland Bloorview 2030.

Practice #3: Establish a multi-functional sustainability team, working group, or task force

Implementing complex organizational changes requires the collective effort of diverse individuals, each bringing unique skills and perspectives to the strategic process (21). Sustainability issues arise in every unit and across every function. So establishing a cross-functional team with expertise that spans all functions is critical to the management, planning, and execution of strategies aimed at advancing sustainable healthcare (27,28). Ensuring that this team is formalized, with dedicated space and time for individuals to focus their efforts on advancing the sustainability agenda, is key to promoting more effective and coordinated implementation.

FROM INFORMAL TO FORMAL TEAMS AND STRUCTURES

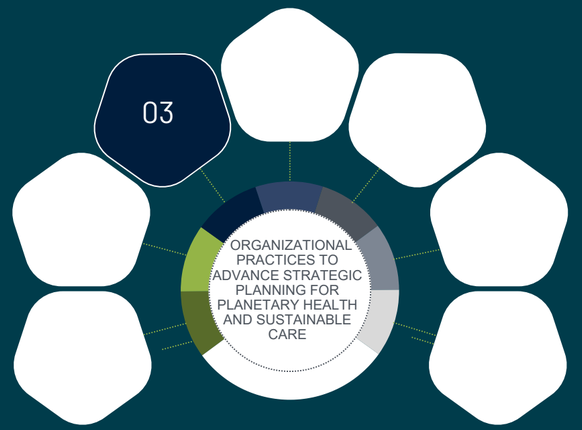
Historically, much sustainability work has been coordinated by voluntary and fairly informal "green teams," sometimes concentrated within specific units or departments and focused on specific sustainability initiatives. Such efforts continue to have value—as ways to engage and leverage the capacities of diverse members of the health workforce and as a potential way to begin to move organizational strategy forward.

However, as organizations move to embed planetary health and sustainability within their strategic frameworks, they are moving to expand the mandate, formalize the structure and enhance the capacity of these implementation teams, ensuring that their expertise and capacities span all functions and strategic commitments (Figure 5).

Formalized structures and processes include established terms of reference, defined funding mechanisms, protected time, clear reporting structure to senior leaders, designated roles, clear mandate, and formalized financial support to effectively advance the sustainability agenda. It is also essential to engage individuals who possess subject matter expertise and decision-making authority.

RESOURCES:

VIDEO: Listen to sustainability leaders from British Columbia and Ontario (Breanna Gregory, Genny Ng, and Spencer Graham) discussing their experiences and ways organizations can leverage multi-functional teams to advance their sustainability agenda.



PRACTICE #3 ACTIVITIES

- [ ] Establish a multidisciplinary team that can inform, draft, and operationalize the organization's sustainability agenda, mandates, and initiatives, drawing on internal or external expertise as needed. (Note: This multidisciplinary team is responsible for advancing initiatives with clear reporting structures and accountability measures.)

- [ ] Leverage and expand traditional expertise in facility-based GHG reduction and waste management, while incorporating knowledge and multi-functional connections in emerging areas such as clinical and community care operations, procurement, infection prevention and control, food services, financial services and more

- [ ] Establish a clear communication mechanism with senior executive leaders and board members for feedback and endorsement of the strategic direction and recommended actions.

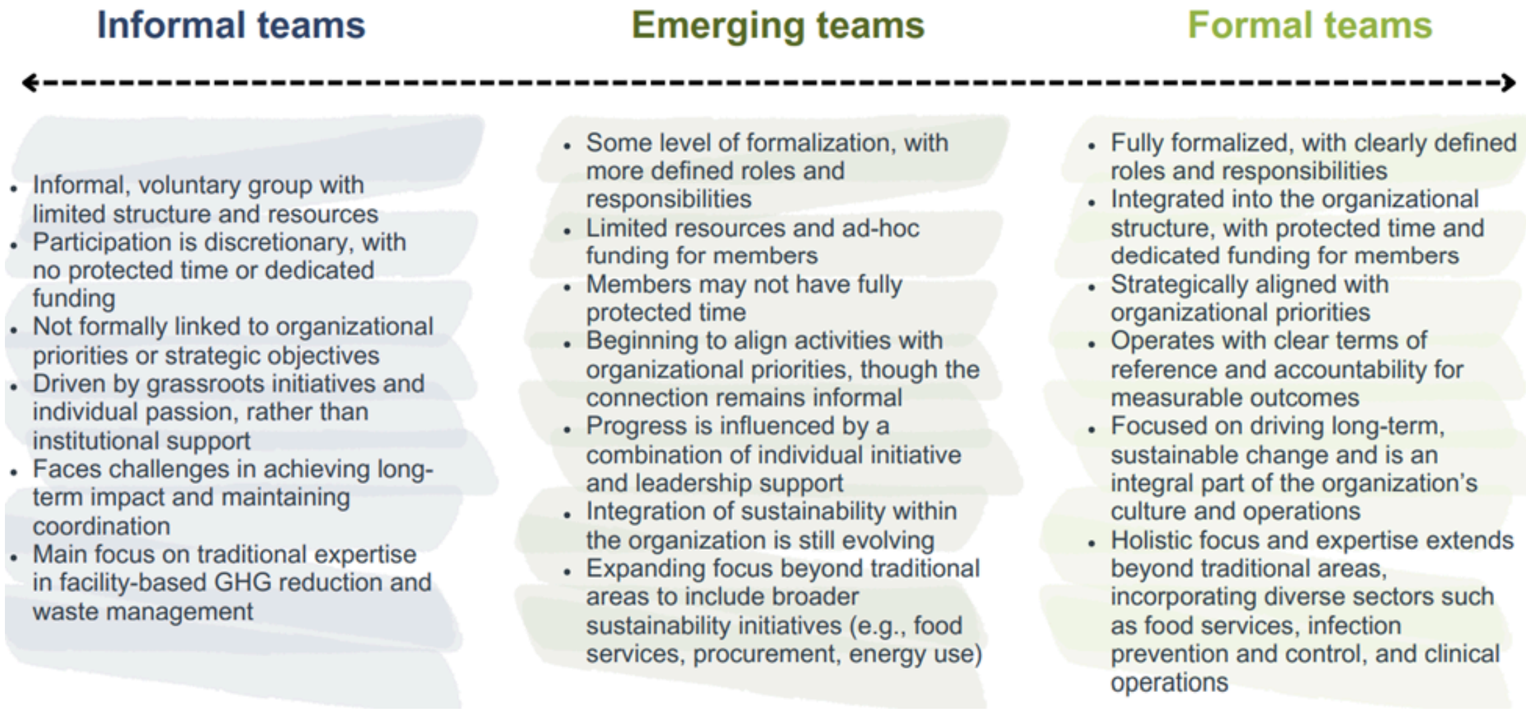


Figure 5: Stages of sustainability team development

WHAT DOES IT LOOK LIKE IN PRACTICE?
ESTABLISHING A MULTI-FUNCTIONAL SUSTAINABILITY TEAM, WORKING GROUP OR TASK FORCE

NL HEALTH SERVICES (NL)

In developing its organization-wide Environmental Sustainability Strategy, NL Health Services in Newfoundland and Labrador established a Steering Committee that integrates key input areas, as outlined in the Steering Committee Terms of Reference. The committee includes leaders and representatives from the following areas:

- Provincial Quality, Risk and Accreditation
- Provincial Planning and Evaluation
- Medical Officer of Health
- Physicians
- Provincial Policy Office
- Provincial Public Health
- Provincial Capital Planning, Infrastructure, and Engineering
- Mental Health and Addictions Services
- Provincial Budgeting, Sustainability and Data Quality
- Provincial Protection Services (Health Emergency Management)
- Provincial Supply Chain, Procurement and Contracts Management
- Provincial Data and Information Services
- Facilities and Support Services

FRASER HEALTH (BC)

Fraser Health's Planetary Health team relies on the multidisciplinary perspectives of the Steering Committee to guide the implementation of the strategy, evaluate progress, and identify opportunities. By cross-pollinating ideas and approaches and connecting people, they ensure that the pursuit of environmental and social sustainability is a whole-of-organization endeavour and movement with momentum. Many working groups with specialized focus report to the Steering Committee, including Circular Health, Anchor Institution, and Natural Environment.

INTERIOR HEALTH (BC)

Interior Health has a formal and established Environmental Sustainability Team, led by an Environmental Sustainability Manager who reports to the Executive Director of Corporate Services under the Chief Financial Officer and Vice President of Corporate Services. Additionally, a Climate Change and Health Lead within the Population and Public Health Team reports to the Chief Medical Health Officer's portfolio.

