



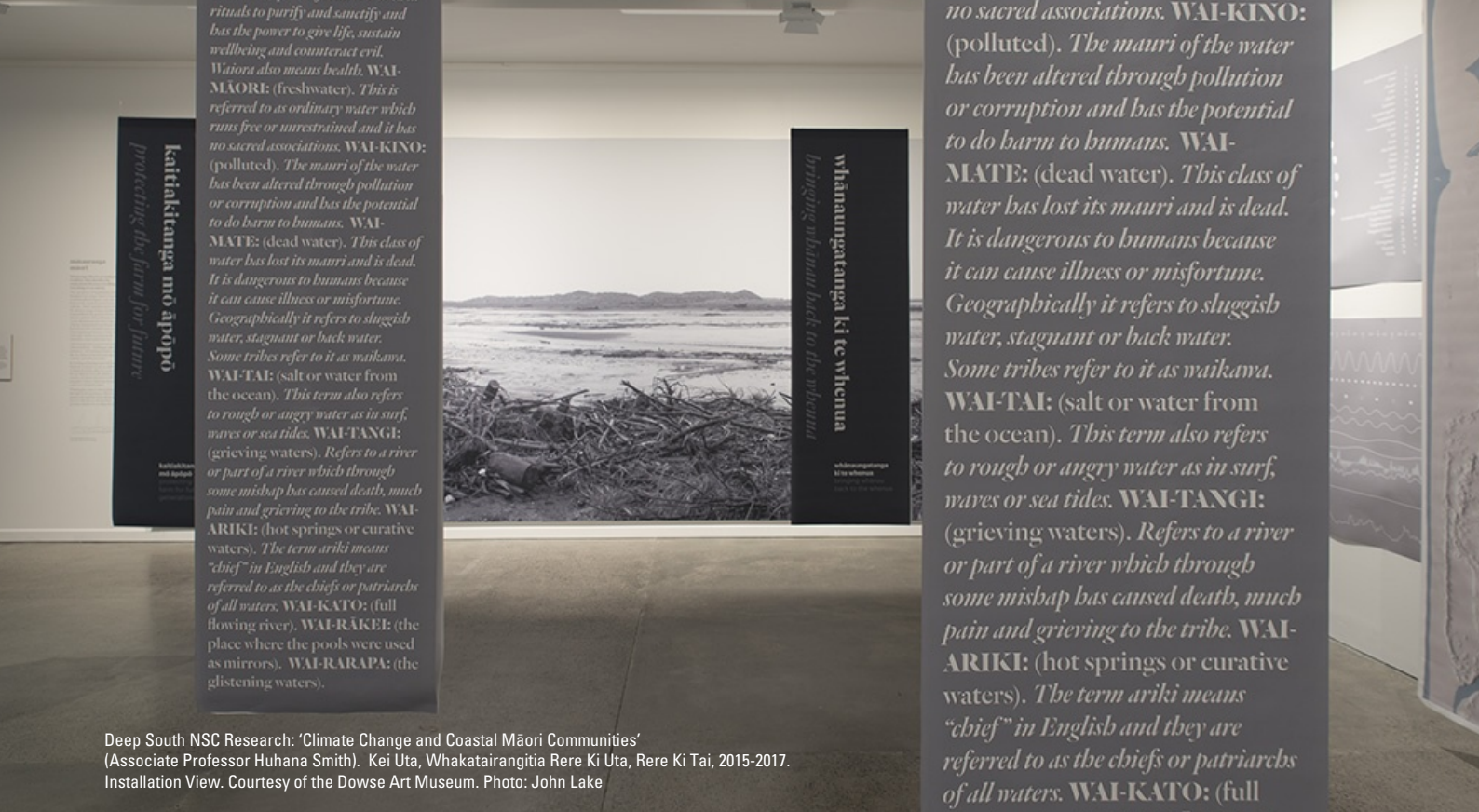
**MASSEY
UNIVERSITY**
TE KUNENGA KI PŪREHUROA

UNIVERSITY OF NEW ZEALAND

CLIMATE ACTION PLAN 2020 – 2030 AT A GLANCE

Net Zero Carbon by 2030





Deep South NSC Research: 'Climate Change and Coastal Māori Communities' (Associate Professor Huhana Smith). Kei Uta, Whakatairangitia Rere Ki Uta, Rere Ki Tai, 2015-2017. Installation View. Courtesy of the Dowse Art Museum. Photo: John Lake

