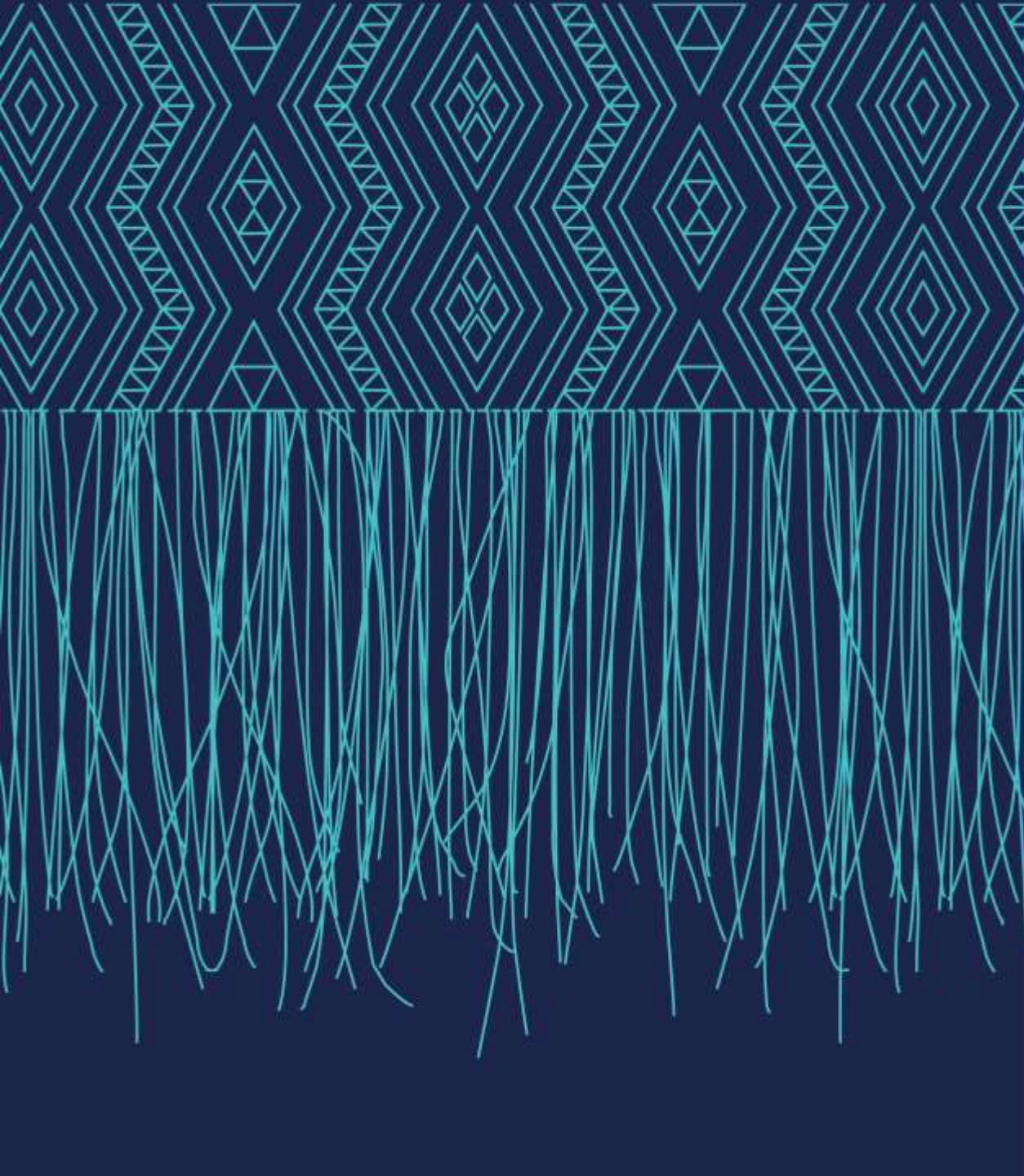


Environmental Sustainability and Climate Resilience at Te Whatu Ora

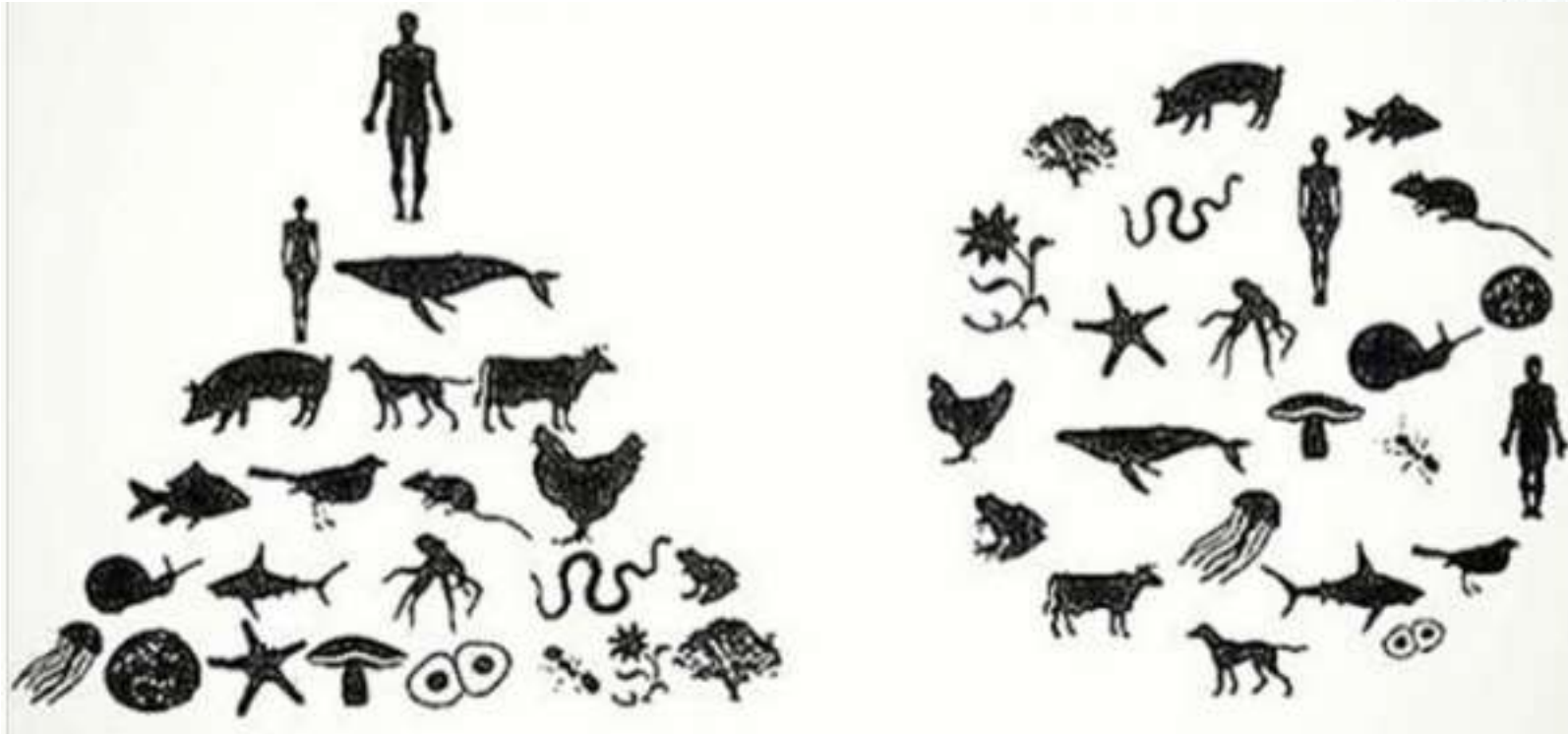
Vicktoria Blake – Interim Head of Sustainability



Understanding the problem

Ka ora te taiao, ka ora te tāngata

We are a part of nature, not apart from it



Climate change and environmental degradation impacts human health!

