

Leadership for Change: Toward Sustainable Health Systems

Dr. Fiona A. Miller

Dr. Sean Christie

Arianna Cruz







Session Agenda

1. Introduction (15 min)

Introduction

Why we need to talk about leadership for climate resilient and sustainable health systems Climate impacts on/of health and health systems Responses: Adaptation, Resilience and Mitigation

2. Leadership in practice (20 min)

The journey as a sustainability leader and champion Why does a neurosurgeon do this work?
Roles at Canadian Coalition for Green Health Care and CASCADES

3. What is driving change? (30 min)

Motivating change Mobilizing change Operationalizing change

4. Activity (25 min)

5. Closing (5 min)

Speakers



Dr. Fiona MillerDirector, CASCADES



Dr. Sean ChristieBoard of Directors,
Canadian Coalition for Green Healthcare



Arianna Cruz
Strategy and Innovation Lead,
CASCADES



Introduction

Dr. Fiona Miller

About CASCADES

CLIMATE ACTION + HEALTHCARE

Creating a Sustainable Canadian Health System in a Climate Crisis

Funder: Environment & Climate Change

Canada

Grant: Community Engagement for

Climate Action and Awareness

Term: April 1, 2021 – March 31, 2026

Amount: \$6M

PARTNER ORGANIZATIONS











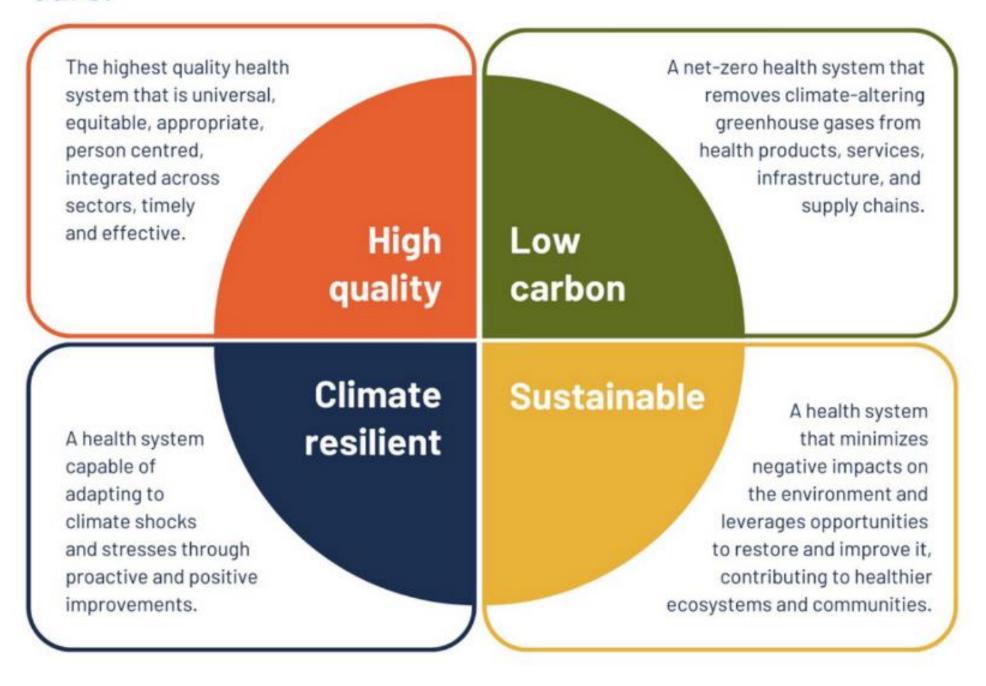
About CASCADES

Health systems that:

- Support a healthy planet
- Are caring and equitable
- Serve communities so that they thrive

OUR MISSION

CASCADES strengthens the capacity of the healthcare community across Canada to transition towards high-quality, low-carbon, sustainable and climate resilient care.



About CASCADES

OUR WORK



Resources to fill the implementation gap.

We leverage community expertise to build robust implementation resources.

Training to strengthen the capacity for change.

We deliver training through a range of courses and events.



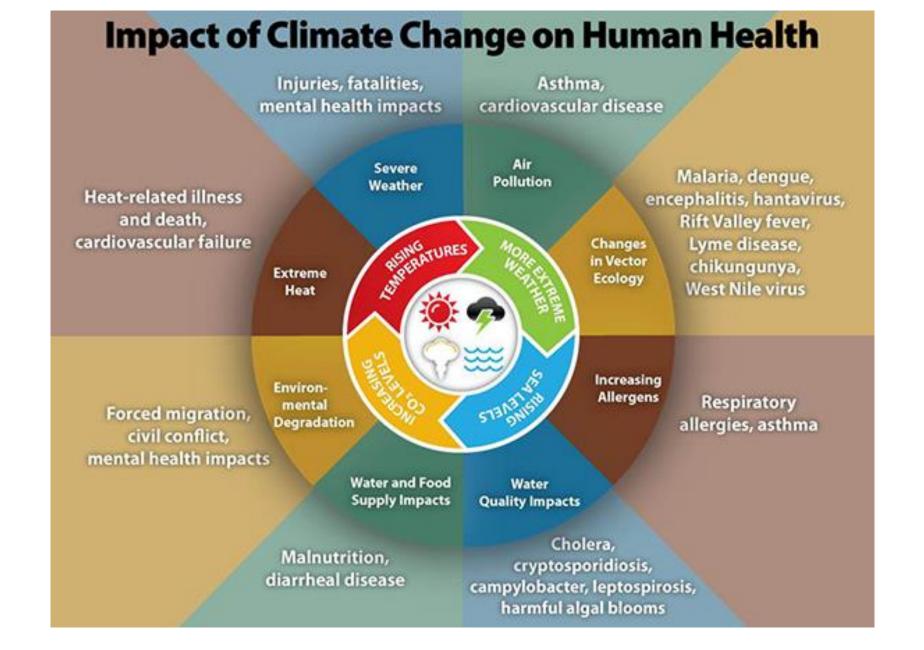
Collaboration to foster pan-Canadian coordination.

