

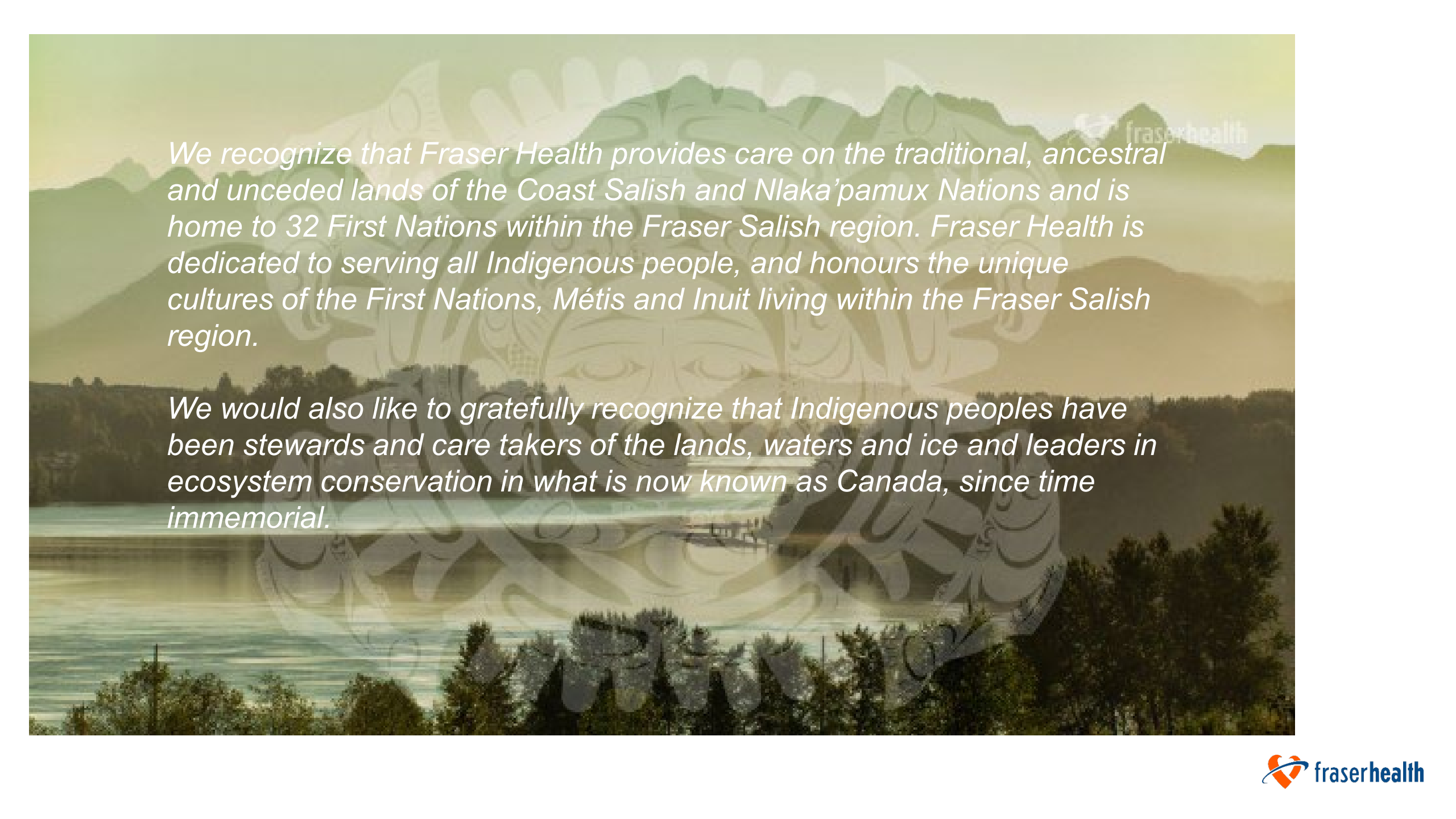
Update on Fraser Health's Planetary Health Response

Strategic Priority #1: Reduce impact of services on the planet

Fraser Health Public Board Meeting

November 27, 2024

Presented by: Dr. Ingrid Tyler, VP Population and Public Health and Chief Medical Health Officer



We recognize that Fraser Health provides care on the traditional, ancestral and unceded lands of the Coast Salish and Nlaka'pamux Nations and is home to 32 First Nations within the Fraser Salish region. Fraser Health is dedicated to serving all Indigenous people, and honours the unique cultures of the First Nations, Métis and Inuit living within the Fraser Salish region.

We would also like to gratefully recognize that Indigenous peoples have been stewards and care takers of the lands, waters and ice and leaders in ecosystem conservation in what is now known as Canada, since time immemorial.



United Nations
Climate Change

The different

futures that

lie ahead.

+1.5 °C

+2 °C

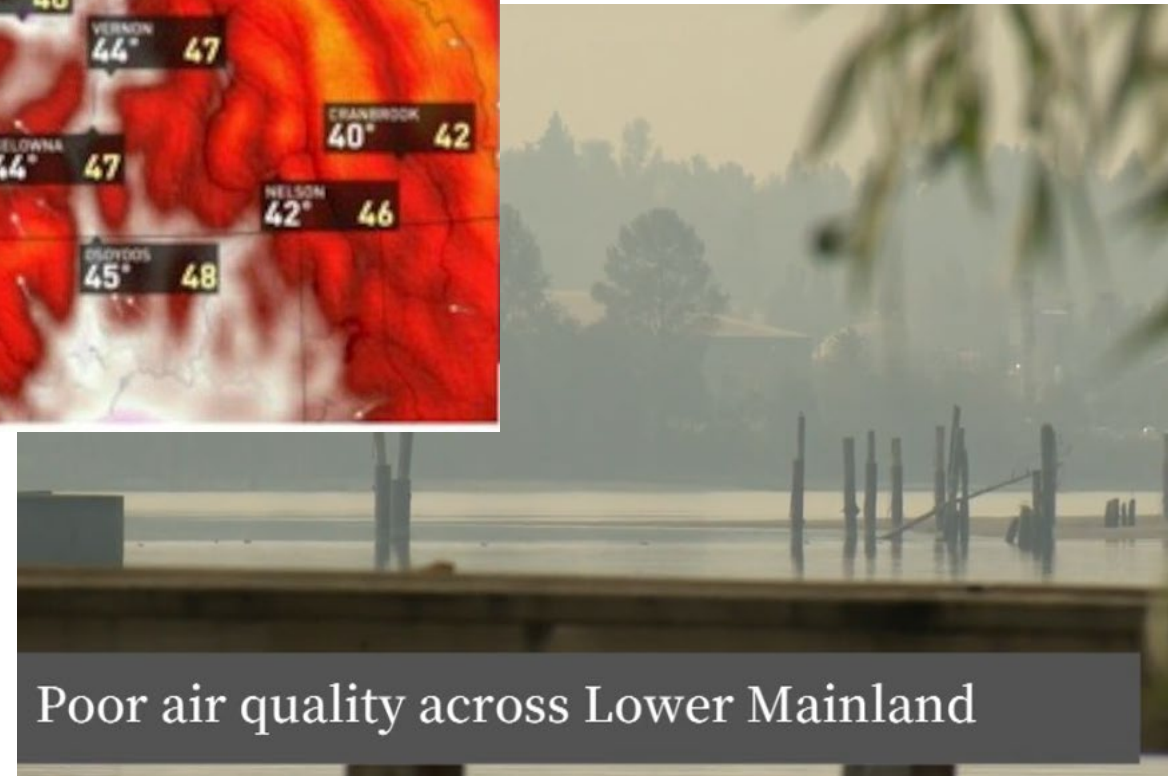
+3 °C

Source: [United Nations 1.5C: what it means and why it matters](#)

595 people were killed by heat in B.C. this summer, new figures from coroner show



1 year later, British Columbians who lost everything reflect on devastating floods



Poor air quality across Lower Mainland

As the effects of climate change become more evident, British Columbia will likely see increased risks of wildfires, flooding and scarcity of water, leading to pressures both in supporting patients but also infrastructure.