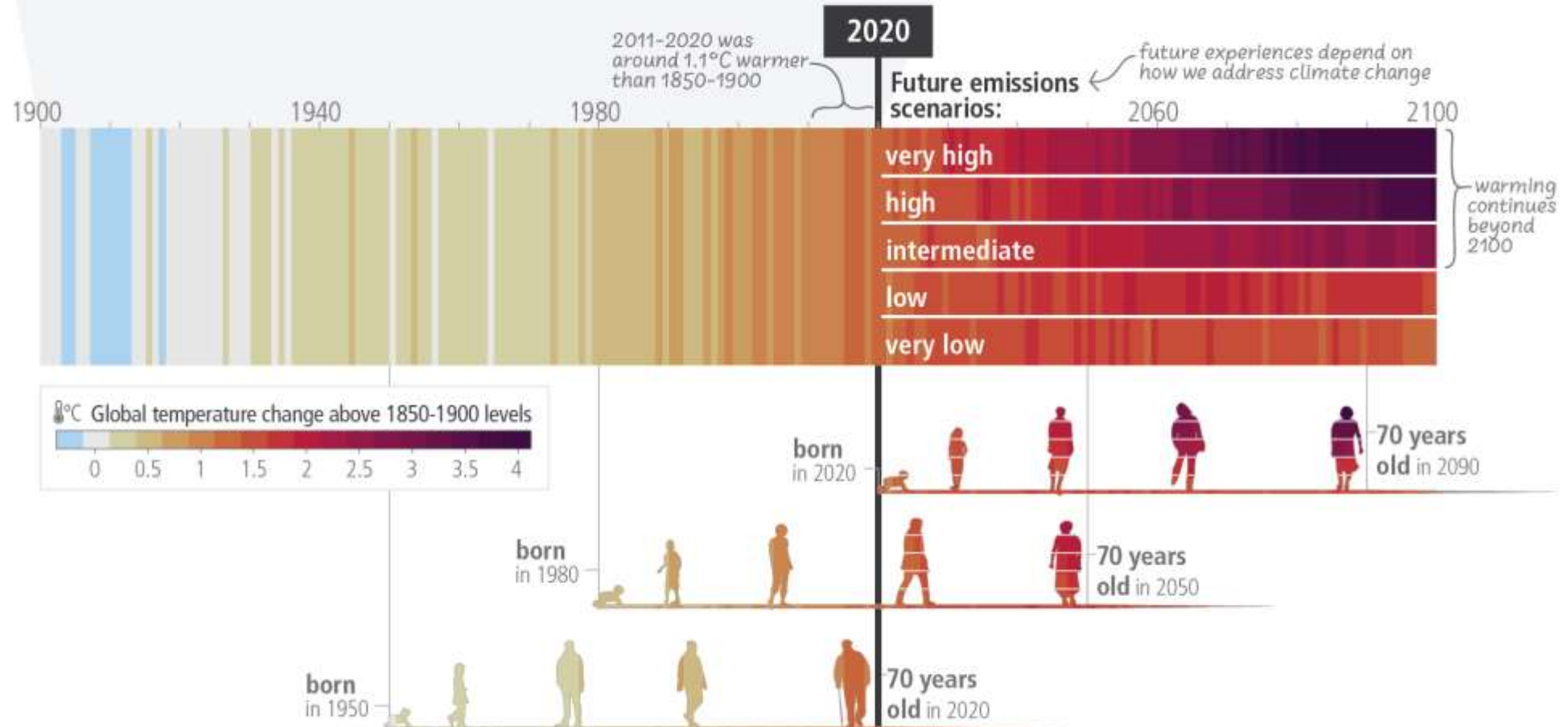
Impacts of climate change on human health



(Source: Centers for Disease Control and Prevention)

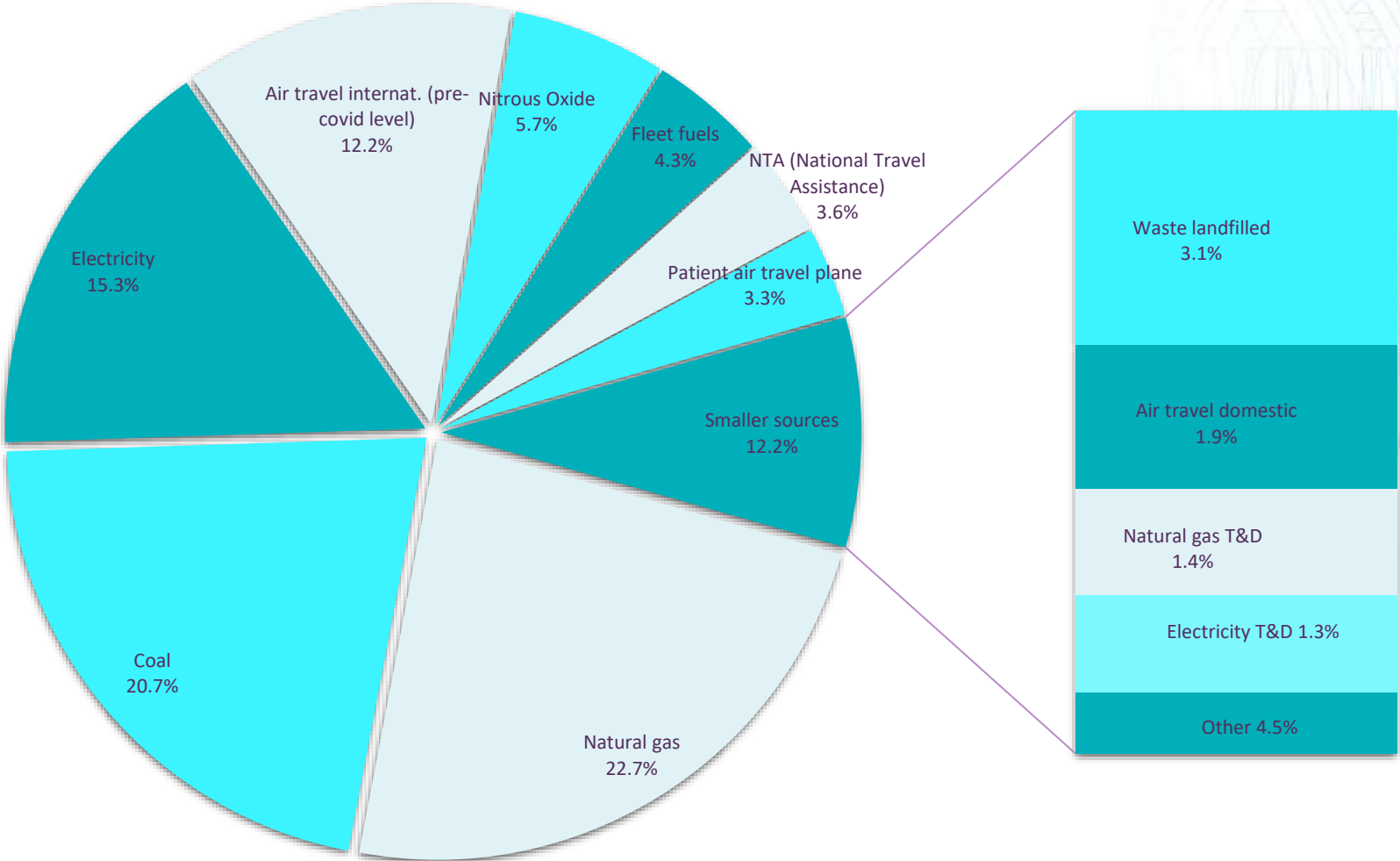
Climate change and environmental degradation impacts quality of life