We work with interested parties across the country with a view to pan-Canadian exchange and coordination.

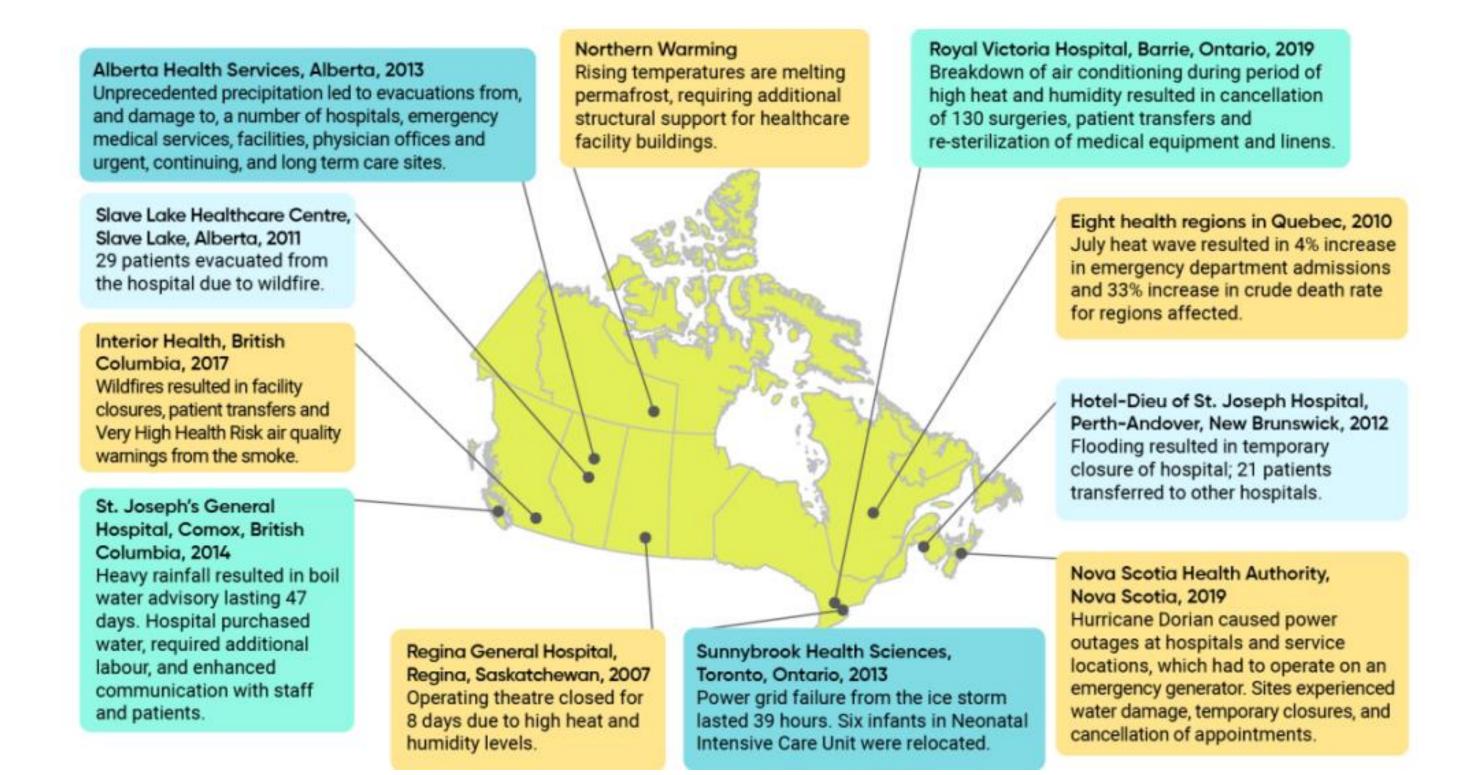


Climate impacts on health

VANCOUVER News B.C. doctor makes international headlines for 'climate change' diagnosis VANCOUVER - A B.C. doctor has captured the world's attention by likely being the first physician to diagnose a patient with "climate change." Bhinder Sajan Multi-media journalist, CTV Nelson-based Dr. Kyle Merritt gave the controversial diagnosis over the summer, saying News Vancouver ¥ Follow | Contact the symptoms a patient in her 70s was seeing all tied back to one thing. Those effects included heatstroke, dehydration and breathing issues. As he treated the Updated Nov. 12, 2021 4:37 patient, he started thinking about underlying issues. He ultimately diagnosed her with Published Nov. 11, 2021 7:51



Climate impacts on health systems



Health system Impacts on climate





Leadership in Practice

Dr. Sean Christie



What is driving change?