Canada is warming at **twice the global rate**, and extreme weather is predicted to be more frequent and intense.

Droughts, floods, and storms could result in a total loss of **CAD\$108 billion** to Canadian gross domestic product (GDP) between 2022 and 2050.

British Columbia is on the front lines of climate change in Canada.



WILDFIRES

Since the 1970s, the annual area burned by wildfires in British Columbia has more than doubled.



FLOODING

The intensity of rainfall events in British Columbia has already increased by 20 per cent since the mid-20th century.



EXTREME HEAT

In the past century, the number of days with temperatures above 25°C (77°F) has increased by 20 per cent in British Columbia.



SEVERE WEATHER

Since the 1950s, the number of extreme precipitation events has increased by 10 per cent.



AIR POLLUTION

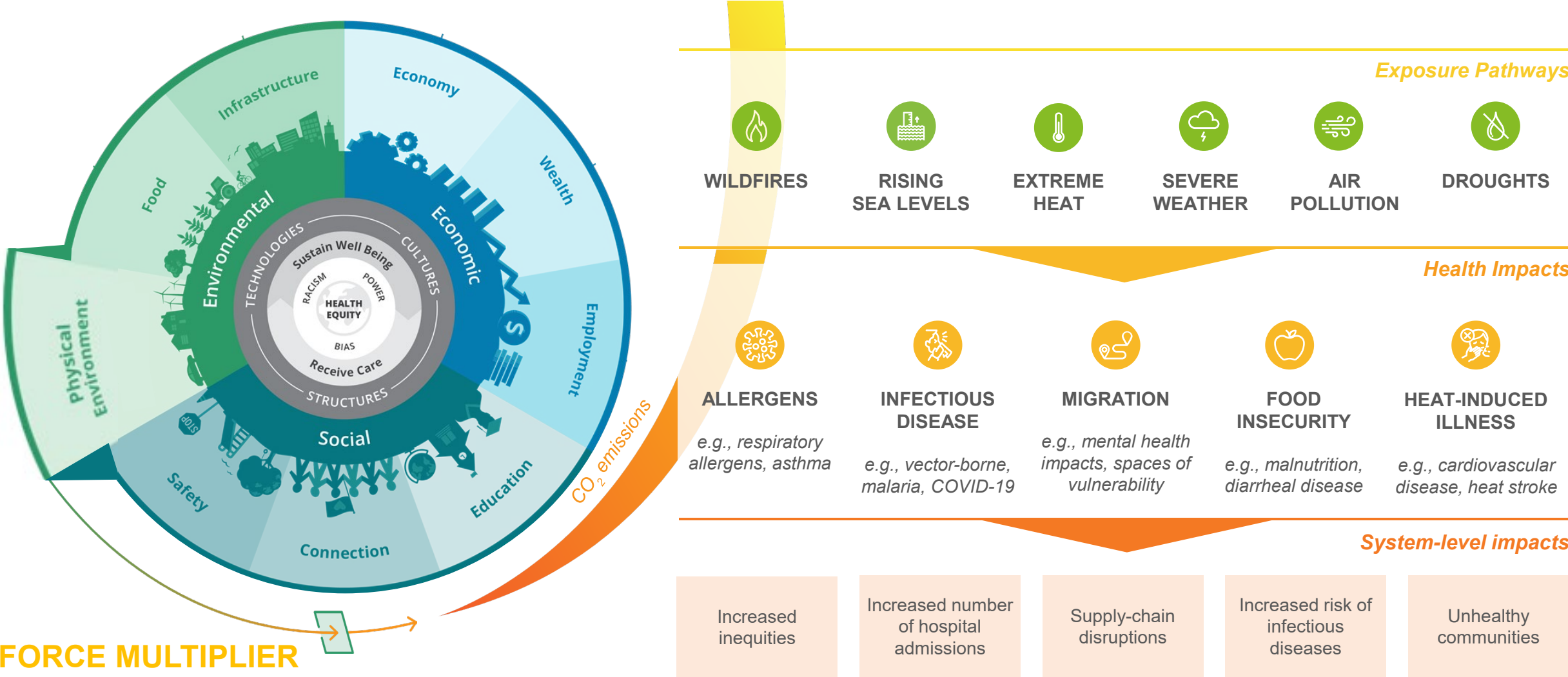
In recent years, British Columbia has experienced some of the worst air quality due to wildfire smoke.