Interior Health also established a Regional Planetary Health Table with physician representation from ten medical staff associations in the southern Interior region, enabling regional collaboration and the spread of local initiatives across sites. To further engage staff in sustainability efforts, Interior Health has Environmental Sustainability Committees focused on local, site-level, and broader regional initiatives.

WHAT DOES IT LOOK LIKE IN PRACTICE?
ESTABLISHING A MULTI-FUNCTIONAL SUSTAINABILITY TEAM, WORKING GROUP OR TASK FORCE

VANCOUVER COASTAL HEALTH (BC)

Vancouver Coastal Health holds interdisciplinary meetings with teams that have a planetary health mandate, along with partners who work closely with these teams. These partners include Public Health, Energy and Environmental Sustainability, Sustainable Clinical Services, the Transformation Team, and Health Emergency Management BC. These meetings provide updates, ensure a consistent and aligned strategy for advancing the sustainable health systems agenda, and foster collaboration.

SUNNYBROOK HEALTH SCIENCES CENTRE (ON)

Sunnybrook Health Sciences Centre in Toronto, Ontario established a Green Task Force in 2022 to guide and support environmental sustainability initiatives across the organization. This voluntary group comprises 18 members from various departments with diverse interests, backgrounds, and levels of leadership and expertise. This team focuses on fours key themes: green building and grounds, research, education and culture; clinical operations, and waste and procurement. The task force reports to the Vice President of Human Resources.

PROVIDENCE HEALTH CARE (BC)

In 2024, Providence Health Care in Vancouver, British Columbia, created a Planetary Health Lead position under the Quality, Safety & Accreditation portfolio to support the development and implementation of an organization-wide Planetary Health Strategy. Additionally, the organization has an environmental stewardship grassroots- initiated green team that includes representatives from across the organization, collaborating on sustainability and climate resilience initiatives.

SPOTLIGHT: COASTAL FIRST NATIONS GREAT BEAR INITIATIVE (CFN-GBI)

VANCOUVER, BRISITH COLUMBIA

The Coastal First Nations Great Bear Initiative (CFN-GBI) hosts the Indigenous Climate Action Network (ICAN), a program that empowers Indigenous leadership in climate action across the province. ICAN provides funding for remote Indigenous communities to hire full-time Climate Action Coordinators, who receive individual and peer networking support, training, and mentorship. These coordinators are responsible for planning and implementing energy efficiency, renewable energy, and climate change adaptation projects within their communities. Since 2011, the CFN-GBI has assisted eight coastal First Nations in preparing for and adapting to climate change.

Learn more

RESOURCES:

- Terms of Reference for sustainable care committees: SickKids Perioperative Care Unit (POCU) Greening Committee.
- The Canadian Coalition for Green Health Care has a "Green Team Project" with relevant resources for organizations wanting to develop a green team.
- CASCADES' perioperative playbook section on starting an OR green team (including two case study videos – London Health Sciences Centre's Green Team and SickKids' Green Team)
- A Guide for Creating Effective Green Teams in Health Care, A Practice Greenhealth Step-By-Step Guide Sustainable Operations Series
- Practice Greenhealth Comparison chart of hospital green teams and their structures

SPOTLIGHT: FROM INFORMAL TO FORMAL SUSTAINABILITY TEAMS

ISLAND HEALTH, BRITISH COLUMBIA

The journey of the sustainability engagement teams at Island Health began with a pilot project involving two Green Teams from Victoria Hospice and The Summit Long-Term Care Home. As part of the pilot, the Environmental Sustainability Team at Island Health provided support in the form of guidance to develop terms of reference, engage a sponsor at the management level, and assist with project and change management.

After these pilots, the need for a more structured and embedded approach became clear. Specifically, there was a need for protected and dedicated time for this work, as well as workforce development in project management, change management, and sustainability.

In response, the organization developed a structured Green Teams Program, a 6-month initiative aimed at empowering healthcare workers to establish and lead Green Teams within various healthcare settings, including hospitals, care homes, and health centers.

The program offers participants the opportunity to collaborate on sustainability initiatives designed to reduce environmental impacts. Green Team Leaders receive protected time for monthly educational sessions, guidance from sustainability experts, and access to resources from Island Health's Environmental Sustainability Program to support the implementation of their projects.

Another important component to a more embedded model, is that the nursing and allied health professionals are eligible for funded, protected time to participate, through the Green Revolving Fund. Open to all Island Health employees, the program requires a commitment of 10 hours per month from Green Team Leaders and 5 hours per month from members.

"Initially, the program was piloted without funded or protected time. We collaborated with champions to carve out time where possible but quickly realized that protected work time was essential for success. To address this, we explored funding options through our Energy, Environment & Climate Change department's Green Revolving Fund (GRF), which is supported by incentives, rebates, grants, and savings from energy conservation projects.

Using the GRF, we calculated budgets and built a business case to fund up to 15 hours per month per team for nursing and allied health staff during the 6-month cohort. Our goal is to help Green Teams demonstrate strong environmental, financial, and social returns while embedding their work into core operations for long-term sustainability."

Learn more

Spencer Graham, Sustainability Coordinator, Island Health

Practice #4: Strengthen internal organizational capacity

One of the core functions of strategic planning and management is to build and enhance internal capacity for ongoing implementation, learning, and strategic change (29,30). By developing this capacity, organizations equip their workforce with the skills, knowledge, and tools necessary to promote and deliver sustainable health systems, while sustaining change over time. A strong foundation of internal knowledge, flexibility, and broad engagement at all levels is essential not only for effective strategy development but also for successful and enduring execution (31). This ensures that strategies are not only well-crafted but also adaptable and resilient, enabling the organization to continuously respond to emerging challenges and opportunities. Strengthening internal organizational capacity can take various forms:

BUILDING KNOWLEDGE AND SKILLS

Providing education and onboarding programs to promote climate and planetary health literacy at all levels of the organization.

MOBILIZING RESOURCES AND PARTNERSHIPS

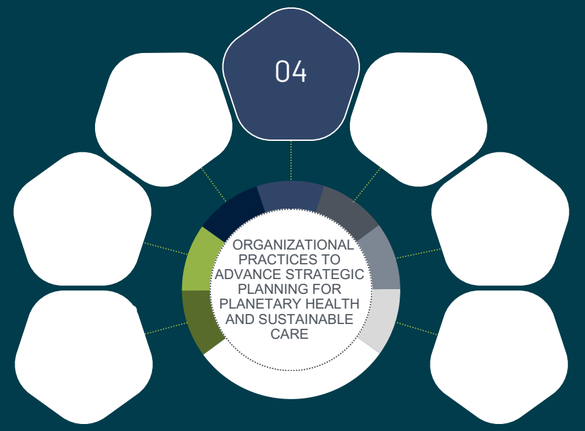
Securing financial and strategic resources to support and scale sustainability initiatives through internal mechanisms and external partnerships. This includes establishing partnerships to advance capacity building, such as with hospital foundations. Notably, in some provinces, foundations and hospitals operate as separate entities. Identifying synergies and aligning foundations with planetary health and sustainable care objectives can help fund, initiate, expand, and scale successful projects across the organization.

LEVERAGING EXISTING STRUCTURES

Utilizing existing organizational structures—such as Quality Improvement, Accreditation, and Research and Innovation—to drive coordinated action across the organization, and facilitate progress by providing protected time, resources, and expertise.

STRENGTHENING RESILIENCE AND PREPAREDNESS

Developing organizational and workforce capacity to prepare for, respond to, and recover from climate-related events and emergencies. As highlighted by the WHO, this requires a workforce that is not only technically skilled but also adaptable to climate-related challenges. It includes ensuring a sufficient number of trained professionals working in safe, supportive environments, with ongoing opportunities for education in climate resilience, health risk management, and disaster preparedness.



SPOTLIGHT: ACCREDITATION CANADA AND THE HEALTH STANDARDS ORGANIZATION

DECLARATION ON CLIMATE ACTION

Accreditation Canada and the Health Standards Organization (HSO) have been actively strengthening their standards to address environmental sustainability within healthcare. These updates emphasize climate action through both mitigation and adaptation strategies. For example, their revised governance standards encourage organizations to integrate environmental stewardship into their leadership frameworks, promoting accountability and sustainable practices. Recently, HSO published a declaration on climate action. This serves as a catalyst for change, prompting accredited organizations to develop workplans to ensure compliance with these standards.