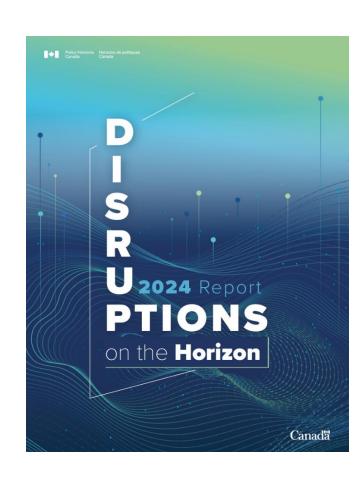
Dr. Fiona Miller & Arianna Cruz



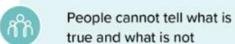
Motivating change



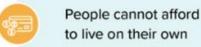
Disruption on the Horizon

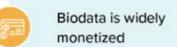


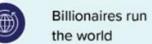
Top 10 most likely disruptions

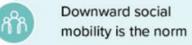


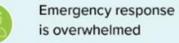


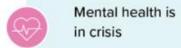








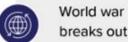


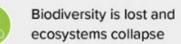


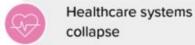


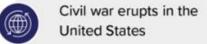
Artificial Intelligence runs wild

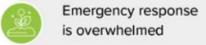
Top 10 highest impact disruptions





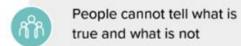


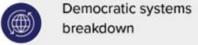


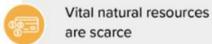












Biodiversity is lost and ecosystems collapse

There is an irreversible loss of biodiversity and a collapse of ecosystems due to habitat destruction, overexploitation, pollution, and climate change.

Ecosystems and the wide range of animals, plants, and microorganisms within them keep the natural world in balance. Ecosystem collapse and the loss of biodiversity could have cascading impacts on all living things, putting basic human needs such as clean air, water, and food in jeopardy. Health and wellbeing could severely suffer as malnutrition, disease, and other health problems become more prevalent, leading to increased mortality rates, healthcare system collapse, and overall reduced quality of life. Key industries like farming, fishing, and logging could be hard hit, leading to major economic losses and instability. Society could become fragile as many people may be unable to meet their basic needs, let alone higher-order needs like a sense of belonging, self-esteem, and self-actualization. With a heightened sense of insecurity over a lifetime, conflicts could become violent, and people could become more vulnerable to authoritarian and anti-establishment groups or leaders.

Emergency response is overwhelmed

Extreme weather events such as fires, floods, tornados, and hurricanes are frequent and severe. The world is in a perpetual state of emergency, and unable to respond adequately and sustainably.

As climate change increases the frequency and severity of natural disasters, even previously unaffected areas could be impacted. Emergency responses may be unable to keep pace. The human impact of constant co-occurring disasters in Canada could be severe, with recurring loss of life and widespread destruction of infrastructure, property, and businesses. Millions of people may be displaced as weather conditions become intolerable and entire regions become uninsurable, preventing people from getting mortgages. The stress and trauma of these displacements, in addition to economic losses from collapsing real estate markets, could contribute to a worsening mental health crisis. Extreme weather events could also result in regular shocks to trade, volatile price of goods, and increased travel restrictions. Meanwhile, an already fragile healthcare system may crumble under surging demand. Internationally, cooperation may decline as many countries turn inwards to respond to their own emergencies. Alternatively, nations may choose to pool resources and collaborate globally in the face of a common threat.

Global commitments



Affirmed at G7 Health Ministers' Meeting

• Germany, May 2022



Affirmed at G20 Health Ministers' Meeting

• India, August 2023



Affirmed at COP 28

 Declaration on climate & health. signed by 123 countries (Dec 1, 2023)



New Climate and Health Resolution Wins Strong Support from WHO Member States

World Health Assembly 77 31/05/2024 · Elaine Ruth Fletcher









WHO member states applaud following late-night approval of WHA resolution on Climate Change and Health

WHO member states approved the first resolution on climate and health to come before the World Health Assembly in 16 years – even as 50°C temperatures in Delhi, flooding in southern Brazil and devastating Caribbean storms are driving home the message to more and more countries that climate change is real.

Member states to cooperate in the development and implementation of national action plans, in accordance with national context and priorities, geared toward decarbonization and ensuring environmentally sustainable health systems, facilities and supply chains

Health System Performance



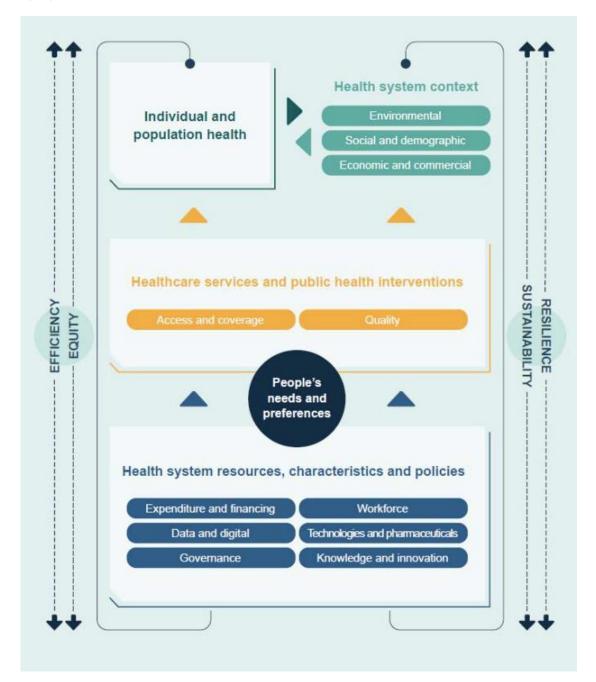


Table 3.2. Examples of environment and health indicators currently collected by the OECD