DROUGHTS

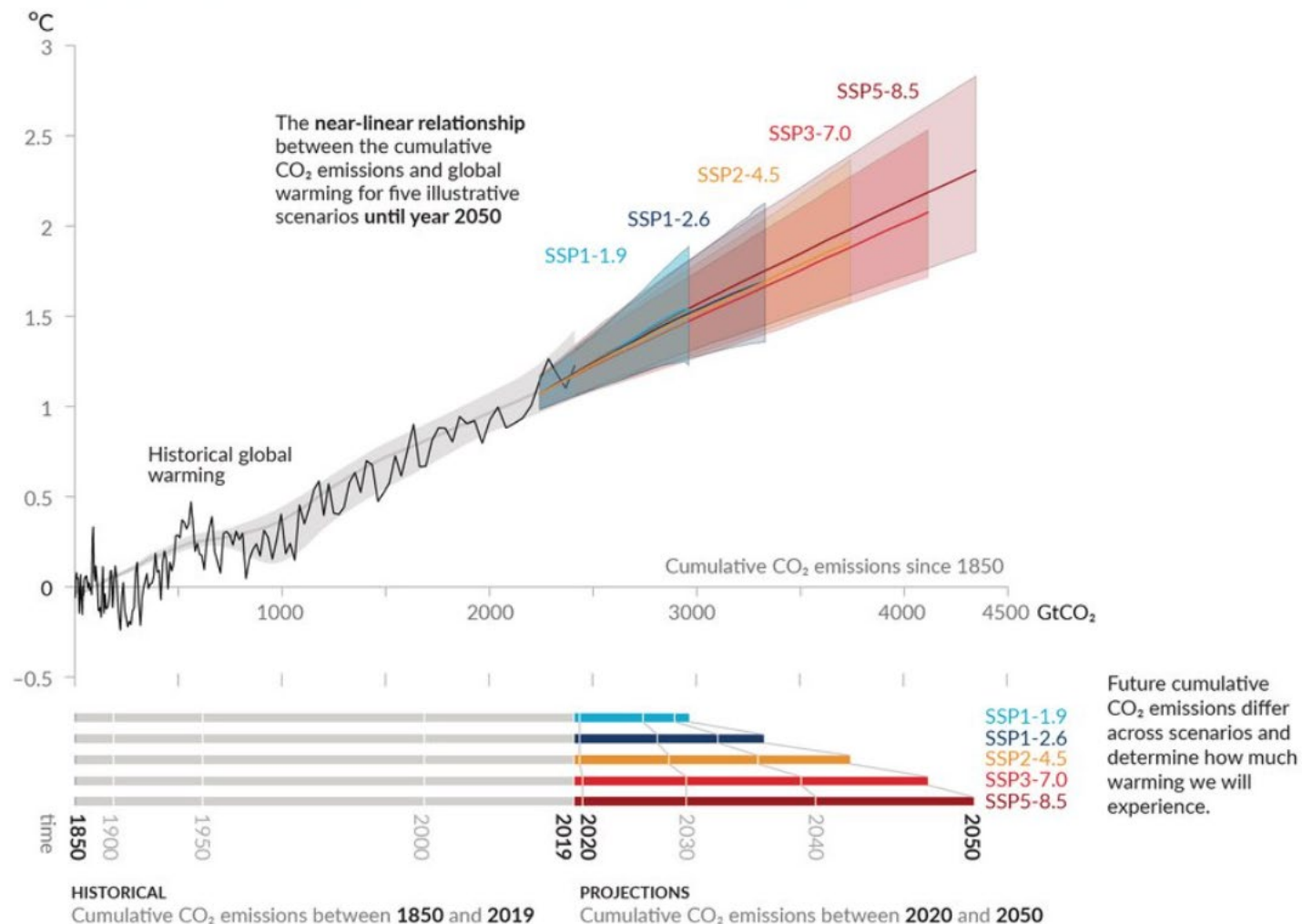
Over the past century, the duration of drought events has increased by 20 per cent.

Effects of Climate Change



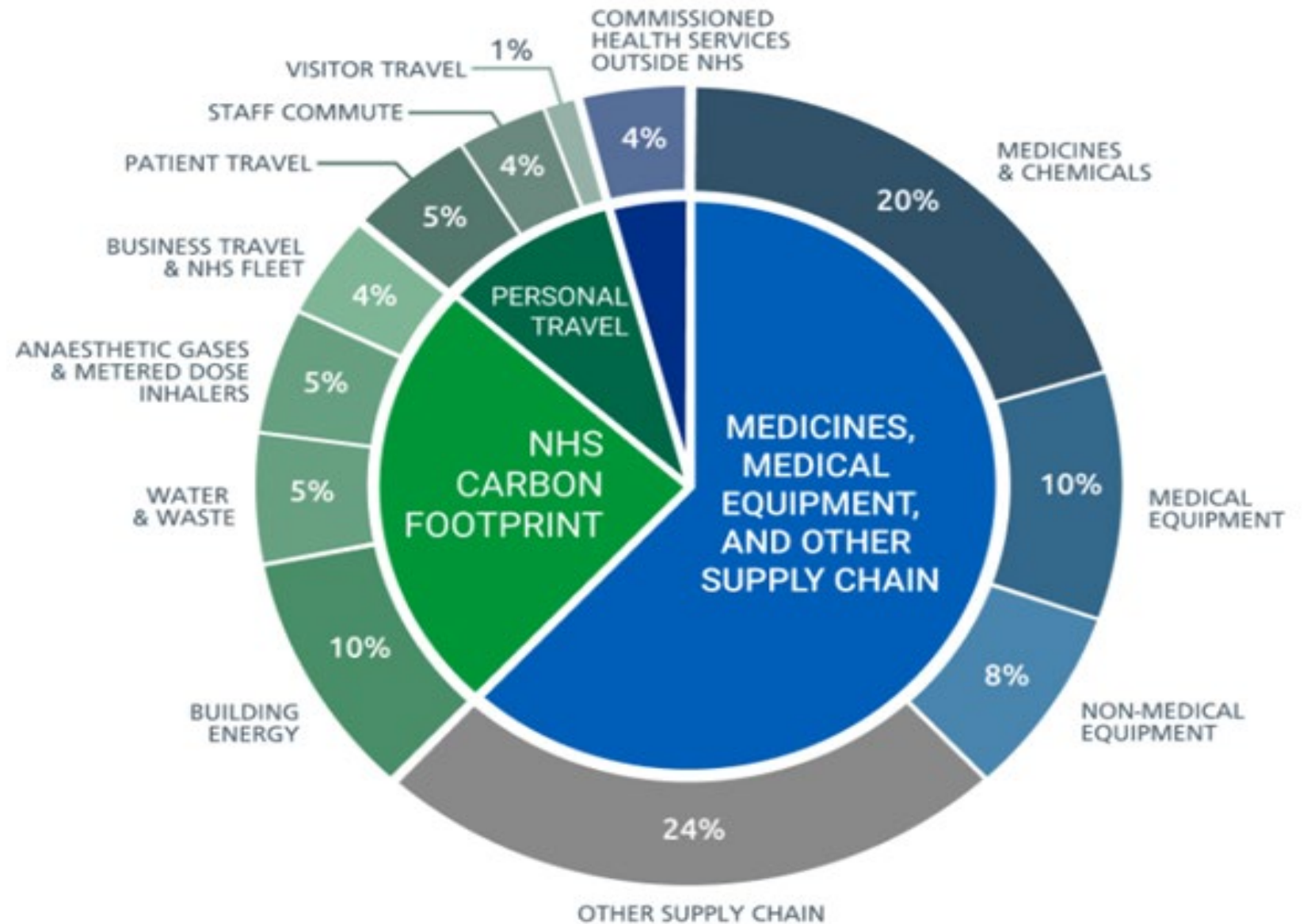
Every tonne of CO₂ emissions adds to global warming

Global surface temperature increase since 1850–1900 (°C) as a function of cumulative CO₂ emissions (GtCO₂)