Learn more

PRACTICE #4 ACTIVITIES

- [ ] Create new, dedicated structures to advance sustainability initiatives, and/or integrate the sustainability agenda into existing frameworks, structures, or policies to promote cross-functional collaboration and leadership, while leveraging existing efforts and resources. Existing structures that can be mobilized to support sustainability initiatives may include but are not limited to: Quality Improvement, Accreditation, Diversity, Equity and Inclusion, Finance, Indigenous Health, Energy and Facilities, and Research and Innovation.
- [ ] Deepen capacity in traditional sustainability areas (e.g., re/development, facilities management, environmental services, etc.)
- [ ] Strengthen capacity in newer sustainability areas (e.g., clinical operations, procurement, infection prevention and control, food services, etc.).
- [ ] Develop and implement onboarding and induction modules, resources, and training materials aimed at promoting planetary health and sustainable care literacy throughout the organization. (Note: New healthcare staff often face overwhelming onboarding demands, making it more effective to integrate content into existing modules where possible. Developing and sustaining this education requires expertise in planetary health, alongside a comprehensive, ongoing training plan rather than a one-time session.)
- [ ] Facilitate opportunities for staff to develop and share knowledge and skills, including through continuing professional development programs.
- [ ] Identify and map existing high-impact environmental sustainability efforts, initiatives, and funds across the organization and provide support to ensure their sustainability and expansion for greater impact.
- [ ] Allocate resources for the organization to effectively carry out the sustainability agenda and achieve its goals.

WHAT DOES IT LOOK LIKE IN PRACTICE?
STRENGTHEN INTERNAL ORGANIZATIONAL CAPACITY

BUILDING KNOWLEDGE AND SKILLS

- CASCADES offers a range of continuing professional development training programs for individuals in health systems working towards environmentally sustainable healthcare. These include:
  - Self-paced Introduction to Sustainable Health Systems and Orientation to Sustainable Health Systems online courses
  - An experiential synchronous Fundamentals course
  - A Metrics for Change course for those looking to develop their environmental measurement literacy
  - A Leadership for Change course
  - Specialized offerings such as Climate Conscious Inhaler Prescribing and Sustainable Perioperative Care courses

- Healthcare Excellence Canada's EXTRA Executive Training Program is a team-based leadership development initiative designed to enhance leaders' capabilities in improving healthcare quality and safety. The program includes a focus on sustainable health systems as part of its curriculum.

- BC Cancer offers a 12-week Planetary Health Nursing Internship Program designed to educate nurses about planetary health and support the development of projects grounded in planetary health principles and quality improvement fundamentals.

- NHS England (2022) is developing educational materials to train all staff on climate mitigation and adaptation, including incorporating climate change training into its existing leadership programs.

LEVERAGING EXISTING STRUCTURES

- Sunnybrook Health Sciences Centre identified Sustainable Care as a strategic goal in the 2020-2025 Quality Strategic Plan. The Green Task Force at Sunnybrook plays a key role in proposing initiatives related to environmental sustainability, some of which are operationalized through the quality framework. A notable example is the Nitrous Oxide Reduction Project, a collaboration between the Green Task Force, PEACH Health Ontario, and CASCADES. The project, aimed at reducing nitrous oxide emissions, has been added to the Quality Improvement Plan, with the first phase focusing on analyzing potential sources of leaks.

- The Physician Quality Improvement Initiative is a collaboration among British Columbia health authorities designed to strengthen physicians' capacity for quality improvement by providing dedicated time and resources for projects, including those focused on environmental sustainability.

- The Vancouver Acute/Vancouver Community Medical Staff Planetary Health Committee seeks to empower medical staff as leaders in planetary health. The committee provides expertise, protected time, and funding to support the advancement of planetary health initiatives.

WHAT DOES IT LOOK LIKE IN PRACTICE?
STRENGTHEN INTERNAL ORGANIZATIONAL CAPACITY

MOBILIZING RESOURCES AND PARTNERSHIPS

Foundation support

- Vancouver General Hospital (VGH) & University of British Columbia (UBC) Hospital Foundation and Boehringer-Ingelheim, established an Innovation Partnership that focuses on Planetary Health as one of the priority areas. The first two funded projects were related to planetary health and resulted in the development and implementation of a Planetary Health Menu (Planetary Health Menus in Action: A Fireside Chat with Vancouver Coastal Health) and a project to implement alternative methods for anesthesia, such as regional anesthesia, where no inhalation agents are used.

Government support

- The Australian Government's Department of Health and Aged Care (2023) has funded the establishment of mental health services for people affected by disasters. This service is available to all emergency services workers—including volunteers and those who are retired—who respond to disasters such as bushfires, floods, and the COVID-19 pandemic. Also, through the National Emergency Worker Support Service, emergency services workers can access up to 12 sessions with a clinical psychologist free of charge.

Internal funding mechanisms

- Regarding funding for protected time for healthcare professionals, an example is the Green Revolving Fund (GRF), an internal financial mechanism that reinvests savings from energy efficiency and sustainability projects into future initiatives. The Fund is supported by incentives, rebates, and grants from energy utility programs, as well as operational cost savings generated by previous projects. Island Health uses this Fund to support its green team programs.

- The Small Steps, Big Idea Projects Committee in BC provides financial support ($1,000–$5,000) through funding from the Specialist Services Committee for physician-led projects addressing priorities like planetary health.

WHAT DOES IT LOOK LIKE IN PRACTICE?
STRENGTHEN INTERNAL ORGANIZATIONAL CAPACITY

STRENGTHENING RESILIENCE AND PREPAREDNESS

Building internal capacity for response and recovery is critical. Clear strategies and protocols are essential for maintaining critical services and ensuring public safety during climate-related emergencies. Defining responsibilities, actions, and timelines in advance strengthens the healthcare system's ability to respond effectively and promptly to crises.

For example, purposeful, regular collaboration between Fraser Health, First Nations Health Authority BC, Metis Nation BC, and Health Emergency Management BC focuses on enhancing communication and coordination across organizations. The established relationships and lines of information flow have proven instrumental in enhancing care and support for Indigenous community members during emergency events.

- For heat-related events, BC has a Provincial Heat Alert and Response System that issues alerts to the public.
- The Inter- and Intra-Health Authority Relocation Toolkit is a provincial initiative that resulted in the creation of a toolkit for Long Term Care during wildfire season, but is now used for other climate change events, including flooding, and it is used across the province. This toolkit was initially used in response to the 2021 wildfire and the Northwest Territories evacuations and relocations.
- For flood-related events, the BC Government created a guiding document From Flood Risk to Resilience: a B.C. Flood Strategy to 2035, outlining strategies to enhance flood preparedness, response, and recovery.
- For wildfires, the Public Health Agency of Canada created a toolkit, Wildfires In Canada: Toolkit for Public Health Authorities, which summarizes information and existing resources to support public health authorities in mitigation, preparedness, response and recovery efforts.

RESOURCES:

- VIDEO: Listen to healthcare professionals share their experience building internal capacity to advance their sustainability agenda.