Indicators	Description / methodological challenges
Environment and air quality	The OECD Environmental database contains a long time series on mean population exposure to fine particulate matter for all OECD countries and beyond.
Mortality rates	Mortality data for several causes that have been associated with potentially environmentally induced risk factors are currently being collected, including deaths from cardiovascular, acute kidney diseases and respiratory conditions, maternal and infant health, violent behaviour and suicide.
Excess mortality	First introduced in the context of the COVID-19 pandemic, weekly data on excess mortality can also be used to track impact of acute climatic events e.g. heatwaves.

Table 3.3. Possible new indicators to further assess interactions between health and environmental threats

Indicators	Description / methodological challenges
Hospitalisation rates or emergency departments visits for "heat related" illnesses	Hospitalisation rates or emergency departments visits for conditions such as heat exhaustion, heat cramps, mild heat oedema, heat syncope, and heat stroke could be used as measures of the impacts of heat waves on health.
Hospitalisation rates or emergency departments visits for "air-quality" illnesses	Diseases could include asthma or chronic obstructive pulmonary disease.
Heat-related mortality	Annual rates of deaths per million population that have been classified with International Classification of Disease codes related to exposure to natural sources of heat or listed as a contributory factor (to e.g. cardio-vascular, kidney failure deaths).
Other climate-induced illness	Climate change brings the potential of rise in incidence rates of tropical/infectious diseases including vector-borne diseases (e.g. dengue, Lyme diseases) and enteric infections and diarrhoea in regions where those conditions were previously not endemic.



Mobilizing change



Sustainable Development







8 DECENT WORK AND ECONOMIC GROWTH







10 REDUCED INEQUALITIES















6 CLEAN WATER AND SANITATION



Target

13.3

Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning



Target

12.4

By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment



IZ./

Promote public procurement practices that are sustainable, in accordance with national policies and priorities



Target

3.8

Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all









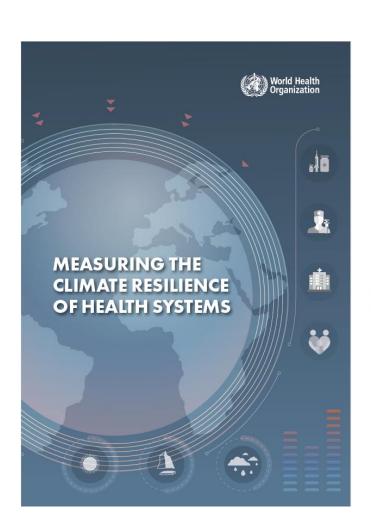






Resilient health systems

FIGURE 3: Ten components comprising the WHO operational framework for building climate resilient health systems, and the main connections to the building blocks of health systems



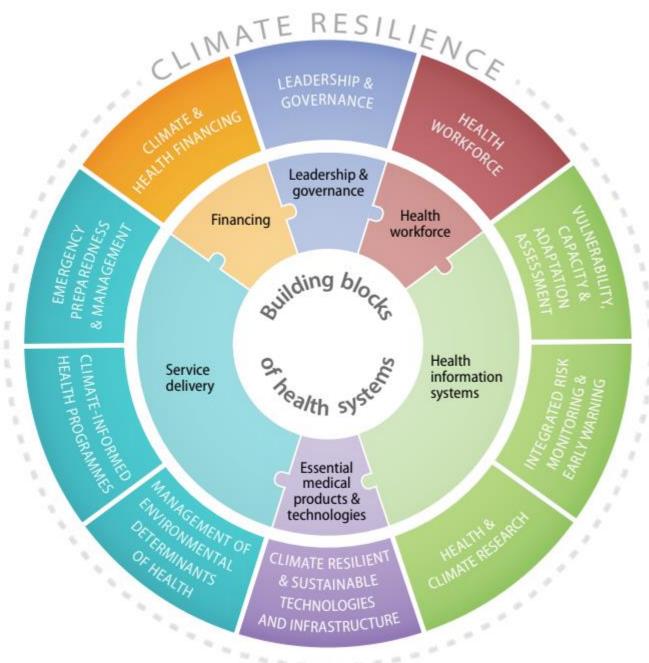


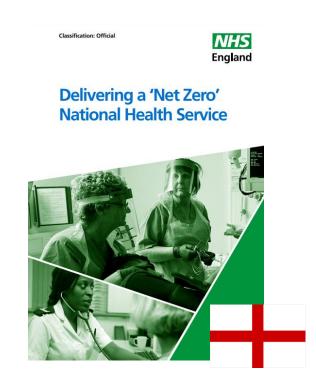
Table 1: Sample indicators of health system resilience to short-term and long-term climate change risks