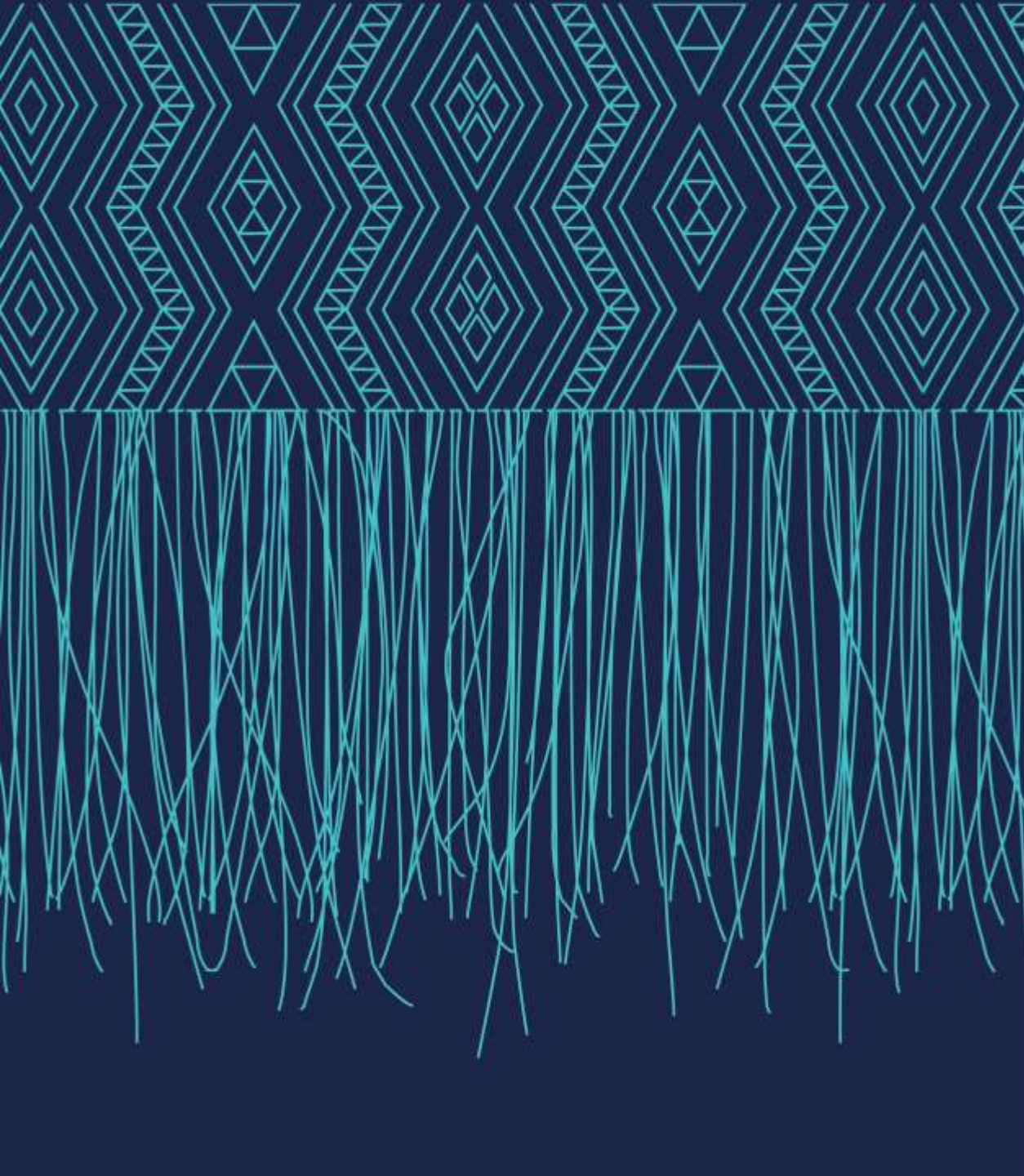
c) The extent to which current and future generations will experience a hotter and different world depends on choices now and in the near-term



GHG Emissions Source % of Total Estimated Te Whatu Ora's National Carbon Footprint (258kTCO₂e)

Hospital-centric view, expected to change over time as other areas are added including patient and visitor travel, staff commute, procurement and commissioning