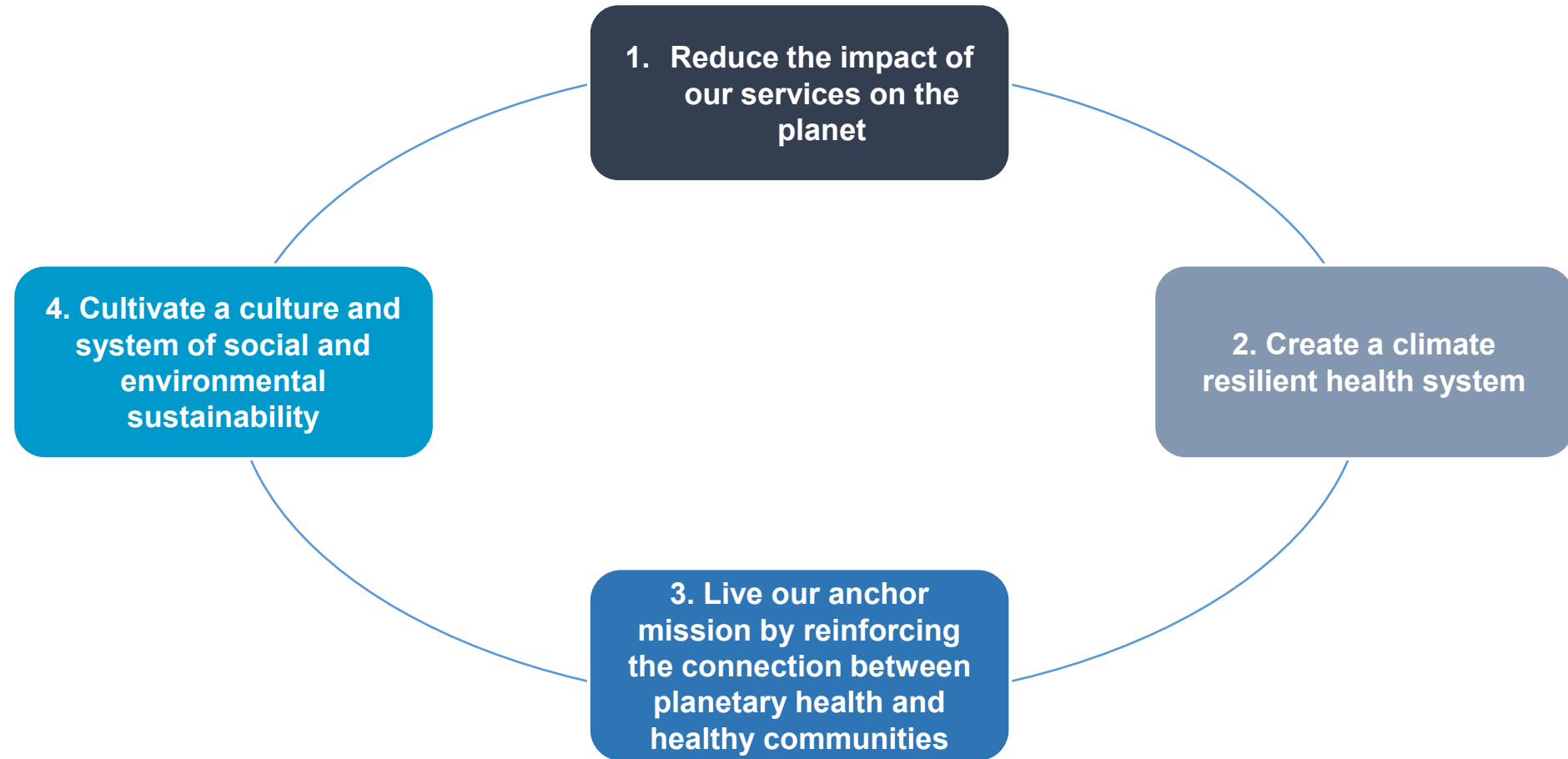
Source: Figure SPM.10 in IPCC, 2021: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–32, doi: [10.1017/9781009157896.001](https://doi.org/10.1017/9781009157896.001).]

Health Care Delivery responsible for 4.6 per cent Greenhouse Gas (GHG) Emissions in Canada



Sources: Canada's health system is among the least green, NHS Greener Health

Fraser Health is responding to
the health impacts of climate
change as well as its causes



Partnership

Research

Measurement

Evaluation

Technology

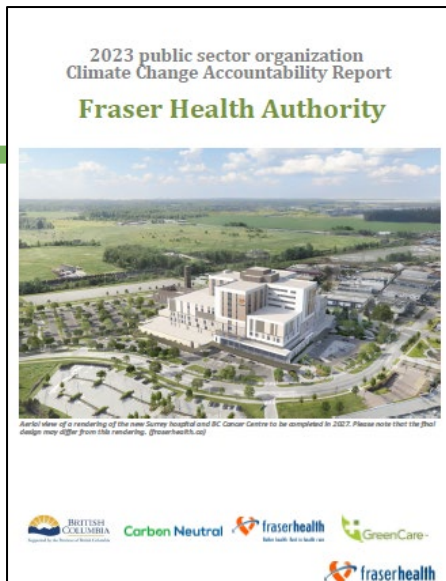
Leadership

Energy and Environmental Sustainability (EES) Public Reporting

Climate Change Accountability Report

Required reporting under Climate Change Accountability Act annually by the **end of May**.

Focus: Greenhouse Gas (GHG) emissions for buildings, fleet and paper; actions and plans; climate leadership.



Environmental Performance Accountability Report

Voluntary report on actions and achievements published annually by the **end of July**.

Focus: Greenhouse Gas (GHG) emissions (broader), energy, food, waste, transportation, and water.