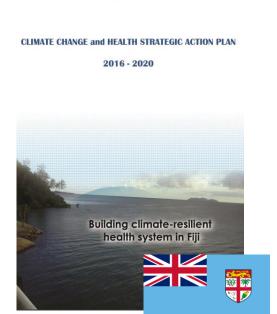
Level of resilience: Medium High (unavailable, unable, unprepared) (in progress, incomplete, basic) (completed, achieved, prepared) Resilience to short-term risks Additional resilience to long-term climate change risks (>10 years) (<= 10 years) Leadership and governance The Ministry of Health has a designated Adequate and sustained human and focal point responsible for health and financial resources in place to implement, review and update the HNAP climate change Climate change and health integrated into Long-term risks inform the implementation health sector strategies and UHC, while and adaptation measures of key priorities an HNAP developed with an appropriate integrated in the HNAP review and update cycle Institutional mechanisms between HNAP includes actions that strengthen the resilience of health systems to long-term the Ministry of Health and key health-determining sectors support risks implementation of the HNAP Health care facilities include sustainability Assessments conducted of health in the selection of products and the sector impacts on the environment, procurement of services, including energy, including greenhouse gas emissions and water, transport and waste management, environmental sustainability, and necessary and review possible impacts of climate measures implemented change on supply chains

Low carbon health systems



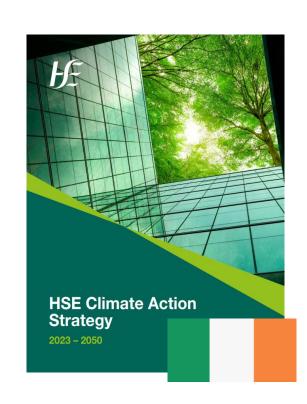
National Health and





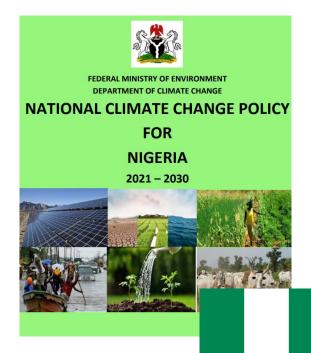
MINISTRY HEALTH & MEDICAL SERVICES

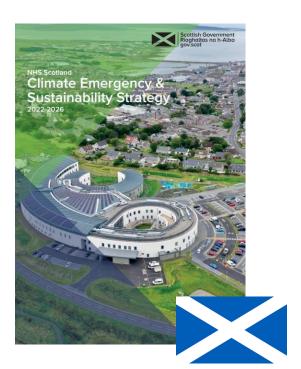














NHS Wales Decarbonisation Strategic Delivery Plan

2021-2030

(including Technical Appendices)



Low carbon health systems













ESG and Climate Disclosure landscape

- Mostly for publicly accountable enterprises
- Increasing number of global disclosure frameworks and reporting rate
- Growing trend towards global harmonization of climate disclosure standards



CSA's Proposed National Instrument



BC Financial Services Agency's Consultation on Natural Catastrophe & Climate Risk



OSFI's B-15 Guideline on Climate Risk Management

BSIF



US SEC's Proposed and SB 261
Rule disclosure



California's SB 253 and SB 261 climate disclosure bills



European Commission's CSRD









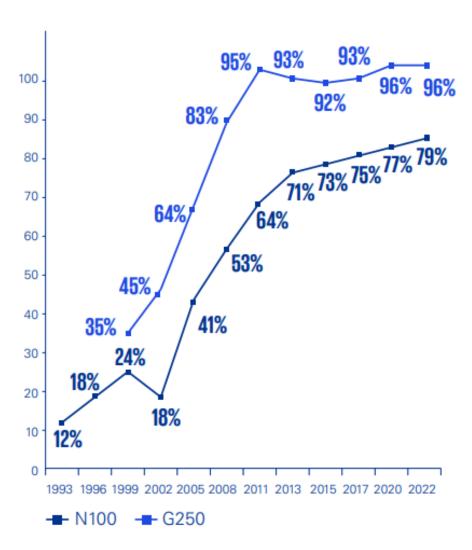




Climate



Figure 1: Global sustainability reporting rates (1993–2022)



Base: 5,800 N100 companies and 250 G250 companies Source: KPMG Survey of Sustainability Reporting 2022, KPMG International, September 2022