Vision

Massey University is committed to the development of a prosperous low carbon future where individuals and communities thrive. As a te Tiriti-led organisation the values of kotahitanga (solidarity, collective action) and kaitiakitanga (environmental stewardship) underpin our approach to developing a just transition to a low carbon future.

Mission

As a tertiary education institution Massey University has a responsibility to address the issue of climate change in what and how we teach; the research that we undertake; and through our engagement with students, mana whenua, iwi/Māori, industry and our cities and regions.

We recognise that to understand climate change in a multi-dimensional way we need to draw on knowledge developed through scientific endeavour, mātauranga Māori and the creative arts.

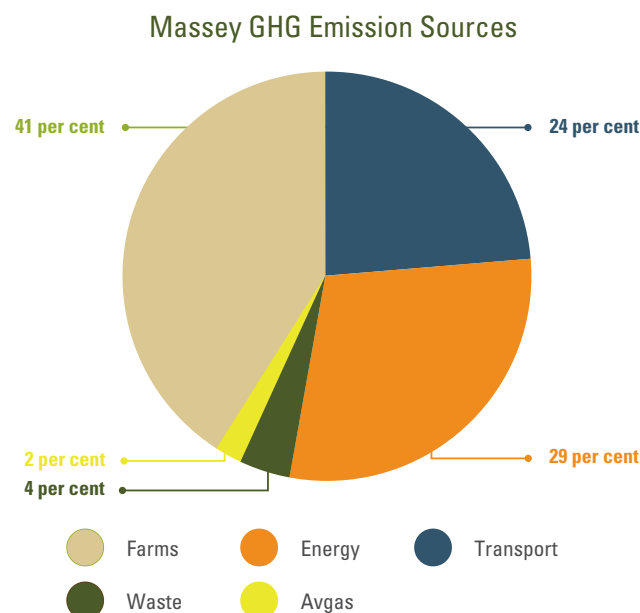
We aim to integrate our strengths in academic endeavours around climate change with the operation of our campuses and business activities so that there is a close alignment of our 'talk' with our 'walk'. [Living labs](#) will help us to make improvements as an organisation around our GHG footprint.

We will develop collaborative relationships with our cities, regions, communities and those who want to partner with us, around creating a prosperous and just low carbon future.

Target: Net Zero Carbon by 2030

Given the urgency of the issue, the university sector's responsibility as critic and conscience of society, and increasing support for setting ambitious goals, Massey is committed to being net zero carbon by 2030 for our energy, building, transport and waste emissions. Biological emissions associated with our farms will decrease in line with the Climate Change Response (Zero Carbon) Amendment Bill.

GHG Emissions Inventory: 2018 30,890 tCO₂e (provisional)





Energy

Goal: Decarbonising energy on campus

GHG emissions from fossil fuels used to generate energy are a key component of global warming. They are long-lived in the atmosphere, but can be replaced by renewable energy sources - either purchased or produced on-site through solar, wind, ground heat or waste water sources.

Three main energy emissions reduction strategies will help us reach our 2030 goal:

- Improving business intelligence (e.g. increased metering, analysis of energy use, modelling)
- Reducing energy use (e.g. efficient energy assets, better thermal envelop for buildings)
- Switching from fossil fuels to renewable energy sources



Buildings

Goal: All Massey Buildings will be Net Zero Carbon by 2050

Net zero carbon buildings are "highly energy efficient with all remaining energy from on-site and/or off-site renewable sources".