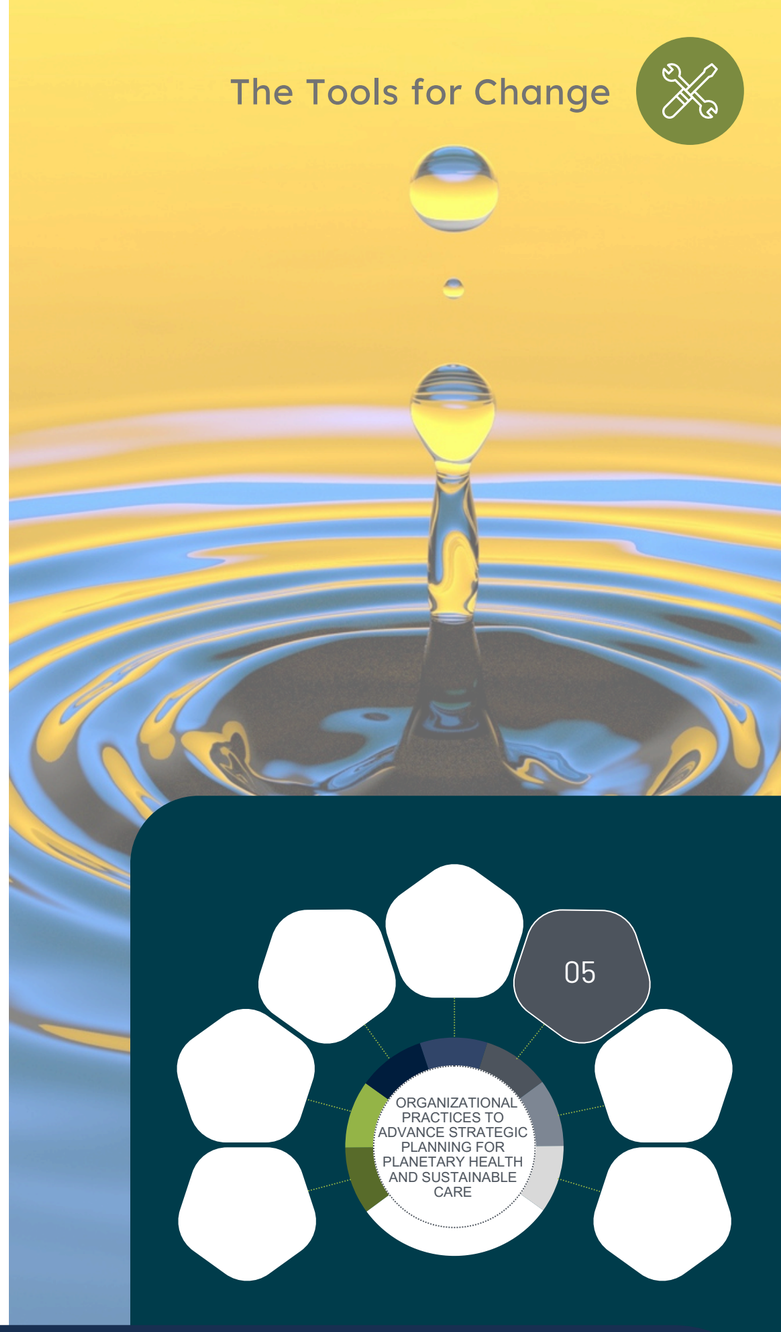
Practice #5: Establish external partnerships and networks for greater impact

External partnerships and networks are crucial for advancing low-carbon, sustainable, equitable, and resilient health systems. Collaborations with organizations, academic institutions, community groups, and other external groups facilitate the exchange of strategies, innovations, learnings, and resources. These partnerships enable the scaling of initiatives and enhance the organization's capacity to drive meaningful change, improving its ability in contexts of complex and adaptive systems.

COMMUNITY IMPACT

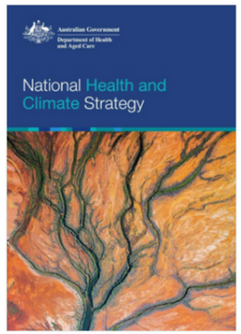
Increasingly, healthcare institutions recognize their pivotal role as anchors within their communities, understanding their unique capacity to leverage resources, investments, procurement strategies, physical infrastructure, and purchasing power to foster and promote sustainable practices. This ability empowers the organizations to drive substantial changes that can improve community health and well-being. By strategically utilizing their position and assets, these institutions play a crucial role in advancing environmental sustainability within the broader community they serve.

For example, Fraser Health outlines in its Planetary Health Strategy one of its four strategic priorities as: "Living our anchor mission by reinforcing the connection between planetary health and healthy communities." This organization explicitly acknowledges its opportunity to influence the social determinants of health through intentional decision-making regarding the use of resources and institutional influence. By being deliberate in how it utilizes its spaces and resources, Fraser Health aims to benefit the communities it serves beyond the provision of healthcare.



HEALTH IN ALL POLICIES

Health in All Policies integrates considerations for health, equity, and well-being into policies by all sectors of government. Strategies to address the health systems impact on climate change should adopt a Health in All Policies perspective, promoting the health co-benefits of climate action across society (32, 33). Collaboration across different policy areas is essential for a just and equitable response to climate change and for healthy, sustainable communities through whole-government action (32, 34, 35).



See Figure 1 Health in All Policies approach in the National Health and Climate Strategy, Australian Government National Health and Climate Strategy

"Health in All Policies is an approach that systematically considers the health and social implications of policies contemplated by all sectors of government — aiming for synergistic benefits and to minimize social and health-related harms." -Marcello Tonelli, Kwok-Cho Tang and Pierre-Gerlier Forest (34, p E61)

PRACTICE #5 ACTIVITIES

- [ ] Establish or join networks to enable local learnings and the exchange of best practices, with a continued sectoral emphasis on promoting high quality, low-carbon, climate-resilient, equitable, and sustainable health services and systems.
- [ ] Strengthen cross-sectoral collaboration and synergies to encourage cohesive and coordinated action.

SPOTLIGHT: NURSING HOME WITHOUT WALLS
NEW BRUNSWICK

The Nursing Home Without Walls (NHWW) program in New Brunswick is rooted in long-term care and community support. The program utilizes a coordinator who contacts older adults at home during heat waves to help prevent health deterioration that could lead to emergency department visits. In this particular community, it was observed that many emergency department visits during heat waves were made by older adults. As a result, the hospital and the community-based program collaborated to prevent this issue from recurring in subsequent years. This initiative highlighted the strength and leadership of the community organization, which had a significant positive impact on the health system.

Learn more

WHAT DOES IT LOOK LIKE IN PRACTICE?
ESTABLISH EXTERNAL PARTNERSHIPS AND NETWORKS FOR GREATER IMPACT

CHOOSING WISELY CANADA

Choosing Wisely Canada advances climate action in healthcare through climate-conscious recommendations and its Hospital Designation Program, which recognizes hospitals that actively reduce unnecessary tests and treatments. This designation highlights an organization's commitment to minimizing waste and harm, supporting environmentally sustainable healthcare practices.

CASCADES' SUMMER INSTITUTE ON SUSTAINABLE HEALTH SYSTEMS

CASCADES' Summer Institute is a pan-Canadian collaboration among academic institutions and the Canadian Institutes of Health Research to educate graduate-level trainees on sustainable health systems. Offered annually between 2022 and 2025, 13 academic institutions collaborated to equip over 400 students with the knowledge and skills required to lead, manage, analyze, inform, or deliver sustainable health systems.

The Summer Institute aimed to develop trainee knowledge, leadership skills and capabilities, and build professional, interdisciplinary networks of trainees and professionals with interests in sustainable health systems.

CANADIAN COALITION FOR GREEN HEALTH CARE (CCGHC) WORKING GROUPS

The Sustainable Prescribing Working Group aims to transform Canadian health care prescribing practices with a shared vision of a resilient and environmentally sustainable health care system.

The Sustainable Procurement Working Group aims to transform Canadian health care supply chains to a shared vision of a resilient and environmentally sustainable health care system. The Working Group acts as a catalyst for joint action of hospital purchasing departments, group purchasing organizations (GPOs), as well as their members and other stakeholders to challenge suppliers to champion low-carbon product innovations and to develop new business models that minimize waste and harm to the environment.

SUSTAINABLE NEPHROLOGY ("SNAP") COMMITTEE

The Canadian Society of Nephrology Sustainable Nephrology (SNAP) Committee consists of a Canada-wide group of providers dedicated to aligning kidney care with planetary health principles.

CASCADES' COMMUNITIES OF PRACTICE

CASCADES' partners with innovation champions and allied organizations to establish national communities of practice, providing an opportunity for individuals working in the healthcare system to connect to enhance sustainability efforts in their own settings by sharing their experiences and seeking guidance on how to maximize the impact of their efforts.

ONSQIN-CASCADES Sustainable Perioperative Care meets monthly for those working to implement sustainability projects in the perioperative care setting.

Healthcare Waste Management Community of Practice is offered in partnership with the CCGHC to enhance sustainability within healthcare waste management processes in Canada.

Greenhouse Gas Emissions Estimation in Canadian Healthcare Organizations Community of Practice is offered in partnership with the CCGHC for experts working in the healthcare system in facilities and/or energy management roles.

WHAT DOES IT LOOK LIKE IN PRACTICE?
ESTABLISH EXTERNAL PARTNERSHIPS AND NETWORKS FOR GREATER IMPACT

SUSTAINABLE PERIOPERATIVE CARE COMMUNITY OF PRACTICE

The Ontario Surgical Quality Improvement Network Sustainable Perioperative Care Community of Practice connects surgical teams across hospitals and specialties. Focused on enhancing surgical care quality through clinical data, including sustainability considerations, the network focused on the "Cut the Carbon Campaign" in 2023 and 2024. Each National Surgical Quality Improvement Program (NSQIP) centre defines its own goals and interventions for the campaign. The network fosters collaboration, supports data collection, and empowers staff to drive local sustainability initiatives.