Now part of IFRS Foundation

Climate-related Disclosure Topics

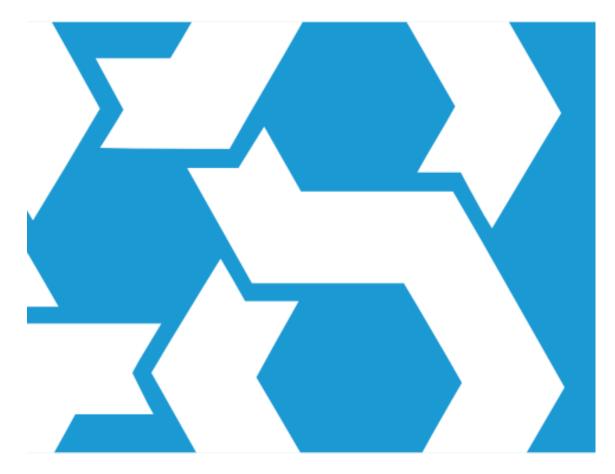


June 202

IFRS S2

IFRS® Sustainability Disclosure Standard

Climate-related Disclosures



International Sustainability Standards Board

Core Disclosure Topics	Description	Example
Governance	Disclose the organization's governance around climate-related risks and opportunities.	Information about the governing body or individual(s) responsible for oversight of climate-related risks and opportunities
Strategy	Disclosure the organization's strategy for managing actual and potential climate-related risks and opportunities.	Describe climate-related risks and opportunities that could reasonably be expected to affect the entity's prospect (short, medium and long term)
Risk Management	Disclose how the organization the organization identifies, assesses, prioritizes and monitors climate-related risks and opportunities	how the entity assesses the nature, likelihood and magnitude of the effects of those risks (for example, whether the entity considers qualitative factors, quantitative thresholds or other criteria)
Metrics and targets	Disclosure the organization's performance in relation to its climate-related risks and opportunities, including progress towards any climate-related targets it has set, and any targets it is required to meet by law or regulation	Disclose its absolute gross greenhouse gas emissions generated during the reporting period, expressed as metric tonnes of CO2 equivalent classified as: (1) Scope 1 greenhouse gas emissions; (2) Scope 2 greenhouse gas emissions; and (3) Scope 3 greenhouse gas emissions;







Identify sustainability-related risk and opportunities
Determine what information to disclose regarding the risks and opportunities identified **Health Care Industry** disclosure topics:



Industry-based Disclosure topic	Metric
Energy Management	(1) Total energy consumed(2) Percentage grid electricity(3) Percentage renewable
	Total amount of medical waste: percentage (a) incinerated, (b) recycled or treated and (c) landfilled
Waste Management	Total amount of: (1) Hazardous and (2) Non-hazardous pharmaceutical waste Percentage (a) incinerated, (b) recycled or treated and (c) landfilled
Climate Change Impacts on Human Health & Infrastructure	Description of policies and practices to address: (1) The physical risks because of an increased frequency and intensity of extreme weather events, (2) Changes in the morbidity and mortality rates of illnesses and diseases associated with climate change (3) Emergency preparedness and response



Operationalizing change

Organizational Roadmaps – Interior Health



Areas of focus and goals

Climate change and sustainability are large, complex, and often complementary terms. The terms are often used in concert with each other and so the distinction between the two is often lost. To ensure the terms of climate change and sustainability are properly scoped and defined, the following focus areas and goals have been developed.

SUSTAINABILITY

Natural environment

- Goal S1.1: Evaluate and reduce the environmental impact of Interior Health operations
- Goal S1.2: Bolster healthy built, natural, and social environments within local communities to support healthy community development

Social

- Goal S2.1: Commit to purchasing and investments for Interior Health programs and services that align with circular economy principles, and climate change and sustainability goals
- Goal S2.2: Increase support for local community businesses and resources through decision-making and purchasing processes

Governance

- Goal S3.1: Establish accountability for climate change and sustainability action at all levels of the organization
- Goal S3.2: Increase internal resourcing for sustainability and climate action initiatives

CLIMATE CHANGE

Mitigation and greenhouse gas reduction

- Goal CC1.1: Reduce greenhouse gas emissions from capital assets and operations
- Goal CC1.2: Work with suppliers and other partners to develop and implement an indirect emission (Scope 3) monitoring and reduction plan

Adaptation and resilience

- Goal CC2.1: Collaboratively improve climateresilient infrastructure and operations
- Goal CC2.2: Create a resilient health care workforce with the capacities and supports to respond to climate impacts
- Goal CC2.3: Build capacity and develop partnerships to support emergency response and adaptation within the communities IH serves
- Goal CC2.4: Support Indigenous-led climate adaptation knowledge and capacity-building
- Goal CC2.5: Grow and align collaborative partnerships with local and Indigenous communities and service providers to enhance the adaptive capacity of the region
- Goal CC2.6: Champion and support Indigenous ways of knowing and being to enhance the adaptive capacity of all communities
- Goal CC2.7: Improve the health and preparedness of populations experiencing vulnerabilities as it relates to climate action and health equity

Source: Interior Health Climate Change Sustainability Roadmap 2023-2028

Organizational Roadmaps – Fraser Health

Fraser Health Planetary Health Strategy 2023-2028

Approved: September 19, 2023



fraserhealth.ca 🗿 😝 🔾

Our Strategic Priorities

Reduce the impact of our services on the planet

Strategic Goal #1: Assess and reduce our greenhouse gas emissions

> Strategic Goal #2: Reduce air pollution

Strategic Goal #3: Use resources efficiently and decrease health system waste Create a climate resilient health system

Strategic Goal #1:
Ensure our health system can withstand changing climate conditions and extreme weather events

Strategic Goal #2: Support our people and the people we serve to adapt to changing climate conditions

Strategic Goal #3: Drive climate-informed clinical practice Live our anchor mission by reinforcing the connection between planetary health and healthy communities

Strategic Goal #1: Support community health and wellbeing using our anchor influence

Strategic Goal #2:
Use our purchasing power to ensure resilient supply and address social and sustainability issues