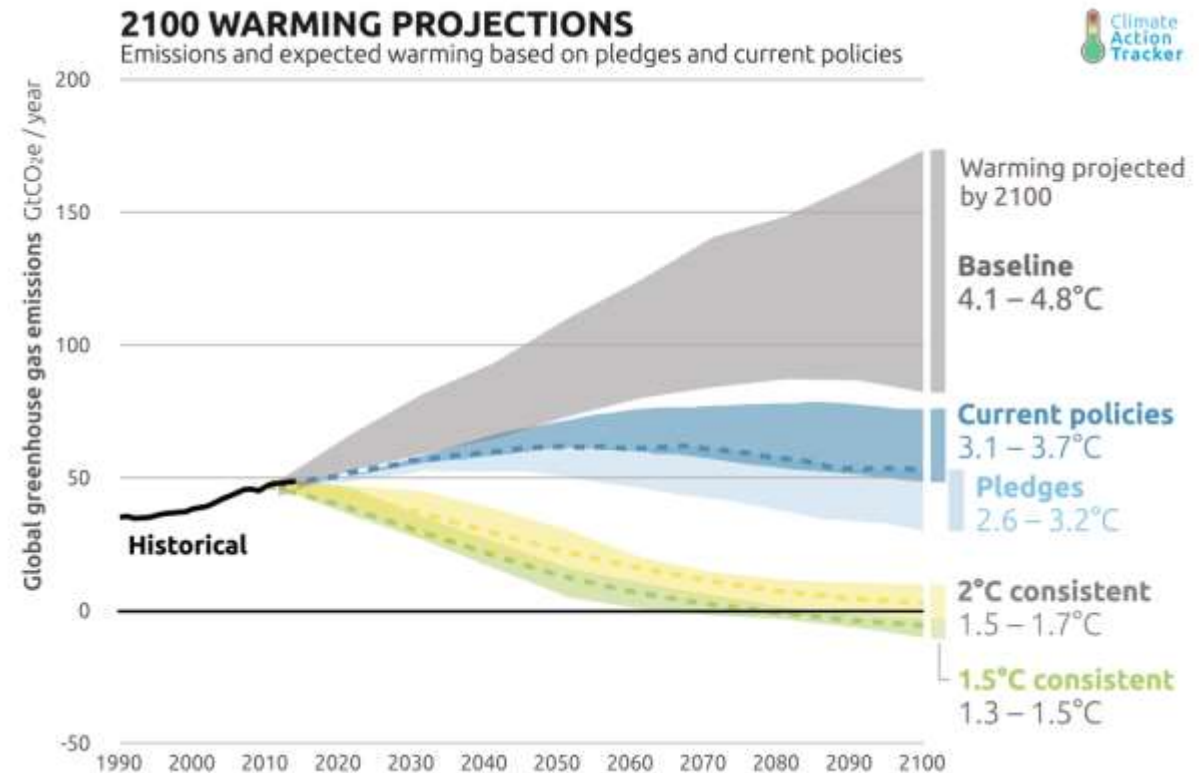
Managing the problem

Sustainability at Te Whatu Ora

- Ka ora te taiao, ka ora te tāngata | Climate health = population health
- Interim work programme leading to 2025 targets informed by Carbon Neutral Government Programme (CNGP) directions
- Genuine opportunity for systemic change incorporating national guidance, innovation, and grassroots leadership
- With great size comes great responsibility
- Broader opportunities
- You cant manage what you don't measure

Key CNGP Requirements

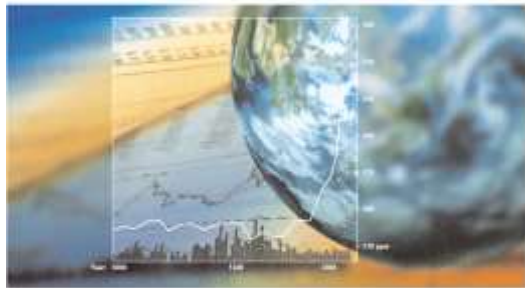
- Verified emissions reporting, science-based targets and emissions reduction plan required annually from 1 December 2024
- Emissions reduction must meet 1.5-degree pathway scenario requiring significant changes to practice and immediate and comprehensive action. (25% reduction by 2025 / 50% by 2030 rule of thumb)
- Te Whatu Ora CNGP Implementation Policy recently endorsed – will set the basis for policy moving forward
- All areas of Te Whatu Ora Health New Zealand must do their part to meet the CNGP requirements with some areas likely having targets to meet and metrics to report against.



Source: <https://climateactiontracker.org/press/global-update-paris-agreement-turning-point/>

Emission reporting standards and guidelines

The Greenhouse Gas Protocol



A Corporate Accounting and Reporting Standard
REVISED EDITION

Greenhouse Gas Protocol

ISO 14064-1

INTERNATIONAL STANDARD

ISO 14064-1:2018(E)

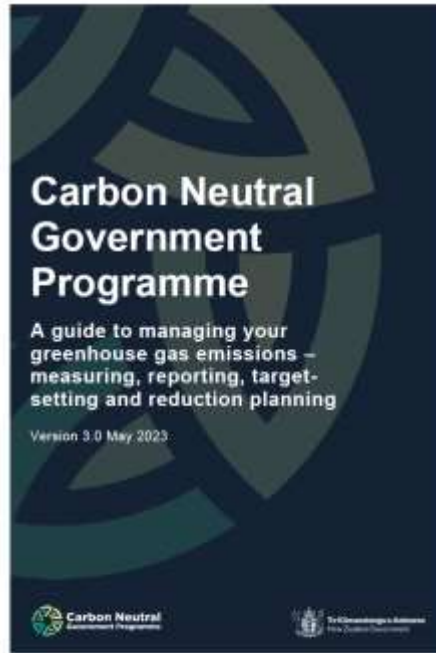
Greenhouse gases —

Part 1:
Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

1 Scope

This document specifies principles and requirements at the organization level for the quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an organization's GHG inventory.

The ISO 14064 series is GHG programme neutral. If a GHG programme is applicable, requirements of that GHG programme are additional to the requirements of the ISO 14064 series.



Carbon Neutral Government Programme

A guide to managing your greenhouse gas emissions – measuring, reporting, target-setting and reduction planning

Version 3.0 May 2023

Carbon Neutral Government Programme

Te Kaitiaki Take Kōwhiri
New Zealand Government

MfE guides



Measuring emissions: A guide for organisations

2022 detailed guide

Ministry of the Environment

Te Kaitiaki Take Kōwhiri
New Zealand Government

Te Whatu Ora Emissions Reporting Framework and CNGP policy



Te Whatu Ora
Health New Zealand

Te Whatu Ora- Health NZ Emissions Reporting Framework

A guide to measuring and reporting greenhouse gas emissions for Te Whatu Ora

Te Whatu Ora
Health New Zealand

Carbon Neutral Government Programme Implementation Policy

Ki te hiri te hiri, ki te ora te ora
It's natural world is healthy, so too are the people

Purpose

1. This Carbon Neutral Government Programme (CNGP) implementation policy outlines:
 - Te Whatu Ora's CNGP obligations
 - Roles and responsibilities for implementing this policy
 - How Te Whatu Ora will implement CNGP objectives

Application

2. For the purposes of the CNGP implementation policy, the operational boundary of Te Whatu Ora is defined as areas where Te Whatu Ora has operational control. This includes all equipment, buildings, grounds and vehicles owned or directly operated by Te Whatu Ora
3. This CNGP implementation Policy applies to all employees of Te Whatu Ora, including permanent, seconded, contracted and temporary employees, Board members, students, volunteers and contractors, and their operational practices
4. Commissioned health services are out of scope

Responsibilities under Te Tiriti o Waitangi

5. Te Whatu Ora is committed to its responsibilities under Te Tiriti o Waitangi
6. Part of this responsibility includes incorporating mātauranga and Te Ao Māori, tino rangatiratanga, kaitiaki, and equity into our practice
7. We acknowledge that these responsibilities have not yet been incorporated into this policy. Te Whatu Ora and Te Aka Whai Ora | Māori Health Authority will work together to develop the principles as they relate to the environmental sustainability and climate resilience work programme, of which the CNGP is a key lever. This policy will be reviewed once this is complete to reflect the principles.

Definitions

8. Programme Lead – the lead Agency coordinating the CNGP, currently Ministry for the Environment (MfE)
9. Emissions or GHG – means greenhouse gases as defined in section 4(2) of the Climate Change Response Act 2002) emitted into the atmosphere that has led to the absorption and hence the greenhouse effect, resulting in global warming. (When measured in carbon dioxide equivalent by force (t.e. CO₂e))

Emission reporting phased approach

Category 1

Energy (Coal natural gas, diesel, LPG, biomass, landfill gas etc.)