ONTARIO'S ANESTHESIOLOGISTS ENVIRONMENTAL SUSTAINABILITY WORKING GROUP

The Ontario's Anesthesiologists Environmental Sustainability Working Group aims to promote environmentally responsible perioperative clinical practices and, more specifically, ensure anesthetic practices minimize effects on the environment.

LOW-CARBON, HIGH-QUALITY CARE COLLABORATIVE

The Low-Carbon, High-Quality Care Collaborative is a provincial quality improvement initiative in British Columbia with the goal to spread and scale up efforts and share knowledge of low-carbon practices that improve the quality of care. It is delivered in partnership between Health Quality BC, CASCADES, and Vancouver Coastal Health.
This Collaborative emerged from early efforts by Health Quality BC to foster meaningful collaboration among provincial partners—laying the groundwork for a coordinated, system-level approach to sustainable, high-quality care.

The first iteration of the Collaborative focuses on the following two key streams, each supported by a structured change management and measurement strategy:

1. Climate-conscious inhaler use

2. Sustainable preoperative practices

SPOTLIGHT: PROVINCIAL SUSTAINABLE CLINICAL SERVICES WORKING GROUP

BRITISH COLUMBIA

The Provincial Sustainable Clinical Services Working Group (PSCSWG) is a pioneering collaborative effort in British Columbia, leading the planning and implementation of high-quality, environmentally sustainable clinical care across the province. Its members include representatives from Health Quality BC, BC Health Authorities, CASCADES, the Ministry of Health, and the Rural Coordination Centre of BC. The working group's key goals are to:

- Collaborate and Innovate: Provide a provincial forum to share strategies and discuss priorities and opportunities for implementing and synergizing environmentally sustainable, high-quality care.
- Align Actions: Develop joint recommendations to support system changes that enable a climate-resilient, low-carbon, and sustainable health system
- Evaluate, Spread, and Enhance: Identify and scale sustainable best practices, developing a project repository, and promoting environmentally sustainable quality improvement initiatives.

Andrea Wnuk
Leader, Health System Improvement
Health Quality BC

"By coming together as a provincial group, we are enabling system-level coordination to build consensus and community around the way forward to supporting environmentally sustainable, low-carbon, high-quality care in BC. We are breaking down silos and moving forward in a collective way to learn from each other and support each other in our efforts to improve care through an environmentally sustainable, low-carbon lens."

RESOURCES:

- VIDEO: Listen to healthcare professionals share their experience establishing external partnerships and networks to advance their sustainability agenda.
- The Planetary Health and Sustainable Care ECHO is a collaborative space for Canadian healthcare professionals to discuss, troubleshoot, and celebrate efforts in delivering climate-resilient, sustainable care across various settings and specialties. CASCADES and the Collaborative Centre for Climate, Health and Sustainable Care, University of Toronto.

Practice #6: Implement organizational-level measurement and reporting systems

EMBEDDING MEASUREMENT AND REPORTING TO DRIVE STRATEGIC ACTION

Performance measurement and reporting systems are essential for translating strategy into action, guiding resource allocation, tracking progress, and ensuring alignment with strategic goals. These systems promote accountability by measuring outcomes against evidence-based targets and timelines, supporting decision-making, facilitating adjustments, and creating a dynamic feedback loop. This process helps ensure that actions align with sustainable health systems priorities, driving continuous improvement and adapting strategies to meet emerging challenges (36, 37).

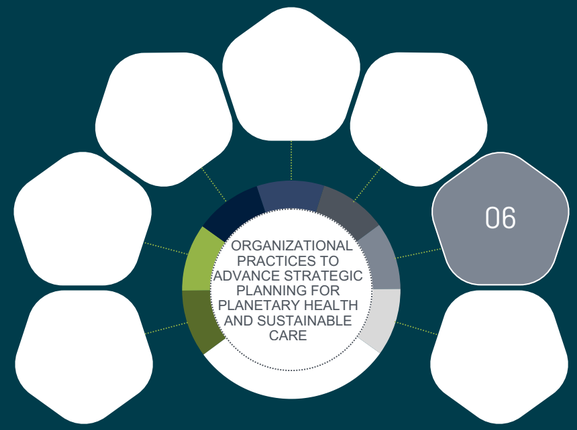
BUILDING EARLY WARNING AND SURVEILLANCE SYSTEMS

Given the growing impacts of climate change, both in magnitude and severity, a timely and effective response is essential. Therefore, it is critical for systems and organizations to invest in the development and strengthening of early warning and reporting systems, alongside establishing regular surveillance of extreme weather events, disease vectors, and infections (38). This monitoring is crucial for assessing both the current and anticipated future capacity of the system to respond effectively and adjust as needed.

GENERATING EVIDENCE TO STRENGTHEN RESILIENCE AND ADAPTATION

Generating evidence on the nature and scale of climate change impacts on health risks and identifying communities that are most vulnerable to these impacts, can help improve health systems preparedness, resilience, and adaptation. According to the WHO, gathering this evidence is critical as health risks depend on several factors including projected changes in weather/climatic conditions; the nature of the exposure; socioeconomic and environmental determinants at the population and individual level (39).

Climate-informed assessments, such as Climate Change and Health Vulnerability and Adaptation Plans and Climate Change Risk Assessments, are instrumental in guiding evidence-based adaptation and preparedness strategies.



TRACKING GLOBAL PROGRESS IN CLIMATE-RESILIENT HEALTH SYSTEMS

According to the 2024 Report of the Lancet Countdown: “As of December 2023, 61% of the WHO Member States that committed to building climate-resilient health systems through the 26th Conference of the Parties (COP26) Health Programme reported having completed a vulnerability and adaptation assessment, up from 17% the year before.

As of December 2023, 52% of WHO members that committed to building climate-resilient health systems through the COP26 Health Programme reported having developed a Health National Adaptation Plans, up from just 6% one year before” (11, p. 16).

ADVANCING ORGANIZATIONAL REPORTING BEYOND EMISSIONS

At the organizational-level, reporting has primarily focused on emission reductions, often framed through a facilities and maintenance lens, addressing aspects such as energy consumption and waste management. These reports are typically shaped by specific mandates and regulatory frameworks at various jurisdictional levels, including provincial requirements, which set expectations for environmental performance (e.g., emission reduction targets and timelines).

INTEGRATING SUSTAINABILITY INDICATORS INTO ORGANIZATIONAL PERFORMANCE FRAMEWORKS

Fewer instances exist where organizations link their environmental sustainability performance to broader strategic objectives. One approach that can facilitate this integration is the use of balanced scorecards, a strategic management tool designed to align organizational activities with long-term goals. By integrating sustainability into balanced scorecards and aligning environmental sustainability indicators with other key performance indicators (KPIs), healthcare organizations can streamline reporting processes, ensuring that sustainability is not treated as a separate effort but is embedded within the organization’s overall strategic framework.

RESOURCES:

- VIDEO: Listen to healthcare professionals share their experience implementing organizational-level measurement and reporting systems to advance their sustainability agenda.

PRACTICE #6 ACTIVITIES

- [ ] Define organizational sustainability goals and performance indicators that align with overall priorities, and address the climate-related risks and opportunities relevant for the organization.
- [ ] Ensure that the selected metrics and targets adhere to applicable federal, provincial, and local regulations (e.g., Climate Change Accountability Act and British Columbia's CleanBC plan and roadmap) as well as relevant sustainability and climate disclosures.
- [ ] Develop an integrated measurement strategy and data collection plan that incorporates various sustainability performance areas (e.g., energy emissions, waste management, clinical services, procurement, climate change adaptation, emergency management, etc.). Recognize the importance and limitations of the chosen metrics.
- [ ] Prepare and publish reports on progress related to sustainability metrics and targets for both internal and external stakeholders. Ensure that updates are consistently provided across all organizational levels to maintain awareness and accountability.

WHAT DOES IT LOOK LIKE IN PRACTICE?