Strategic Goal #3: Leverage the natural world for health, well-being and climate adaptation Cultivate a culture and system of social and environmental sustainability

Strategic Goal #1:
Develop planetary health expertise and capacity to empower and activate our staff, medical staff and the people we serve

Strategic Goal #2: Embed planetary health into decisions, programs and policies

Strategic Goal #3:
Seek guidance from Indigenous
leaders on culturally appropriate use
of traditional ecological knowledge to
support ways of working and decision
making

Source: Fraser Health Planetary Health Strategy 2023-2028



Collective Action



U.S. Health Care Workers Want Their Employers to Address Climate Change



▲ Daniella Meza-Diaz, surgical recovery coordinator in the operating room at OneLegacy on June 29, 2023, in Azusa, Calif. About four in five clinicians surveyed believe it's important for their hospital to address climate change and that doing so is aligned with their organization's mission. Photo: Francine Orr/Los Angeles Times via Getty Images













Environment and Sustainability Statement from the Common Issues Group partners

The World Health Organization recognises the climate crisis as the major threat to human health in the 21st century and growing scientific evidence points towards a need to address the contribution of humanity to the climate change. The global healthcare industry is a significant contributor of greenhouse gases and other environmental pollutants and hence, contributory to the impact of climate change on human health.

The Common Issues Group (CIG) is a representative group drawing its membership from the senior leadership of the American Society of Anesthesiologists, the Association of Anaesthetists [of Great Britain & Ireland], the Australian Society of Anaesthetists, the Canadian Anesthesiologists' Society, the New Zealand Society of Anaesthetists and the South African Society of Anaesthetists. The group functions through mutual cooperation between its members.

The purpose of this joint statement is to denote that the medical societies listed above recognise that the professional actions of anaesthesiologists have an environmental impact and that this, in turn, may affect health, wellbeing and our economies both now and in the future.

Introduction

We recognise that the professional actions of anaesthesiologists have an environmental impact and that this, in turn, may affect health, wellbeing and our economies both now and in the future.

We are committed to promoting environmental sustainability across our organisations' activities as well as encouraging and supporting action by our members. This includes, but is not limited to, mitigating the adverse effects of climate change, prudent use of natural resources such as minimisation of water usage, energy consumption and waste generation.

Examples include: minimising waste anaesthetic gases and intravenous drug waste; minimising single-use disposable medical devices; encouragement of environmentally preferable drugs and devices; as well as encouragement of circular economy practices. The objective is to minimise the adverse effects of healthcare pollution on population health, and ecological justice.

We will collaborate with each other and other stakeholders to identify and act on opportunities to improve environmental sustainability in the perioperative arena generally, and anaesthesia in particular. Our approach will run alongside our continuing work to ensure the safety of patients and the wellbeing of our members and their colleagues.

Priorities

Priority 1

To position our organisations as leaders in promoting sustainable healthcare, specifically the contribution of anaesthesia practice.

Priority 2

To commit to provide the latest scientific evidence, to educate and to share good practice to enable our members to minimise the environmental impact of their clinical practice.

Priority

To monitor and continually strive to improve our organisations' contributions to environmental and financial sustainability.

Priority

To promote the reduction of environmental and financial waste by individuals and organisations in healthcare delivery.

Canadian Society of Nephrology urges action on Climate Change

Ottawa, Ont. (July 15, 2022) – The Canadian Society of Nephrology (CSN) is calling on kidney health professionals, industry and governments to:

- a) curb anthropogenic greenhouse gas (GHG) emissions that lead to climate change and
- address the impact of climate change on people living with kidney disease who are uniquely vulnerable to its effects

Climate health impacts kidney health. Recurrent or severe volume depletion arising from higher temperatures can cause acute and chronic kidney diseases and worsen stone disease. Severe weather, including extreme heat events, fires, and floods, are increasing in frequency and severity with rising temperatures and threaten access to care. Kidney failure disproportionately impacts quality of life, socioeconomic determinants of health, burden of healthcare utilization and healthcare costs. These inequities are disproportionately and unfairly borne by vulnerable populations both around the world and within Canada who are most susceptible to the impacts of climate change.

Treatment of end-stage kidney disease in turn contributes negatively to the cycle of increasing emissions and global heating, given the disproportionately large GHG emissions from our therapies. Specifically, in the United Kingdom, emissions from in-centre dialysis care were shown to doubles a person's carbon footprint, and exceeded seven times the mean per patient carbon footprint.

The Canadian Society of Nephrology pledges our responsibility in this new era, as the first national nephrology society to sign the Sao Paolo Declaration on Planetary Health. Our commitment is embodied in the work of our Sustainable Nephrology Action Planning committee, which has created a framework for a novel planetary health approach to kidney care that is congruent with Canada's signing of the COP26 Health Programme.

We believe there is hope. Together, we can work to promote health, adopt and enjoy low carbon lifestyles, and renew our relationships with Earth's natural systems. We can reduce the carbon footprint of kidney care by thoughtful pursuits to reduce the burden of kidney disease through prevention and optimizing kidney transplantation. We can improve our systems that provide care, including dialysis, adding operational efficiencies and improved technologies whilst protecting care delivery systems from climate change associated threats. Reducing the carbon footprint of dialysis care must involve societal level changes, including reducing emissions from transportation of patients and goods, improving infrastructure towards reduced energy, water, and plastics consumption, recycling where possible, and powering our many facilities with renewable energy.