Massey University will embed high levels of environmental sustainable design (ESD) principles throughout the whole design phase of new construction or renovation. In addition we will require all business cases for building projects to include carbon as part of estimating whole of life cost for the building

- Develop 'Net Zero Carbon Buildings Pathway to 2050' to: (i) inform and support a long term capital planning process; as well as (ii) inform and support building design teams to achieve the best possible performance
- Development of a Low Carbon and Sustainable Built Environment Design Policy to ensure that all new and renovated building projects will, from the earliest concept design phase, be guided by ESD



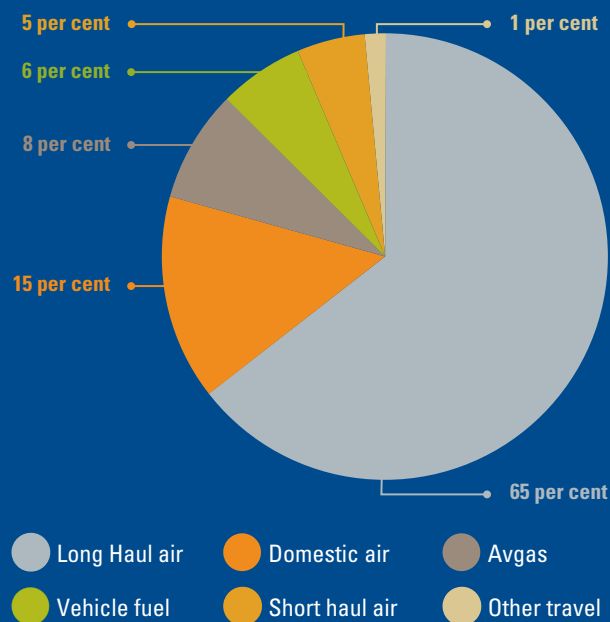
Transport

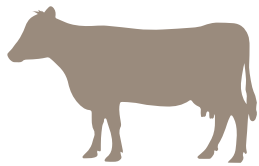
Goal: Low carbon mobility

Commuting to campus, and undertaking university travel between campuses and around New Zealand and further afield are unavoidable for staff and students. However we can reduce our travel-related GHG emissions through four main strategies:

- Reduce unnecessary travel - between campuses, for meetings, conferences etc
- Shift mode of transport from higher emitting transport modes (e.g. air, single occupant vehicles) to lower emitting ones (e.g. mass transit, active transport through cycling and walking, carpooling)
- Electrify our vehicle fleet
- Reduce carbon footprint of the Aviation School (this may be challenging until new technologies or biofuels become available)

Transport Emissions (tCO₂e) 2018 by Source





Massey Farms

Goal: Leading agriculture in Aotearoa NZ to a climate smart future

Biological emissions from agriculture have a very strong impact on global warming, even though they are less long lived than CO₂. Massey's farms support the research and teaching activities of agricultural and veterinary sciences at the university. There is a strong case to tie the farms' own emissions reduction strategies to a research, engagement and impact agenda about leading the change that the NZ agricultural sector will have to make to become low carbon.

The main strategy for achieving biological GHG emissions reductions in line with targets that will be set by government will be through the revision and development of Farm Environmental and GHG Emission Plans. More specifically these plans will focus on:

- Fertiliser, liming
- Livestock numbers and management (type of feed, housing)
- Management of manure and effluents
- Pasture planting and management
- Soil carbon
- Tree planting