The examples presented in the next pages illustrate how measurement and reporting systems are being implemented at multiple levels and scopes:

- MANDATORY PROVINCIAL REPORTS
- ORGANIZATIONAL-LEVEL SCORECARDS
- AREA-SPECIFIC SCORECARDS
- CLIMATE RISK ASSESSMENTS AND MONITORING

RESOURCES:

- Organizational GHG Emissions Measurement: Opportunities and Guidance Chart provides different sources for estimating emissions from fuel combustion, heating/cooling, electricity, nitrous oxide, waste, purchased paper, patient travel, and others. CASCADES
- Virtual Care Carbon Accounting Tool helps estimate the carbon savings associated with patient travel. Please Refer to Virtual Care Carbon Accounting Playbook for more details. CASCADES
- Inhaler coverage chart provides emissions factors for different types of inhalers, based on brand and dosage. CASCADES
- Emerging applications, for example the Anaesthetic gases calculator, which compares both the financial and carbon costs of inhaled anesthetics.
- If you have energy or emission data, you can "translate" those units into equivalency results that might be easier for your partners and stakeholders to interpret. This Greenhouse gas equivalencies calculator can help with these estimations.
- HealthcareLCA database compiles healthcare-related published articles and literature that address environmental impacts. You can browse by area of interest (e.g., gloves) and explore whether there is available literature to help you identify or approximate a suitable emissions factor.
- Climate Change and Health Vulnerability and Adaptation Assessments: A Knowledge to Action Resource Guide (Health Canada); Health Chapter: Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation (Berry et al, 2014);
- A Changing Climate: Assessing Health Impacts & Vulnerabilities Due to Climate Change Within Simcoe Muskoka, Ontario (Levison et al., 2018)

WHAT DOES IT LOOK LIKE IN PRACTICE?
MANDATORY PROVINCIAL REPORTS

BRITISH COLUMBIA: CLIMATE CHANGE ACCOUNTABILITY ACT

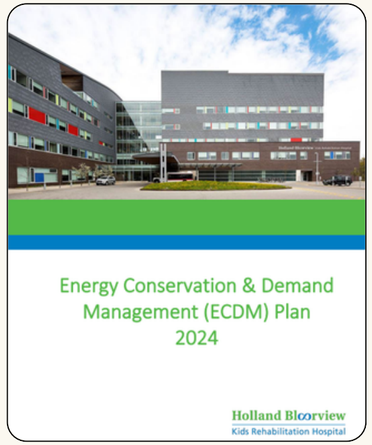
British Columbia (BC) is one of the provinces that mandates large public-sector organizations, including healthcare institutions, to track and report carbon emissions and climate-related efforts under the Climate Change Accountability Act. This legislation requires public-sector organizations to disclose their greenhouse gas (GHG) emissions and climate action plans. Since 2010, health authorities, along with other public-sector entities, have been producing Climate Change Accountability Reports (CCARs), which detail GHG emissions from stationary fuel combustion, purchased energy, and supplies (e.g., paper), as well as offsets used to achieve net-zero emissions.

These reports also outline progress toward targets, including a 40% reduction in absolute GHG emissions below 2007 levels by 2030. In addition to CCARs, health authorities voluntarily produce annual Environmental Performance Accountability Reports (EPARs), which highlight the environmental milestones, achievements, and impacts of organizations such as Fraser Health, Providence Health Care, Provincial Health Services Authority, and Vancouver Coastal Health.

ONTARIO: ENERGY CONSERVATION AND DEMAND MANAGEMENT PLAN

In Ontario, broader public sector organizations must publish an energy conservation and demand management plan.

As an example, in 2024, Holland Bloorview took extra efforts to make the 2024 edition more accessible and used it as an opportunity to set GHG goals, outline new initiatives, and speak about the impact of past efforts. The Energy Conservation & Demand Management Plan 2024 was endorsed by the Executive Leadership team.



WHAT DOES IT LOOK LIKE IN PRACTICE?
ORGANIZATIONAL-LEVEL SCORECARDS

GREEN HOSPITAL SCORECARD

The Green Hospital Scorecard (GHS) is an environmental benchmarking tool for Canadian hospitals. Originally developed by the Ontario Hospital Association in 2013, the Canadian Coalition for Green Health Care has been delivering this national program since 2016 to over 100 hospitals. Based on their responses to a questionnaire, participating hospitals are provided a score which allows them to measure their progress year to year and compare themselves to similar types of hospitals. The new GHS scorecard measures initiatives in areas such as corporate leadership and governance, climate change and resiliency, education, Supply chain, clinical practices, medications and anesthetics, building energy, water, and waste; food, transportation, and system design. Participants have used their GHS results to help understand their sustainability and climate resilience successes and to help them develop their future programs.

SPOTLIGHT: TORONTO ACADEMIC HEALTH SCIENCE NETWORK (ON)

COLLABORATIVE CENTRE FOR
Climate, Health + Sustainable Care

SUSTAINABLE HEALTH SYSTEM COMMUNITY of PRACTICE

The Toronto Academic Health Science Network (TAHSN) Sustainable Health System Community of Practice has worked with the University of Toronto (UofT) Collaborative Centre for Climate, Health & Sustainable Care to develop a trailblazing Sustainability Balanced Scorecard. This tool encompasses both reducing greenhouse gas (GHG) emissions and overall environmental impact, as well as adapting to climate risks, and developing resilience to climate shocks and stresses. It outlines common sustainability objectives and indicators that align with broader organizational goals, enabling TAHSN institutions to assess and celebrate improvements. The scorecard is structured around four key dimensions of organizational performance in which sustainability can be integrated:

- Leading: Organizational capacity, leadership, and governance
- Caring: Appropriate care, products, and supplies
- Building: Greenhouse gas (GHG) emissions and waste
- Shaping: Procurement and resilient institutions

Learn more

Organizations evaluate each dimension based on established criteria and determine whether the sustainability objectives are unmet, partially met, or fully met. Success stories and best practices derived from these outcomes will be widely disseminated as learning opportunities across the Community of Practice.

WHAT DOES IT LOOK LIKE IN PRACTICE?
AREA-SPECIFIC SCORECARDS

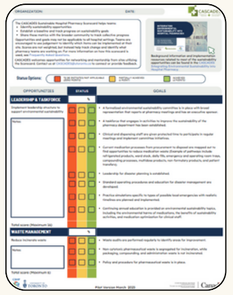
CASCADES' PAN-CANADIAN SCORECARDS

CASCADES' Sustainable Perioperative Care Scorecard supports perioperative teams to:

- establish a baseline and track progress on sustainability goals
- identify sustainability opportunities
- access implementation resources
- share metrics with a broader community to track collective progress on a shared dashboard

CASCADES' Sustainable Hospital Pharmacy Scorecard helps teams to:

- establish a baseline and track progress on sustainability goals
- identify sustainability opportunities
- share metrics with the broader community to track collective progress



QUALITY IMPROVEMENT

Ontario Health, in collaboration with CASCADES, is defining sustainability-focused quality indicators across key healthcare settings—including hospitals, primary care, home and community care, and long-term care—to drive action in five priority change areas: healthcare workforce preparedness, leadership and governance, medication optimization, food infrastructure, and reusables.

These indicators are embedded into organization-wide Quality Improvement Plans, which are regularly updated and tracked, helping to integrate planetary health into quality improvement efforts.

DIVISION OF GENERAL SURGERY

The Division of General Surgery at Vancouver General Hospital uses a five-tier metric system, requiring each Integrated Practice Unit (IPU)—organized around clinical conditions—to report quarterly on at least one sustainability metric. These metrics should respond to the guiding question: Are we making optimal and sustainable use of resources?

The initial focus for these surgical teams includes two key sustainability metrics: optimizing surgical trays and reducing unnecessary blood work.

WHAT DOES IT LOOK LIKE IN PRACTICE?
CLIMATE RISK ASSESSMENTS AND MONITORING

BRITISH COLUMBIA COLLABORATIVE (BC)

The Climate Change and Health Vulnerability and Capacity Assessment is a result of a partnership between Vancouver Coastal Health (VCH), Fraser Health (FH), Health Emergency Management BC, VCH/FH Facilities Management and Health Canada-funded project (HealthADAPT). The key findings of this report include the increased risks to health from extreme heat, wildfires, air quality issues, and infectious diseases linked to climate change. Vulnerable populations, such as Indigenous communities and socioeconomically disadvantaged groups, are particularly at risk.

INTERIOR HEALTH (BC)

Interior Health conducts Climate Risk Assessments in accordance with the Provincial Framework and Health Authority Guidelines (including the provincial Climate Resilience Framework and Standards for Public Sector Buildings and the Climate Resilience Guidelines for BC Health Facility Planning).

Further, as established in the Climate Change and Sustainability Roadmap, in response to more frequent extreme heat events and in line with the 2022 Interior Health Heat Response Plan, Interior Health implements the Heat Alert Response System (HARS), a two-tiered alert system tailored to regional weather conditions.

NHS SCOTLAND

NHS Scotland (2023) has developed Climate Change Impact Assessments for each of its 22 Health Boards, identifying current and future key climate risks. Additionally, the Scottish Government has also developed a National Adaptation Plan 2024-2029 and a web-based Geographic Information System (GIS) climate change hazard and vulnerability mapping tool that allows Health Boards to evaluate risks to facilities, critical transport, and access routes.