Fleet fuels

Medical and anaesthetic gases

Refrigerants

Category 2

Electricity

Purchased steam

Category 3

Air travel (incl. CME)

Patient transport services:

-Ambulance (road)

-Helicopter (air ambulance)

-Fixed Wing (medical airplanes)

National Travel Assistance (NTA) claims

Staff business travel taxi

Phase 1 Boundary

Category 4

Waste to landfill

Water & wastewater (QTY)

Accommodation (excl. CME)

Transmission & distribution losses

Liabilities

Phase 2 Boundary

Category 3

Contracted patient transport services (taxi, bus, shuttle)

Staff commute

Staff shuttle

Category 4

Working from Home

Purchased goods and services

-Patient staff meals

-Laundry

Recycling

Phase 3 Boundary

Category 4

Capital goods purchased equipment

Embodied emissions construction

All other purchased goods and services

Medicines including metered dose inhaler use phase

Category 6

Patient private travel

Visitor travel

Excluded phase 1, to review inclusion in phase 2 and 3

Category 1

Biogenic (except biomass)

Acetylene

Medical gas mixtures with methane

Category 3

Rental cars

Staff mileage claims

Freight

Reimbursed patient travel (except NTA)

Category 4

Accommodation CME

Category 6

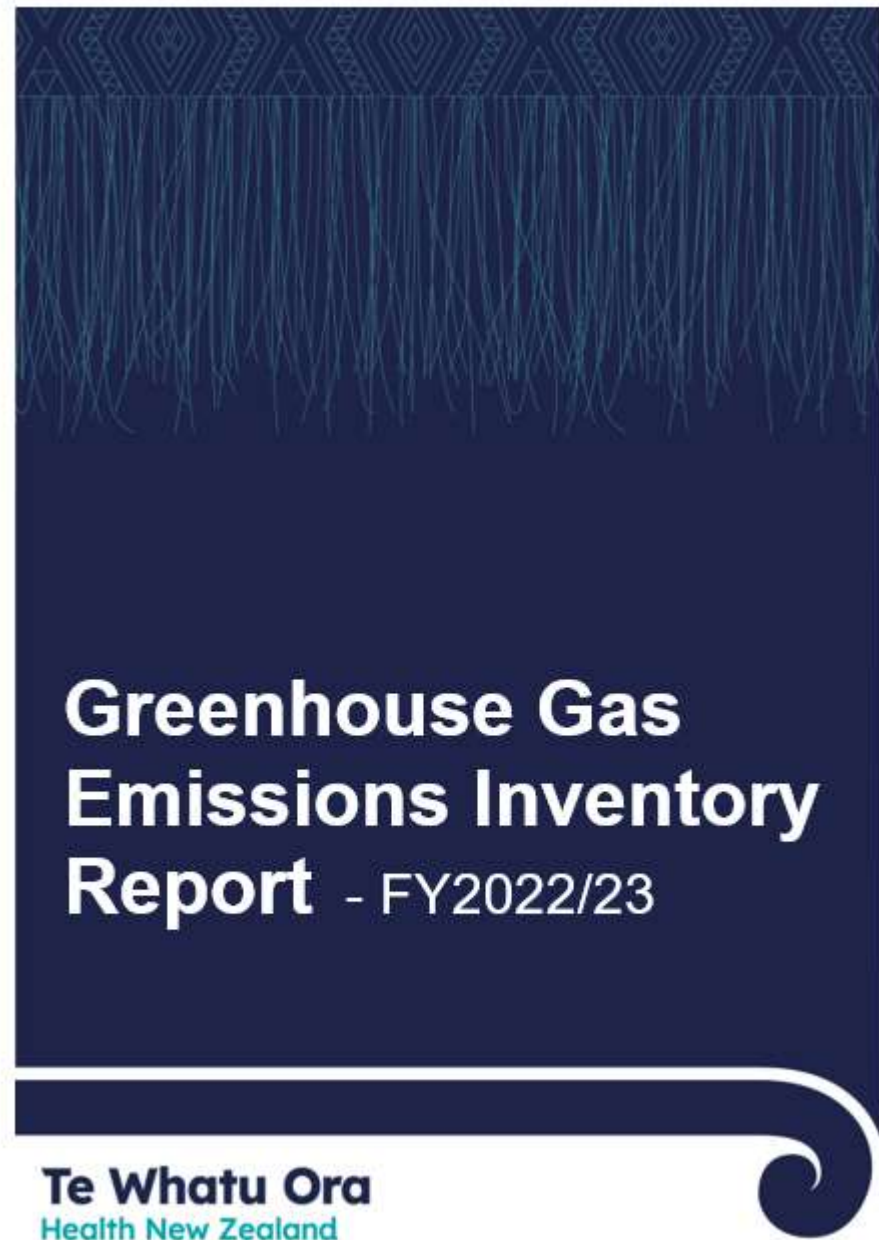
Investments

Reporting

Quarterly Board Reporting

Annual Greenhouse Gas
Emissions Inventory

Te Whatu Ora Annual Report



Environmental Sustainability and Climate Resilience functions

STRATEGY / POLICY

Environmental
Sustainability and
Climate Resilience
Framework

Climate Risk and
Adaptation Planning

Policy review and
alignment

PLANNING, MONITORING & REPORTING

Emission
Reduction
Planning

Emissions
Reporting

CNGP Monitoring

NAP Monitoring

IMPLEMENTATION SUPPORT

Project and initiative
support at national,
regional and local
level

Service/process
design advice e.g.
waste minimisation
and management,
building design,
travel planning

Meet the team



Viktoria Blake
Interim Head of
Sustainability



Rob Burrell
Anaesthetist –
Counties Manukau
Clinical Lead



Debbie Wilson
Principal Sustainability
Advisor – Infrastructure
and Investment Group



Jay Hadfield
Principal Sustainability
Advisor – Capital, Coast
and Hutt Valley



Margriet Geesink
Sustainability Lead –
Te Tai Tokerau



Larisa Thathiah
Sustainability Lead –
Waitemata



Maggie Brown
Sustainability Lead – Te
Matau a Maui Hawkes Bay



Lisa Bridson
Sustainability Lead –
Nelson Marlborough



Shelley Johnstone
Sustainability Officer –
Capital, Coast and Hutt
Valley



Daygan Eagar
Sustainability Lead –
MidCentral



Helen Polley
Sustainability Lead –
Counties Manukau



Katie Hine
Sustainability Lead –
Waikato

Environmental Sustainability and Climate Resilience work streams

Health System Decarbonisation



To reduce health system carbon emissions in line with a 1.5-degree scenario

Environment in All Practices



To realise co-benefits that include the environment alongside health, equity, social and economic values

Health System Resilience and Adaptation



To ensure sector resilience by planning for and adapting to the impacts of climate change

The background features a dark blue central panel with the text 'Decarbonising the sector' in white. This panel is flanked by teal-colored areas containing intricate white geometric patterns. The top half of the teal areas has a repeating diamond and zigzag motif, while the bottom half consists of a dense, vertical line pattern.

Decarbonising the sector

Energy Transition Programme

- \$99M programme
- Co funded by the SSDF
- Aiming for a 25% Greenhouse Gas Emissions Reduction by 2025
- Equates to an annual reduction of 23,000 tCO₂e

Coal Boiler Transition

- \$12M programme fully funded by SSDF
- Targeting the removal of the final 11 coal boilers
- This will see a further annual reduction of 7,800 tCO₂e
- Projects in various stages of delivery

Environmental and Resilient Design

- Design Guidance Notes (DGN) launched which includes Environmentally Sustainable Design critical actions
- Climate Risk Assessment Report of key infrastructure to be released

Coal conversion

- Christchurch hospital coal boilers replaced with biomass from February 2023 saving 20,000tCO₂e (that's more than twice Hauora a Toi Bay of Plenty's total measured emissions).
- Ashburton hospital coal boilers replacement project using ground source heat pumps completion by mid-2024 saving over 2,000 tCO₂e.
- Greymouth hospital coal boiler conversion to pellets project expected completion mid 2024 saving around 1,300 TCO₂e.
- Early stages of projects to eliminate coal at Reefton and a final building on the old coal boilers at Westport.