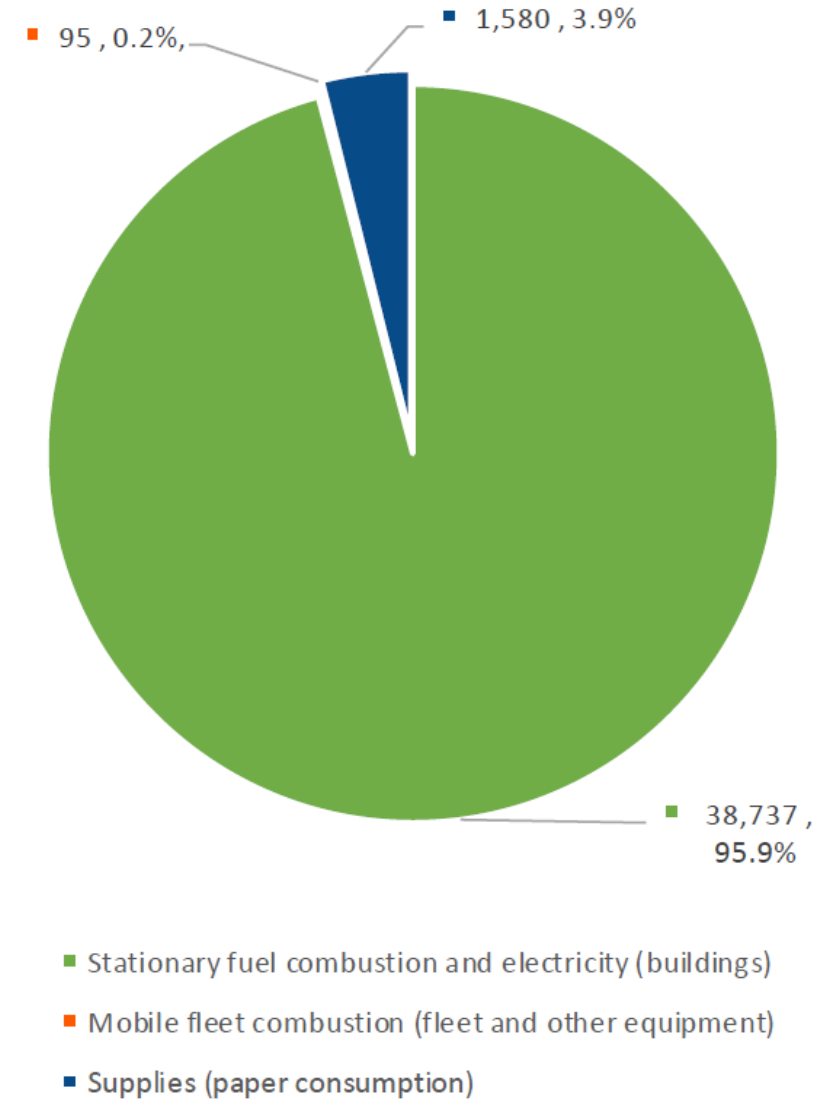
In Scope Emissions

In BC, **health authorities are required to measure:**

1. stationary fuel combustion and electricity
2. mobile fleet
3. paper

In 2023, Fraser health measured emissions this were **40,874 tonnes CO²equivalent** - this would be **equivalent to 27,329 homes' electricity use for one year.**

Source: [2023 Climate Change Accountability Report - FH](#)

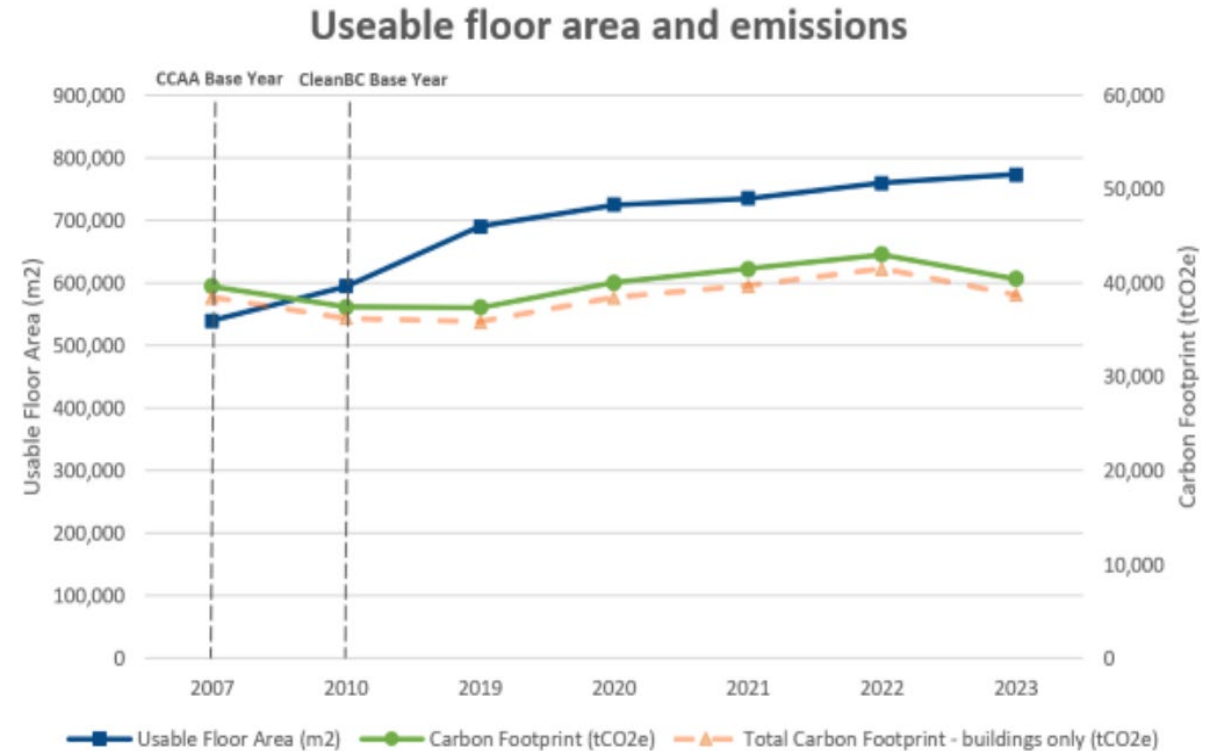




Energy and Carbon

Goal: Reduce our carbon footprint by increasing energy efficiency and reducing reliance on fossil fuels.

Key Performance Indicator (Metric)		2023 Results	2025 Target	2030 Target
Regulatory guidance	To meet the CCAA target, decrease total GHG emissions from owned and leased buildings, fleet vehicles and paper use from 2007 levels (% change of tCO ₂ e/year)	-2%	16% ●	40% ●
	To meet the CleanBC target, decrease total GHG emissions from owned and leased buildings from 2010 levels (% change of tCO ₂ e/year)	-7%	16% ●	50% ●
	Decrease the amount of GHG emissions generated per floor area of owned and leased buildings from 2010 levels (% change of tCO ₂ e/m ² /year)	18%	25% ◆	50% ◆
	Decrease the amount of energy used per floor area of owned buildings ^D from 2007 levels (% change of kWh/m ² /year)	13%	20% ◆	25% ■



Source: Fraser Health EPAR and CCAR reports



2. Energy and Carbon

Our goal: Reduce our carbon footprint by increasing energy efficiency and reducing reliance on fossil fuels.

Select 2023 actions and achievements

Energy and emissions reduction projects initiated or continued

- ▶ Upgraded hot water systems at Delta Hospital and Peace Arch Hospital with 54 solar thermal panels, projected to reduce emissions by reducing domestic water heating by 20% annually
- ▶ Implemented Queen's Park Care Centre Heat Recovery Chiller project, which is projected to save 224 tCO₂e emissions per year, and has also improved patients' comfort in hot summer weather by adding 65 tonnes of cooling to the building
- ▶ Completed Eagle Ridge Hospital Parking Lighting projects and started 6 more lighting projects
- ▶ Piloted energy- and emissions-saving retrofit technology, such as gas absorption heat pumps, gas engine heat pumps, solar thermal systems, and combined heat and power at multiple sites, with monitoring and verification in progress

- ▶ Included comprehensive and integrated strategies for low carbon resilience and environmental sustainability in the approved Burnaby Hospital and BC Cancer Centre Redevelopment Phase 2 Business Plan, such as a plan to include shared and clean transportation to the hospital
- ▶ The fully electric new Surrey hospital and BC Cancer Centre — in construction since 2023 — is being designed as a digitally-equipped and technologically advanced smart hospital to provide improved health outcomes and an enhanced care experience for our patients, staff and medical staff

Studies and engagement

- ▶ Completed energy modelling processes for Royal Columbian Hospital Redevelopment Phase 2 and Burnaby Hospital Redevelopment Phase 1 that will support energy and emissions reduction design measures
- ▶ Completed 2 sessions of building operator training as part of the EnergyWise Network Campaign

Funding and investments

- ▶ \$466,000 invested in energy efficiency initiatives from the Green Revolving Fund
- ▶ \$3.2M invested in carbon-reduction projects from CNCP funding
- ▶ \$683,000 received in incentives from utility partners and invested in energy and emissions studies and projects

The Fraser Health Climate Change Accountability Report

Each year, along with all public sector organizations, B.C.'s health organizations submit a Climate Change Accountability Report (CCAR) to the Climate Action Secretariat of the provincial government. This is a mandated reporting of greenhouse gas (GHG) emissions and other data, and current and planned actions to reduce GHG emissions.