NHS ENGLAND

The Strategic Health Asset Planning and Evaluation (SHAPE) tool by NHS England (2022) aids in strategic planning for healthcare services. Local organizations and health services utilize the tool to map local risks, determine optimal service locations, and assess the impact of service configurations on population health.

CANADIAN COALITION FOR GREEN HEALTH CARE

The Health Care Facility Climate Change Resiliency Checklist was co-developed by the Canadian Coalition for Green Health Care and Health Canada. By undertaking this assessment, participants can identify key areas which may need to be strengthened to enhance organizational and facility climate change resilience. The three primary components are 1) assessing climate-related risks, 2) risk management, and 3) building assessment.

Practice #7: Develop strategies to communicate and engage with patients, caregivers, and communities

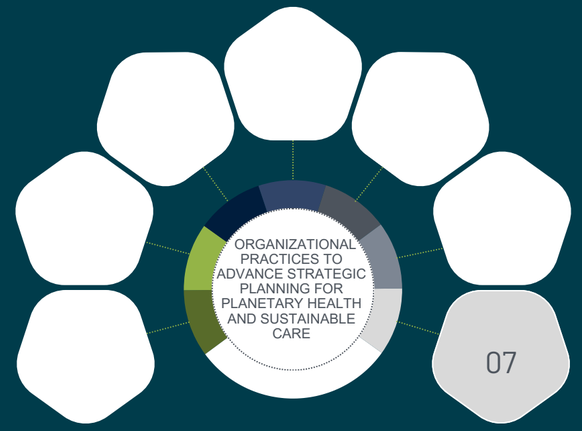
By respecting and valuing the insights and experiences of patients, caregivers, and communities, healthcare providers empower individuals to take an active role in their care, supporting evidence-based decisions that can contribute to more sustainable outcomes. Informed patients and caregivers can improve coordination among clinical teams, reduce duplications, and even shorten hospital stays, all of which help decrease carbon-intensive healthcare activities (40, 41). Engaging patients, caregivers, and communities in the design and delivery of healthcare services improves quality of care and can advance a more sustainable system. This meaningful partnership is essential to reducing environmental impact and ensuring that patient and community voices are central in shaping the care they receive.

Community collaboration and integration are crucial for building resilient health systems, especially in the context of climate-related challenges. By leveraging local knowledge, health systems can design preparedness strategies that are context-specific and address the real needs of the community (42, 43). Meaningful engagement ensures that communities are better equipped to respond to health crises which can minimize the impact of climate shocks.

INDIGENOUS PEOPLES LEADERSHIP

Climate impacts not only cause environmental damage and harm to human health but also exacerbate social inequities for Indigenous communities brought about by colonialism (7, 44). The diverse Indigenous communities across Canada (Inuit, First Nations, and Métis peoples) are deeply connected to their environment. The transition to sustainable, equitable health systems must include Indigenous Elders, Knowledge Keepers, and traditional values and insights to advance social well-being, environmental health, and a just economy. Climate change requires a change in values, behaviours, and ways of relating to the land, through the leadership of Indigenous Peoples (45–48).

"Engaging patients in shared decision making and encouraging them to be active participants in the management of their own health conditions have been shown to improve patient outcomes and are essential to the sustainability of health systems worldwide."
– Dr. Ilona Hale et al. (52, p 225).



PRACTICE # 7 ACTIVITIES

- ☐ Establish mechanisms to meaningfully engage and partner with patients, caregivers, and communities throughout the care-delivery process.
- ☐ Develop resources that help healthcare staff guide conversations with patients, along with tools for patients and families to make clinically appropriate decisions that can also minimize healthcare emissions.
- ☐ Co-design a strategy for ongoing and meaningful engagement with Indigenous Peoples guided by principles of reconciliation and respect.

COMMUNITY CONSULTATION

As part of its strategic engagement process for developing the Planetary Health Strategy, Fraser Health consulted with Fraser residents through a survey. A total of 463 participants responded. One key finding from this engagement was that residents identified purchasing from local companies and advocating for healthy public policy as the top two actions Fraser Health should prioritize to strengthen the communities it serves.

Interior Health's Climate Change and Sustainability Roadmap includes collaborating with local governments and Indigenous communities in the Climate Change and Health Vulnerability and Adaptation Assessments (CCHVAA).

RESOURCES:

- CASCADES provides a summary resource for patients that compiles materials from various organizations aimed at supporting the deprescribing of specific medications in patient care, including antiglycemics, anti-inflammatories, antipsychotics, opioids, and proton pump inhibitors.
- The Virtual Care Benefits Calculator, developed in collaboration with CASCADES and the Sustainable Health System Community of Practice, is a tool for patients to better understand the cumulative impact of virtual care in terms of cost, greenhouse gas emissions, and time savings.
- The My Kidneys My Health website is an interactive resource designed to provide guidance and support to patients with chronic kidney disease (CKD) and their caregivers. Its goal is to help them better understand CKD, actively manage the condition, and slow disease progression. The content on My Kidneys My Health is based on the latest evidence-based clinical practice guidelines from different organizations including Kidney Disease Improving Global Outcomes (KDIGO), the Canadian Cardiovascular Society, Diabetes Canada, the Canadian Society of Nephrology, and Hypertension Canada.
- The World Health Organization (WHO) resource, Communicating on Climate Change and Health: Toolkit for Health Professionals, helps healthcare providers effectively communicate the health impacts of climate change. It emphasizes their role in raising awareness about climate-related health risks and promoting solutions that safeguard health while addressing climate challenges.
- The James Lind Alliance from the United Kingdom has done public engagement to set priorities for sustainable perioperative care.
- NHS Scotland developed Clinical Decision Support tools and guidance aimed at promoting shared decision making. These tools inform patients about their treatment and medication, while providing clinicians with current, evidence-based prescribing advice.
- Choosing Wisely Canada developed patient resources to support patients in starting conversations with healthcare providers about the risks and benefits of different medications, tests, and treatments, including sustainability implications.
- Health Quality BC created a guide to authentic patient engagement, co-produced with patient partners, that outlines principles and essentials of patient engagement, as well as a toolkit to include patient partners in the hiring process of health care leader.

SPOTLIGHT: HEALTHCARE EXCELLENCE CANADA

Healthcare Excellence Canada's (HEC) Engaging Patients in Patient Safety: A Canadian Guide highlights the value of patient engagement in advancing all seven quality domains: safety, people-centred care, coordination, equity, outcomes, effectiveness, and efficiency. HEC also offers a companion guide listing patient and health organizations across Canada that prioritize engagement and patient-centred care.

HEC supports the National Health Engagement Network—a community of practice of healthcare leaders, providers, and essential care partners focused on advancing patient and public engagement in health systems.

To support organizations, HEC has also developed the Engagement-Capable Environments: Organizational Self-Assessment Tool to assess and strengthen engagement capacity.

Learn more

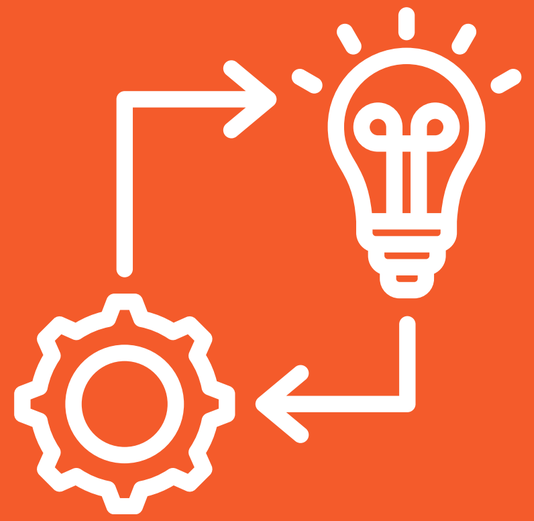
SPOTLIGHT: PLANETARY HEALTH MENU (BC)

Vancouver General Hospital launched a sustainable inpatient menu project to improve nutrition while reducing food-related emissions and waste. Through a co-design approach, 54 recipes were developed with input from patient partners, who participated in tasting sessions and provided feedback via surveys and QR codes. Educational materials highlighted local sourcing and sustainability. Over 20 new items were introduced during the pilot (October 2023–March 2024), and the model is now being scaled across Vancouver Coastal Health sites. The initiative was supported by the hospital foundation and external partners.