Green building

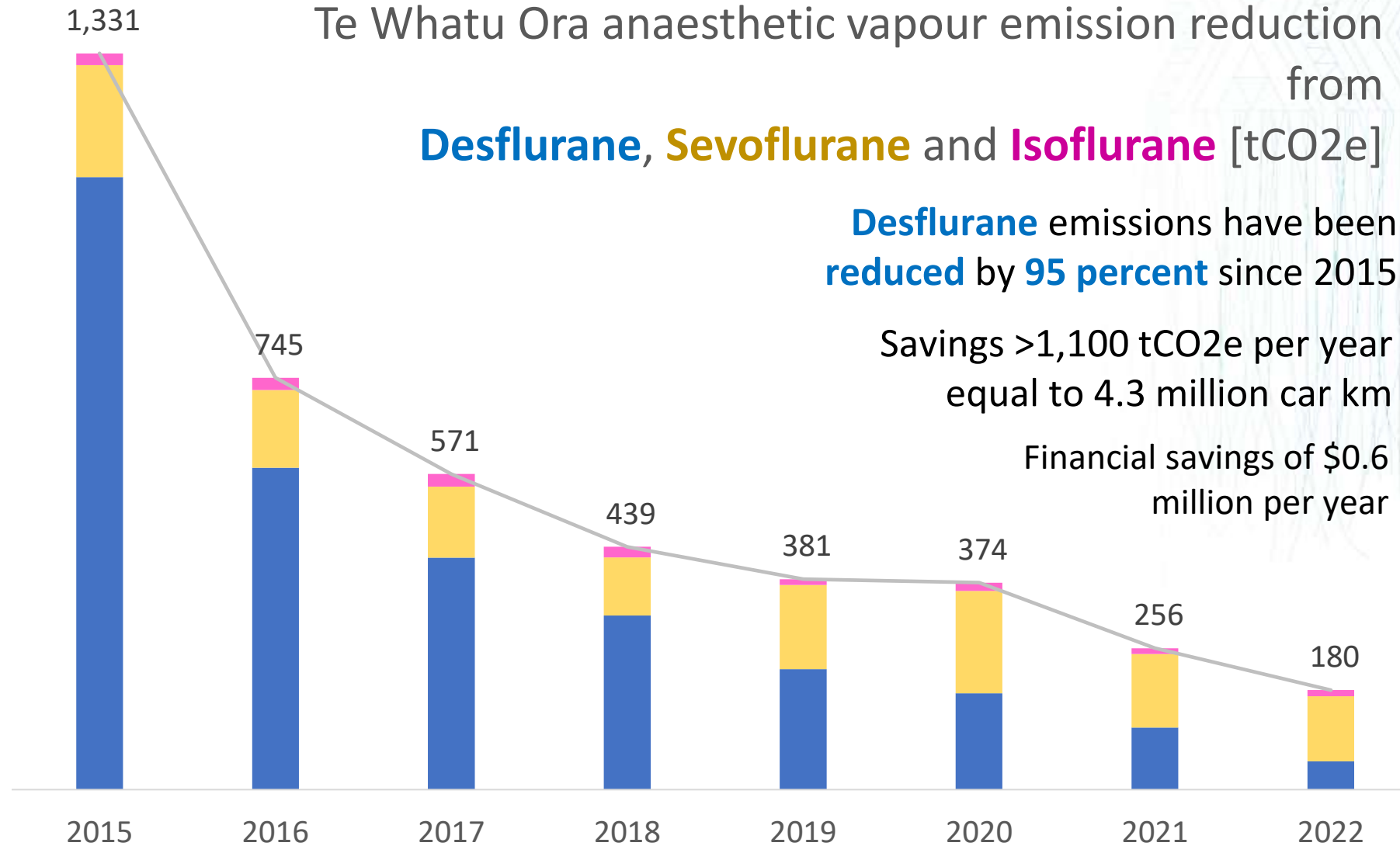
- Taranaki's new Renal Unit, Te Huhi Raupō, has scooped five design awards in a matter of weeks
- Came in on budget and is a great place to work and receive services according to staff and patients
- Has a target to be one of the world's first Zero Carbon and Zero Energy certified healthcare facilities
- All infrastructure over \$50M must be Greenstar 5 moving forward



Fleet conversion



Desflurane use reduced by 95% over 5 years

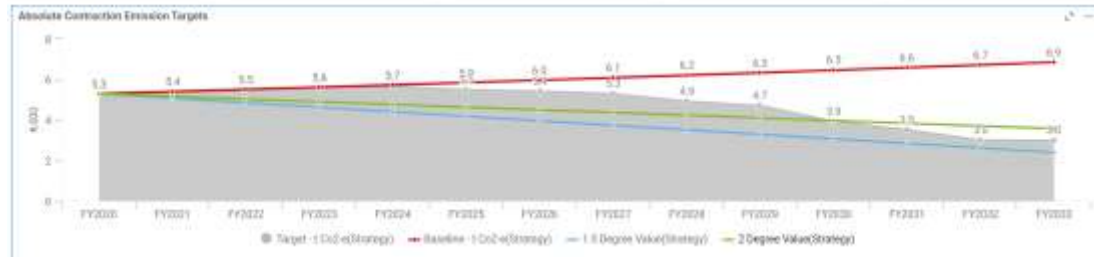


Other cool stuff

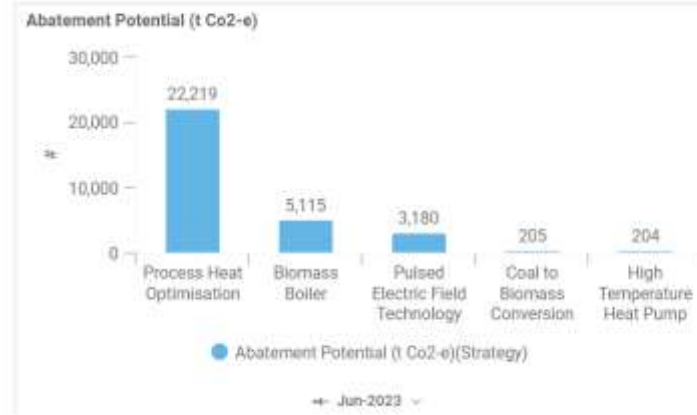
- Nitrous oxide mobile destruction units being trialled in various maternity departments across the motu
- LED lighting audits and national transition programme
- HVAC audits and transition from natural gas feasibility



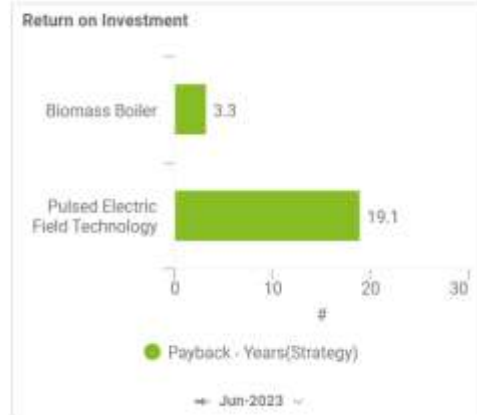
Emission target setting and scenario planning