[Download the Fraser Health Climate Change Accountability Report](#)



Materials

Goal: Choose materials and products that contribute to human and environmental health, while avoiding waste and unnecessary chemicals.

Key Performance Indicator (Metric)*	2023 Results	2025 Target	2030 Target
Increase waste recycled or composted in acute care owned sites ^E (% recycled, annual average)	33%	33% ■	40% ◆
Increase waste recycled or composted in non-acute care owned sites ^F (% recycled, annual average)	50%	50% ■	60% ◆
Decrease waste generated per floor area in acute care owned sites (kg/m ² /year)	17.5	13.7 ◆	12.3 ◆
Decrease waste generated per floor area in non-acute care owned sites (kg/m ² /year)	21.7	19.2 ◆	17.3 ◆

Select 2023 actions and achievements

Waste reduction and recycling

- ▶ Audited non-sterile glove use across the organization to inform an unnecessary glove use reduction project in 2024 and beyond
- ▶ Replaced single-use sharps containers with reusable ones across the organization, which can save up to 4,691 single-use bins annually and reduce the risk of needlestick injuries
- ▶ Implemented a clinical process change to the administration of IV iron in the hemodialysis unit at Surrey Memorial Hospital, which prevented 36 kilograms of medical waste from going to the landfill after one month. An annual reduction of 1,900 kilograms of medical waste is anticipated once the initiative is scaled to hemodialysis units across Fraser Health in 2024.
- ▶ Repurposed 299 beds and 256 mattresses that were being replaced across long-term care facilities and donated them overseas to Ukraine, Liberia, Sierra Leone and Nigeria, providing much needed medical aid globally and reducing waste locally
- ▶ Established a Circular Health Care Working Group looking at moving to a more circular model of health-care delivery, which includes exploration of using reusable rather than single-use items where clinically safe
- ▶ Created a dedicated Waste Contract Specialist role that will support waste audits, education, innovation and reporting

Source: Fraser Health EPAR and CCAR reports



Transportation

Goal: Increase access to and use of transportation modes that reduce negative environmental impacts and benefit human health and wellness.

Key Performance Indicator (Metric)	2023 Results	2025 Target	2030 Target
Increase the proportion of self-reported ^G commutes staff make by cycling, walking and rolling* (% commutes, annual average)	4%	10% 	15%
Increase the proportion of self-reported commutes staff make by hybrid and electric vehicles, public transit, carshare, carpool and hospital shuttle (% commutes, annual average)	27%	25% 	30%

Source: Fraser Health EPAR and CCAR reports

Select 2023 actions and achievements

Incentives

- ▶ Launched a 50% transit incentive for staff using TransLink and, on average, 1,035 staff participated monthly (approximately doubling the previous enrolment)
- ▶ Added a real time GPS and notification shuttle tracker to routes for 3 facilities in order to support staff planning to travel by Fraser Health shuttle services

- ▶ The EV Steering Committee collaborated on a framework to support everything from requests for EVs to feasibility studies, infrastructure specifications and operations

Commuting

- ▶ Staff took 129,489 shuttle rides between health-care sites and transit hubs in 2023

Education and resources

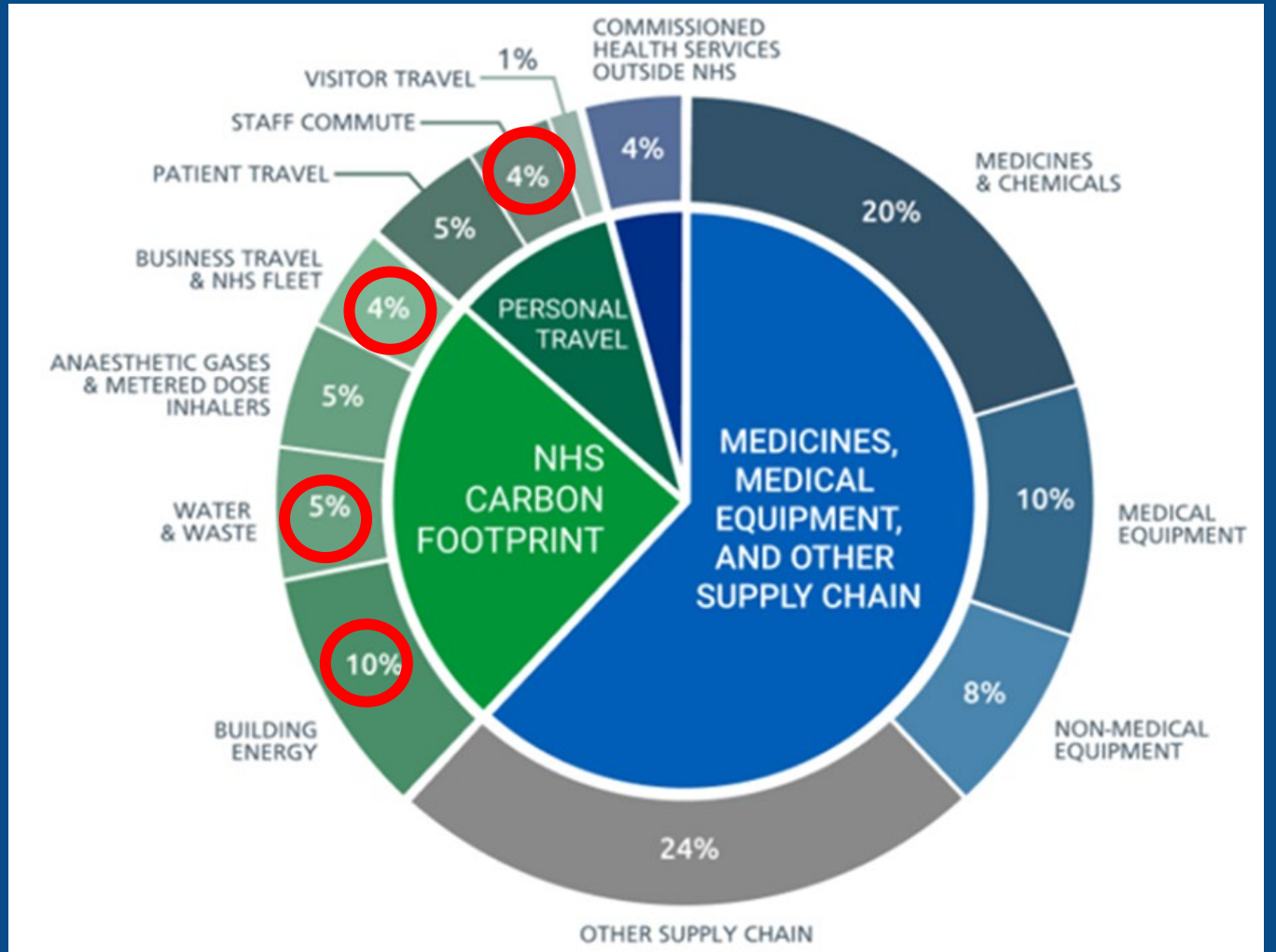
- ▶ Hosted GoByBike Celebration stations at Royal Columbian Hospital, Surrey Memorial Hospital, Burnaby Hospital and Abbotsford Regional Hospital; 7,715 people were engaged in conversations at the seasonal stations
- ▶ Increased support for e-bikes by updating bike infrastructure guidelines for new and existing health-care facilities

What do Fraser Health staff surveyed have to say about EVs?