This essential work will involve many disciplines and will require support and partnerships with health leaders, ministries, industry, and the research community. Most importantly, we will need to work with our patient partners and renal care teams to effect change. In so doing, we hope to improve patients' lives, improve the financial sustainability of our care systems, reduce nephrology's contribution to climate change, and make our care delivery more resilient to the effects of our changing climate.

Community of Practice- TAHSN

TAHSN Sustainable Health System Community of Practice

Collaborative initiative

- Toronto Academic Health Science Network (TAHSN) 14 hospital corporations affiliated with UofT
- Council of Health Sciences UofT's Health Science Faculties

Secretariat:

 Collaborative Centre for Climate, Health & Sustainable Care

• Term:

- 1: September 2020 June 2022
- 2: September 2022 June 2025











TAHSN CoP: Term 2 Leadership Table





TORONTO EAST HEALTH NETWORK

HOSPITAL



















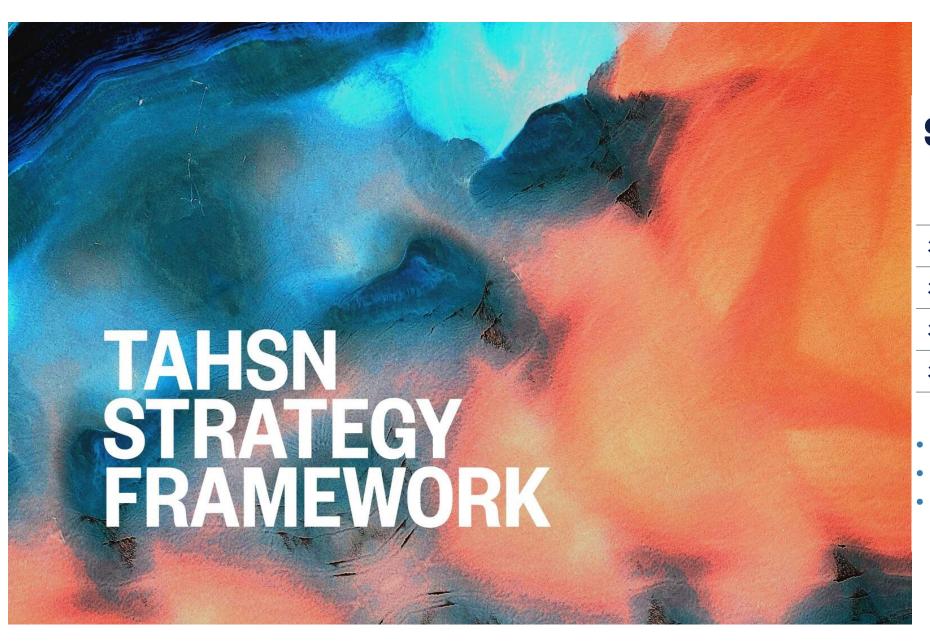








TAHSN Strategy Framework



STRATEGIC PRIORITIES

3.0

Expand All

3.1 — EXCELLENCE IN CARE TOGETHER	+
3.2 — CANADA'S LEADING HEALTH RESEARCH HUB	+
3.3 — FUTURE HEALTH PROFESSIONALS AND LEADERS	+
3.4 — AN EQUITABLE AND SUSTAINABLE FUTURE	_

- Dismantle systems of racism in our health system, with a focus on anti-Black and anti-Indigenous racism
- Ensure a lens of equity is applied to all our efforts
- Reduce health-care's contribution to climate change and implement measures to mitigate problems caused by climate change



TAHSN CoP: Initiatives

Sustainable OR

 TAHSN OR Scorecard



Organizational Readiness

TAHSN Balanced
 Scorecard

Sustainable Procurement

TAHSN
 Commitment



Pilot

Reducing gloves

Pilot

Reusable textiles

TAHSN CoP: Balanced Scorecard

1 | Leading

- 1.1 Cross-functional sustainability team
- 1.2 Sustainability leadership & governance

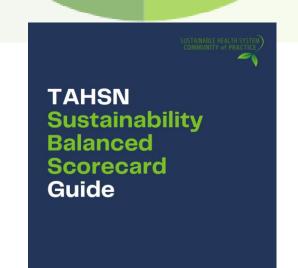
Dimensions of Organizational Sustainability

Caring | 2

- 2.1 Lean & appropriate care
- 2.2 Low carbon & sustainable alternatives

3 | Building

- 3.1 Reduce operational GHG emissions
- 3.2 Waste reduction & diversion



Partnering | 4

- 4.1 Sustainable procurement program
- 4.2 Sustainable food systems



Activity

In your tables...

Select and discuss one of the following discussion topics (15 min)

Topic 1: Motivating change

- Which motivators of change seem more relevant and impactful to your context and organization? Why?
- –Are there any additional motivators you are witnessing that are relevant to advancing toward sustainable health systems?

Topic 2: Mobilizing and operationalizing change

- -Which action areas or topics will help mobilize change in your organization?
- -What progress has been made? What can be initiated?
- Be ready to report back (make sure you identify a spokesperson) (5 min)



Debrief



Closing