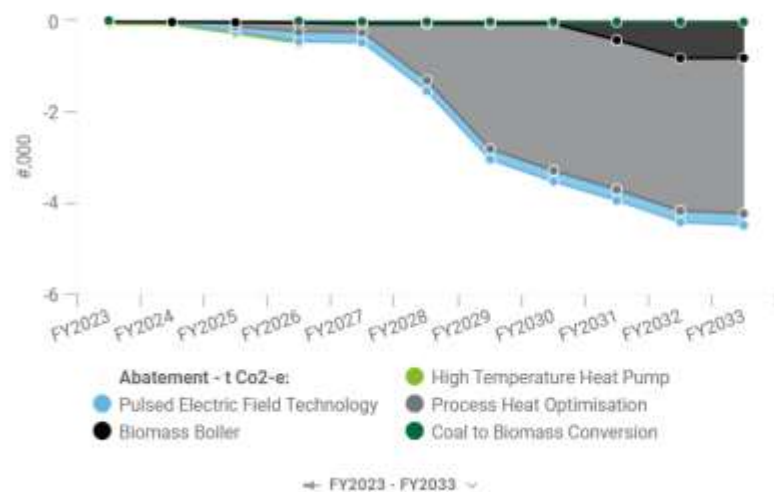
Total Abatement Potential (t Co2-e):



Return on Investment (Years)



Project Breakdown of Abatement (t Co2-e)



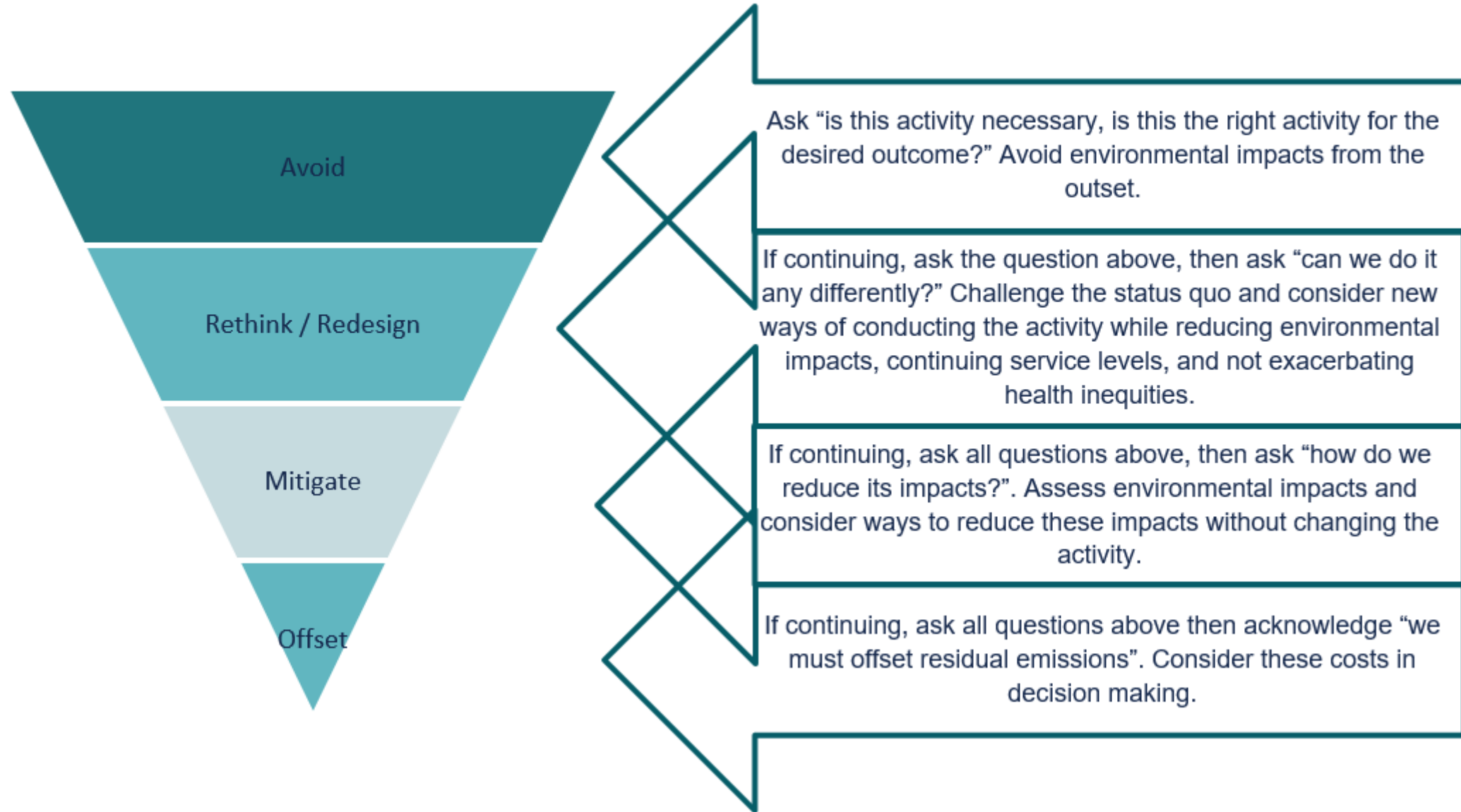
Comparison to Baseline & SBTs (t Co2-e)



The image features a dark blue central panel with white text. The background is decorated with teal and white geometric patterns. The top half consists of a repeating pattern of concentric diamonds and zig-zags. The bottom half features a dense, chaotic pattern of vertical white lines of varying lengths, resembling grass or a fringe.

**Environment
in all practices**

Decision making hierarchy for an environmentally sustainable and climate resilient health sector v1



Other things to consider:

Government Policy	Considerations
<p>Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy https://www.doc.govt.nz/nature/biodiversity/aotearoa-new-zealand-biodiversity-strategy/</p>	<ul style="list-style-type: none">• Assess impacts on water, soil, flora, and fauna
<p>Aotearoa New Zealand Waste Strategy https://environment.govt.nz/what-government-is-doing/areas-of-work/waste/waste-legislation-review/</p>	<ul style="list-style-type: none">• Consider the waste hierarchy https://environment.govt.nz/publications/aotearoa-new-zealands-first-emissions-reduction-plan/waste/• Consider the whole life cycle of a product or service including its end of life• Consider the Government public sector goal of 15 – 30 percent waste generation reduction by 2026.
<p>Carbon Neutral Government Programme https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/carbon-neutral-government-programme/</p>	<ul style="list-style-type: none">• Refer to the Te Whatu Ora Carbon Neutral Government Programme Implementation Policy• Consider targets to meet emissions reductions in line with a 1.5-degree pathway• Consider reporting requirements
<p>Government Procurement Rules https://www.procurement.govt.nz/procurement/principles-charter-and-rules/government-procurement-rules/</p>	<ul style="list-style-type: none">• Consider the requirement to apply Broader Outcomes (Rule 16)• Consider the requirement to transition to a net zero emissions economy and design waste out of the system (Rule 20)
<p>New Zealand's First National Adaptation Plan https://environment.govt.nz/publications/aotearoa-new-zealands-first-national-adaptation-plan/</p>	<ul style="list-style-type: none">• Consider resilience to the impacts of climate change