Based on GreenCare Survey^G results:

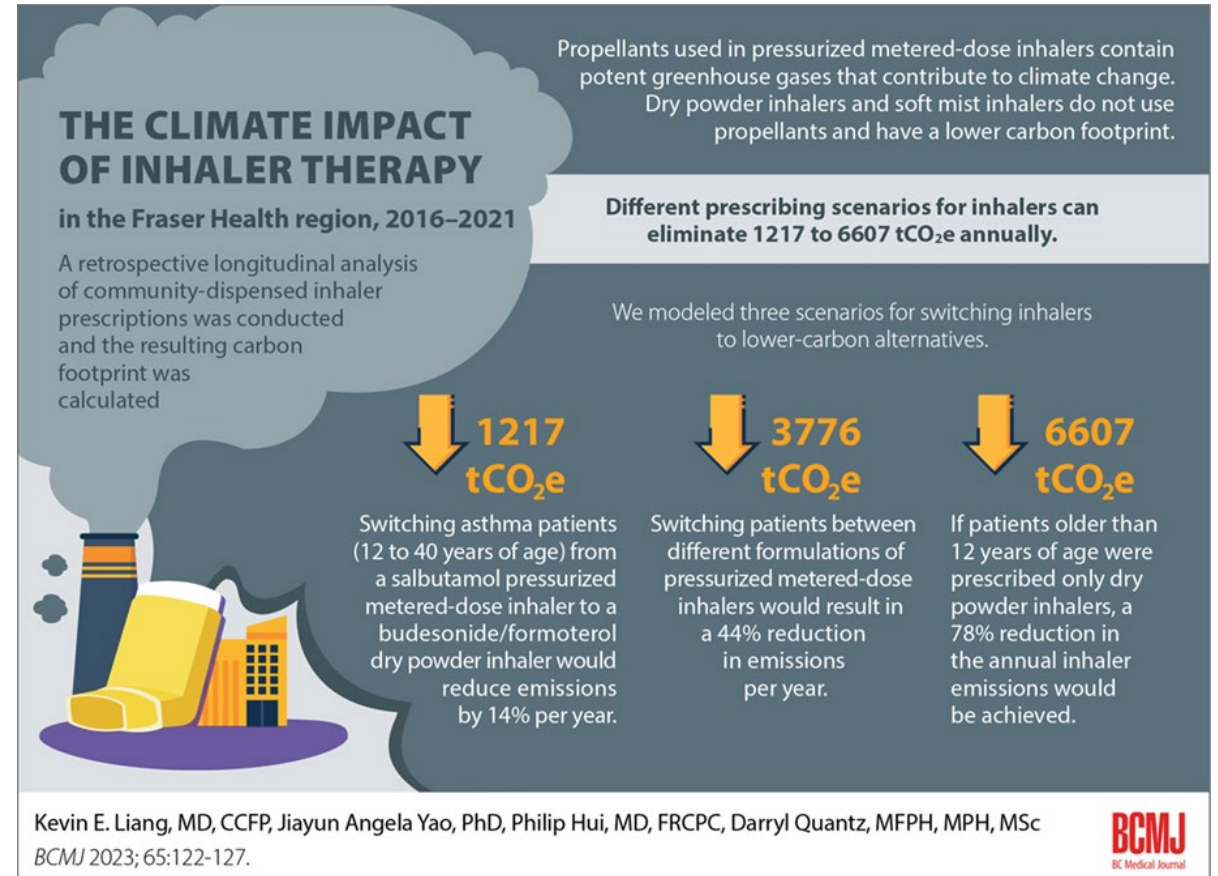
- ▶ **17%** of 710 staff currently own an EV.
- ▶ **34%** of 587 staff plan to own an EV in the next five years.

However, current measurements reflect only a small portion of our actual ecological footprint.



Inhaler Therapy

- Fraser Health is the first health region in Canada to provide a carbon footprint of inhaler therapy.
- Scenarios to reduce up to 6607 tonnes CO₂e annually.
- This reduction would be equivalent to approximately 16 per cent of all our currently measured emissions.



Anesthetic Gases

- Royal Columbian Hospital made headlines by stopping use of desflurane – a potent greenhouse gas used in anesthesia - in 2022.
- This advocacy started action across Fraser Health.
- By end of fiscal year, all sites will have stopped using desflurane.
- From 2022/23 to 23/24, this change will save equivalent of 70,000 litres of gasoline consumed (estimated).
- Work underway to abandon piped in Nitrous oxide – a system that leaks up to 95 per cent into the atmosphere.

British Columbia

Major B.C. trauma hospital switches anesthetic gas to reduce carbon footprint

Anesthesiologists to stop using desflurane, which they say emits 25 times more GHGs than an alternative gas