"The Intergovernmental Panel on Climate Change recognises colonisation is a key driver of climate change. Colonisation disrupted First Nation people's connection to Country by dispossessing them of their lands and interrupting inter-generational transfer of knowledge." -Australian Government, Department of Health and Aged Care (35, p. 15)

RESOURCES:

- VIDEO: Listen to healthcare professionals share their experience developing strategies to communicate and engage with patients, caregivers and communities to advance their sustainability agenda.
- Sharing Concerns: Principles to Guide the Development of an Indigenous Patient Feedback Process, Health Quality BC
- World Out of Balance, Terry Teegee talks about climate change and forest management in his territory on the west coast.
- Onjisay Aki Initiative on Climate Change, Climate Atlas
- Climate Change Initiatives Led by the First Peoples, Onjisay Aki
- "A Change of Heart": Indigenous Perspectives from the Onjisay Aki Summit on Climate Change, Cameron et al (2021)
- For our Future: Indigenous Resilience Report, Reed et al (2024)



HOW

Strategy for Change

Seven Enablers for Advancing
Planetary Health and Sustainable Care

Enablers for Advancing Planetary Health and Sustainable Care

Embedding sustainability into healthcare organizations requires clear, intentional strategies, strong leadership commitment, and broad engagement across all levels.

To support the successful implementation of the seven organizational practices, it's crucial to focus on the following key enablers that drive alignment, foster momentum, and ensure lasting impact (Figure 2).

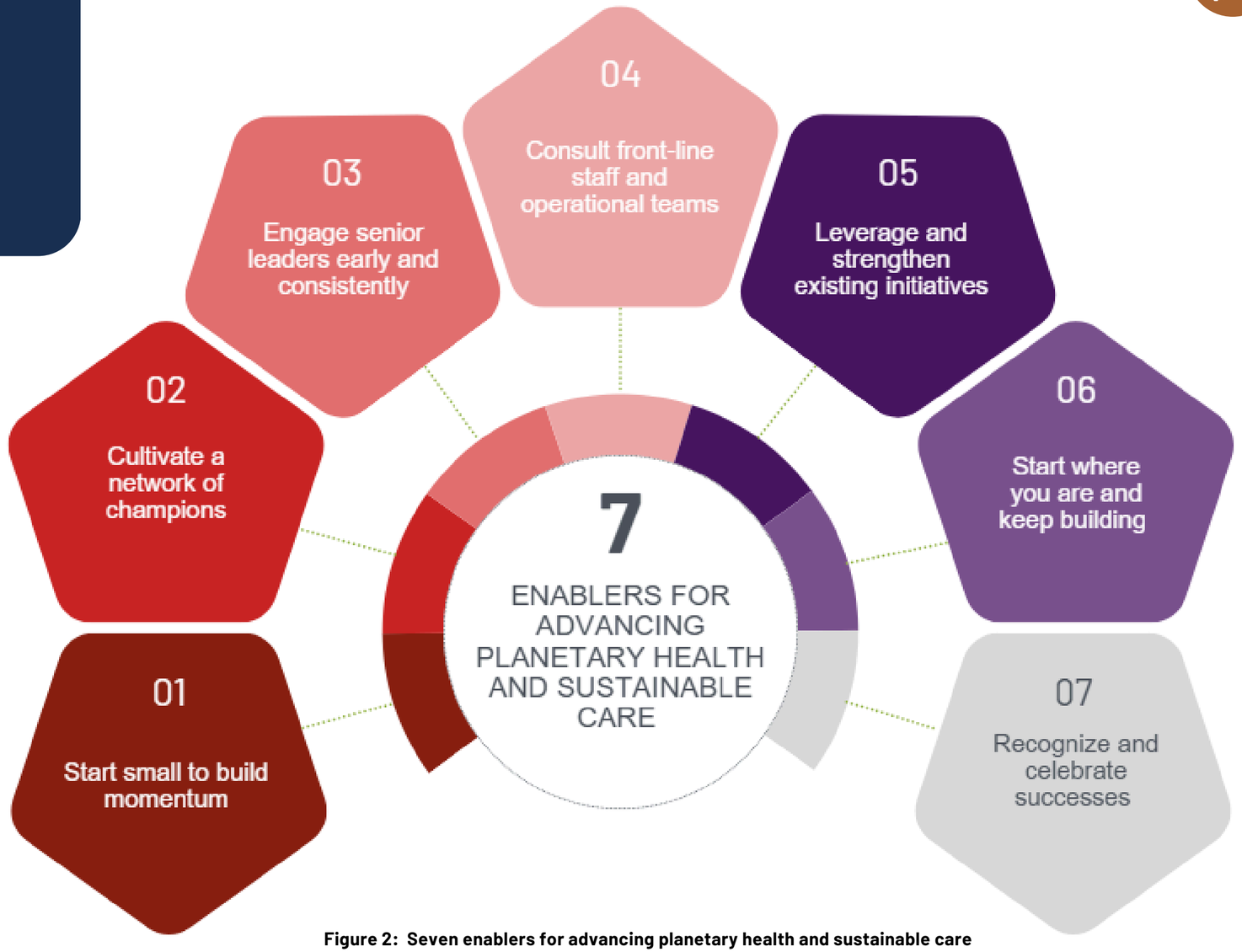


Figure 2: Seven enablers for advancing planetary health and sustainable care

SEVEN ENABLERS FOR ADVANCING PLANETARY HEALTH AND SUSTAINABLE CARE

1 ## Start small to build momentum

Initiating focused, high-impact projects can quickly demonstrate success, build confidence, and ignite enthusiasm. Research on organizational change shows that achieving early wins is essential for sustaining long-term transformation, reinforcing commitment, and minimizing resistance (49).

2 ## Cultivate a network of champions

Empower sustainability champions across various roles and departments to advocate for change, promote collaboration, and deepen engagement. These champions play a vital role in aligning operational realities with strategic goals, ensuring sustainability efforts are not only achievable but also impactful.

3 ## Engage senior leaders early and consistently

Leadership commitment is the cornerstone of successful, sustained change. Involving executives and decision-makers from the beginning ensures that sustainability initiatives are aligned with organizational priorities, backed by visible sponsorship, and supported by the necessary resources. Studies highlight that leadership buy-in is critical for long-term success in organizational change (49).

4 ## Consult front-line staff and operational teams

Engaging staff who directly experience the impact of climate change ensures that sustainability initiatives are practical and responsive to the challenges of day-to-day healthcare delivery. Participatory approaches in healthcare transformation have proven effective in improving adoption and impact (50).

5 ## Leverage and strengthen existing initiatives

Many healthcare organizations already have valuable sustainability efforts in place. Mapping these initiatives, aligning them with broader strategic priorities, and scaling those with the most potential prevents duplication and accelerates progress.

6 ## Start where you are and keep building

Start with the resources you have and integrate sustainability into ongoing efforts rather than waiting for ideal conditions. Utilizing adaptive approaches like Plan-Do-Study-Act (PDSA) cycles encourages continuous learning and allows for incremental progress (51).

7 ## Recognize and celebrate successes

Acknowledging and celebrating sustainability milestones—no matter how small—helps sustain motivation, reinforce commitment, and cultivate a culture of continuous improvement.

INTEGRATING CHANGE LEADERSHIP

Grappling with complex and adaptive change requires more than isolated actions—it demands intentional and well-coordinated efforts that integrate project and change management disciplines. Each of the enablers outlined should be implemented alongside robust change leadership approaches to ensure sustainability initiatives are appropriately framed, adopted, and embedded into organizational practice. Individuals and teams advancing this agenda can draw on well-established organizational and change leadership frameworks to help guide this process, including:

THE WATER OF SYSTEMS CHANGE

An actionable model for advancing systems change by shifting conditions at the structural, relational, and transformational levels.

INNOVATION AMBITION CONTINUUM

A continuum for aligning innovation efforts by framing them along a spectrum of incremental, reform-oriented, and transformative ambitions.

KOTTER'S 8-STEP MODEL FOR CHANGE

A structured model to leading change that moves organizations from early urgency to long-term sustainability through eight dynamic steps.

RADICAL COLLABORATION

Rooted in love, trust, and justice, this framework supports transformative change by strengthening relationships and enabling inclusive, values-driven collaboration across complex systems.

ADAPTIVE LEADERSHIP FRAMEWORK

A practice-oriented leadership framework that helps leaders mobilize people to tackle tough challenges by distinguishing technical problems from adaptive ones.

Ultimately, complex and systemic challenges—such as advancing sustainable healthcare—require adaptive and ambitious solutions. The strategies outlined in this playbook are intended as a starting point for organizations to model, tailor, and iterate as they progress on their environmental sustainability journey, recognizing that transformation is both dynamic and context dependent.

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