Circular economy and waste





Climate resilience

National Adaptation Plan

Figure: Health actions from [Aotearoa New Zealand's First National Adaptation Plan](#)

	Timeframe	Implementation progress expected by	Comments
3.28 Assess healthcare service resilience (p. 61)	Years 1–2 (2022–24)	<ul style="list-style-type: none"> By 2024, guidance material is provided for the sector and a set of recommendations produced for Health NZ. From 2023, regional assessments are completed as part of the next phase of health adaptation planning. 	The aim of this action is to understand the healthcare service's vulnerability to climate events, and consider physical risks to infrastructure, and changes in illness patterns and vulnerability. This will help to ensure communities can continue to access the healthcare services they need, even in the face of climate change adversity. This is the responsibility of Te Whatu Ora.
9.2 Develop the Health National Adaptation Plan (p.145)	Year 1 (2022/23)	<ul style="list-style-type: none"> By the end of 2022, the Health National Adaptation Plan is expected to be completed. From 2023, regional climate health action plans will be developed. 	<p>The Health National Adaptation Plan (HNAP), led by Manatū Hauora, will complement the national adaptation plan and be supported by regional climate health action plans developed by the health sector. The aim of the HNAP is to prepare the health sector to meet the needs of communities in terms of the effects of climate change, including physical, mental and cultural health and wellbeing.</p> <p>A key part of adaptation planning in the health sector is identifying vulnerable groups. The term “vulnerable” is risk language with some negative connotations in the health space. We will, however, continue to use the term until an appropriate replacement is found,</p> <p>Vulnerability can be affected by many factors, including geography, demographics, socio-economic status, physical and mental health status, and family and community support. Vulnerability will be considered alongside risk in adaptation planning.</p> <p>The regional climate health action plans will be the responsibility of Te Whatu Ora to regionalise (or localise) planning from direction in the HNAP.</p>

Understanding risk

- National Climate Change Risk Assessment
- Territorial Authority Risk Assessments
- Northern Region, Hauora a Toi Bay of Plenty, and national infrastructure risk screenings:
 - Health service delivery disruption
 - Infrastructure related risks
 - Supply chain disruption both national and international
 - Transition risks
 - Workforce resilience
 - Community impacts
- We need to apply a health and wellbeing lens across identified climate risks, and consider risks that have not yet been identified
- We need to plan for these risks

Climate Health Action Plans

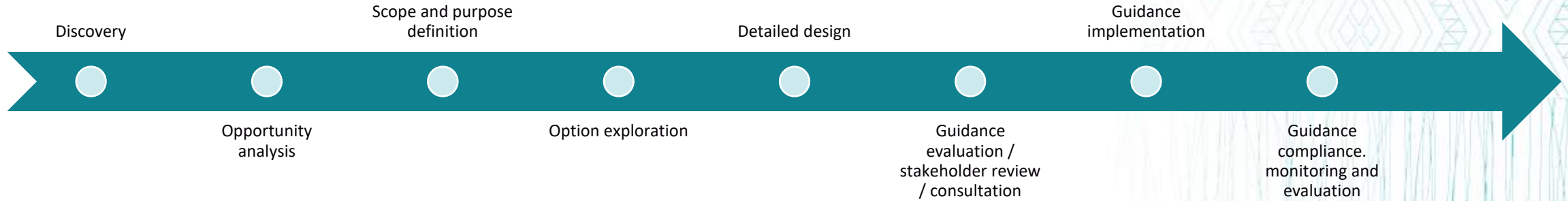


Figure 1. National CHAP guidance

Current state: Discovery almost complete.

Future tasks/what next: What/who is the national CHAP working group? Who will lead? Who will be involved?

Opportunity analysis: what are the goals, purpose, outcomes, principles (esp. te ao/mātauranga Māori) for CHAP guidance? How do CHAPs relate to other strategy/plans to identify gaps/overlaps etc.? What relationships need to be developed? EHZ what indicators and what role? Barriers and challenges? Lifecycle of a CHAP/review period etc.? Roles and responsibilities? Regional risk assessments tracking and review?

Scope and purpose definition: brings together the framing from the opportunity analysis.

Healthcare sector climate change scenarios

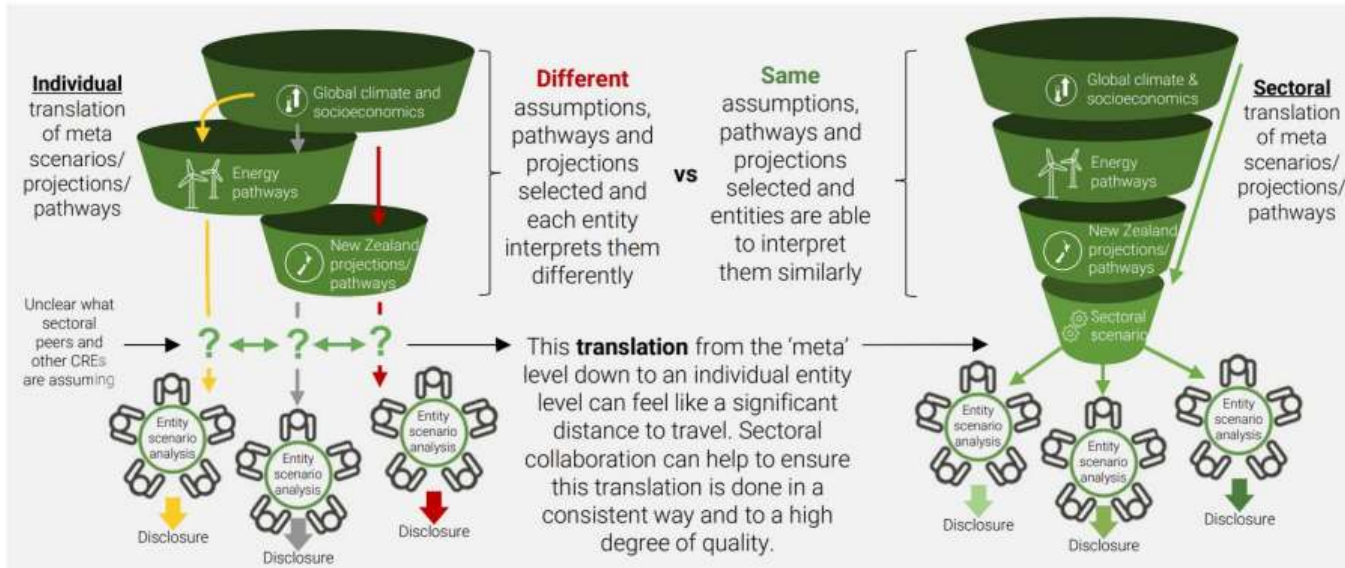


Figure 1: The role of sectoral scenarios in creating a shared scenario architecture for the use of CREs in New Zealand

- Early engagement and scoping stage
- 20 sector agencies engaged
- A detailed report will show three chosen scenarios for agreed time horizons.
- The report will contain details of the impact of climate change on various agreed healthcare metrics and indicators – specifically health impacts.
- It will also contain the risks and opportunities identified by the group. This can then be used by the individual entities to understand the impact on the individual entity.
- Report may also be used by other sectors to help understand impact on workforce and community resilience

Thank you



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Te Whatu Ora Health New Zealand

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