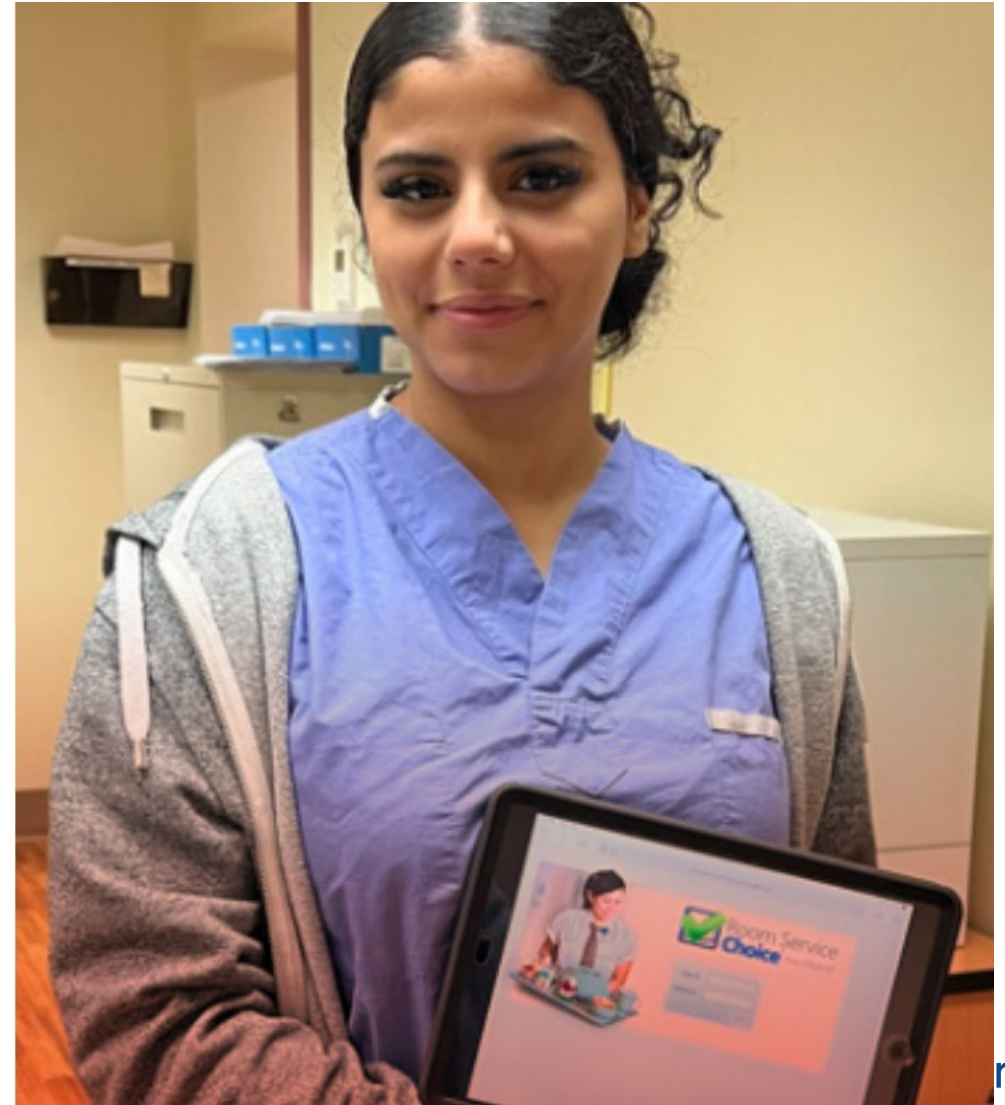


Ali Pitargue · CBC News · Posted: Jun 02, 2022 2:44 PM PDT | Last Updated: June 2, 2022



Food Choices and Food Waste

- Signed the Cool Food Pledge, to reduce the greenhouse gas (GHG) emissions associated with the food served at Royal Columbian Hospital.
- Launched the Choice Dining pilot at Royal Columbian Hospital and Surrey Memorial Hospital, an innovative hospital food service that helps empower patients and their loved ones with the power of meal selection while also reducing food waste
- Participating in Nourish Leadership cohort working on:
 - Bringing the concept of food into healing
 - Improving patient and staff food experience
 - Establishing planetary health menus
 - Advancing sustainable purchasing



Planetary Health Champions



Reducing pharmaceutical waste at Surrey Memorial Hospital



Reusable surgical gowns at Peace Arch Hospital



Dr. Kevin Liang is supporting the use of low carbon inhalers across the Fraser region



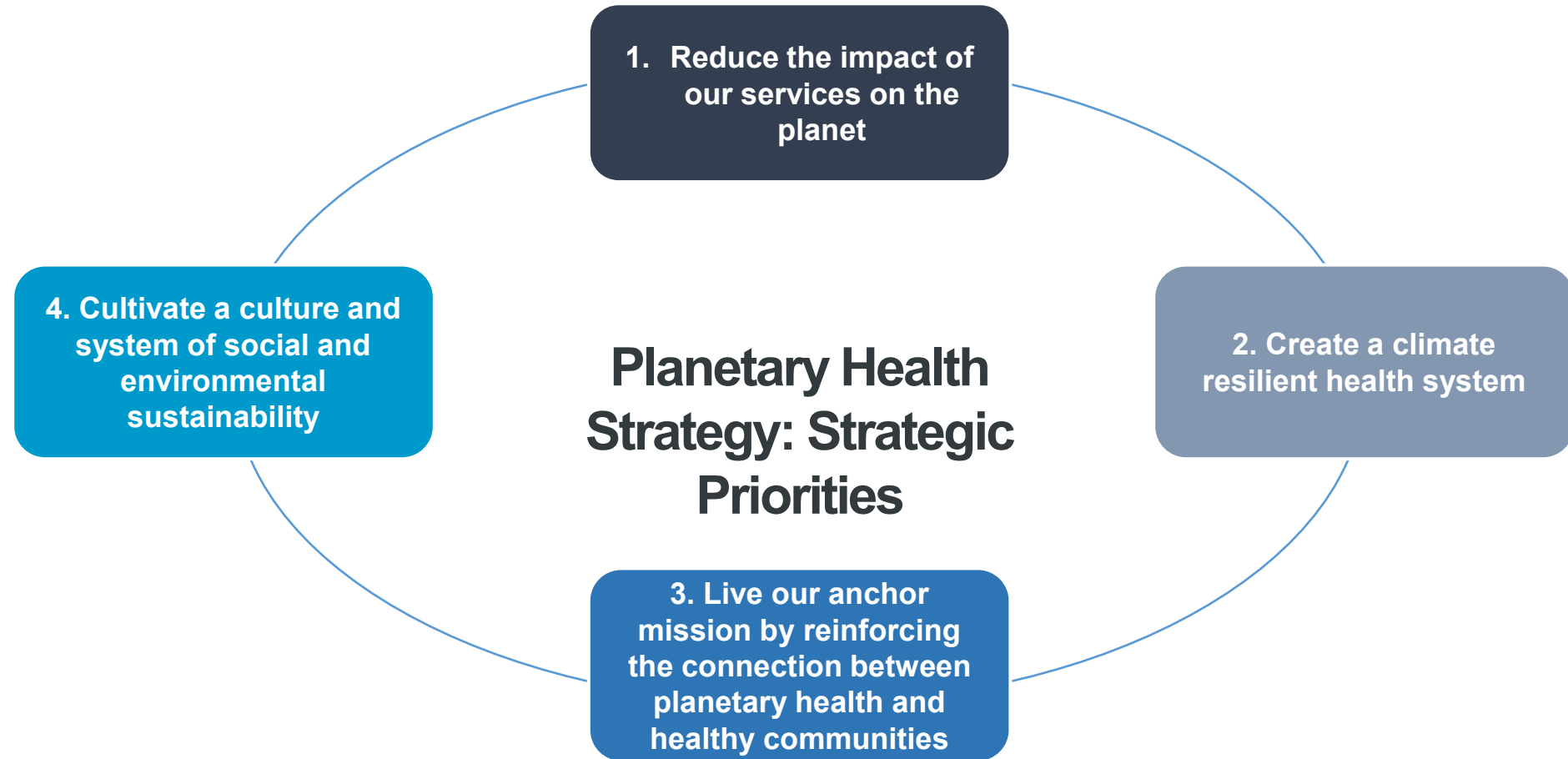
More local and planetary health friendly food



Enhancing the natural environment at our sites



Reusable Linen Wraps at Eagle Ridge Hospital



Partnership

Research

Measurement

Evaluation

Technology

Leadership



fraserhealth

Better health. Best in health care.



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