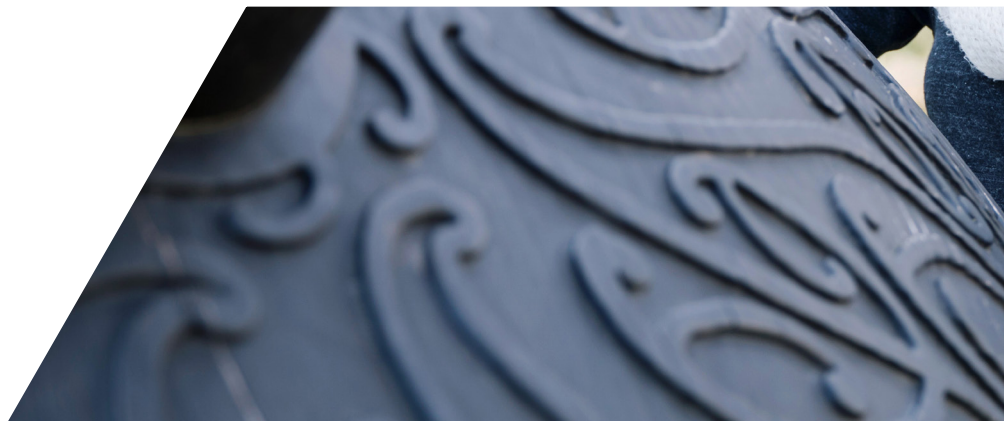


Waste and recycling

Goal: Zero Waste Campuses

Drawing on the concept of the zero waste hierarchy as a creative inspiration for innovation we will rethink and redesign the way Massey as an institution functions in support of a circular economy. In particular we will use the following three waste emissions reduction strategies to divert as much waste as possible from landfill:

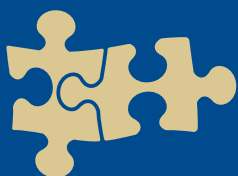
- reduce resource use
- promote and support reuse and recycling and the use of reusable and recyclable materials
- divert food and organic waste from landfill through composting (either on-site or through business or local authority schemes)





Academic Action on Climate Change

Taking leadership on climate change demands that we engage the hearts and minds of our staff, students and those we engage with outside of the university. We can draw on the teaching and research strengths of our academic staff to generate new knowledge, communicate it beyond the university and use it to partner with Māori/iwi/mana whenua, local communities, local, regional and central government, business and industry to transition to a low carbon future.



Research and Engagement

Opportunities to Collaborate on Climate

Massey will draw on the research strengths of staff to develop further engagement opportunities in relation to climate change. In particular the following two opportunities are aligned with Massey's strengths:

Climate smart farming

Given our strengths around agriculture, and significant farm holdings, we will develop an engagement strategy working with academics, industry and the public to demonstrate how agriculture can transition to a low carbon future.

Low carbon cities

Using our academic strengths around transport, urban planning, waste, geoinformatics, engagement with Māori communities etc. we will collaborate with local authorities to help develop roadmaps to low carbon cities.



Teaching, Learning and Student Enterprise

Civic engagement and enterprise

In addition to work in taught courses in relation to civic engagement MU is developing an enterprise strategy to capture the full value that lies within and across all types of enterprise, including civic, social, commercial and indigenous, which will bring new value and strengths to help solve complex societal and environmental problems. Recent developments in relation to student enterprise can provide a platform for climate change related engagement e.g:

- campus colabs on each campus;
- student enterprise studios and entrepreneurial training and support across campuses through the eCentre



OTHER OPPORTUNITIES

- Embedding climate change within current courses as well as develop new courses and qualifications to meet the demand for climate scientists, 'carbon management' workers (e.g. carbon accounting, management of GHG emissions in business, industries, cities) and broader policy, design and creative work around low carbon futures
- Masters in SDGs - possible theme on Climate Change (CUAP application under development)
- PaCE - international education
- Connecting agriculture, horticulture and veterinary students to a 'Climate Smart Farming' collaborative research agenda on Massey's farms



Engaging on the Climate Action Plan

RESPONSES PLEASE BY 30 SEPTEMBER 2019

Please use this online survey to provide feedback on some key issues [HERE](#).
We also welcome your comments on any aspect of the draft Plan which you
can email directly to sustainability@massey.ac.nz

A series of meetings will provide you with an opportunity to hear more about
the plan and to discuss with your colleagues how we can best move forward on
this kaupapa. Meeting details can be accessed [HERE](#).

