

# Ngā Ara Whetū | Centre for Climate, Biodiversity, and Society

Ngā Ara Whetū, Centre for Climate, Biodiversity and Society, was established in 2023 as a flagship research centre at Waipapa Taumata Rau | University of Auckland, dedicated to addressing the intertwined challenges of climate change, biodiversity loss, and societal well-being. The Centre's mission is to use research for a future where people and nature flourish together for generations to come.

Ngā Ara Whetū, brings together ideas, capability and innovation from across the university to partner with sector and community to generate knowledge and accelerate impact.

Given the scale, urgency, and complexity of sustainability issues, Ngā Ara Whetū is bold and ambitious, taking a holistic approach that unites thought leaders to find innovative solutions to climate change, sustainability and societal challenges.

Anchored in mātauranga Māori and the values of kaitiakitanga (guardianship), manaakitanga (generosity), and whanaungatanga (community), the centre engages communities across the Pacific and globally. Through its collaborations, outreach, and partnerships, Ngā Ara Whetū is creating a legacy that is aligned with modern aspirations for a sustainable and prosperous world.

Collaborate with us to drive high-impact change.



UNIVERSITY OF  
**AUCKLAND**  
Waipapa Taumata Rau  
NEW ZEALAND

**NGĀ ARA WHETŪ**  
CENTRE FOR CLIMATE,  
BIODIVERSITY & SOCIETY



## Our approach

Ngā Ara Whetū fosters transdisciplinary collaboration, supporting teams of researchers focused on challenges that span disciplines. As we navigate our path forward, we ensure our values align with those of the University of Auckland, are respectful of Te Tiriti o Waitangi, and embody a sustainability ethos in our everyday practice.

We work to bring academics, researchers and community representatives with diverse expertise together to develop programmes of work that directly contribute to building a better world.



Our mahi includes horizon scanning workshops, panel discussions, policy submissions, and the sharing of knowledge through education, podcasts and more.

We connect, convene, and catalyse for improved outcomes.

## Engaging with Te Ao Māori

Committed to supporting kaupapa Māori research, Ngā Ara Whetū integrates mātauranga Māori principles and values into its projects. We support Māori summer studentships, foster iwi partnerships, and advance Māori-led research initiatives. We are dedicated to delivering research models that respects and includes Indigenous perspectives, underscoring an inclusive and forward-thinking approach to sustainability.



### Case study:

## Huri Rawa, Huri Rauna, Māori-Led Circular Economy & Climate Resilience

Professor Saeid Baroutian, *Executive Director, CIRCUIT*

### Kaua e moumou – do not be wasteful

Extreme weather events, such as Cyclone Gabrielle in 2023, can put remote communities at risk by causing power outages, disrupting access to clean water, and damaging roads and infrastructure.

A unique collaboration between transdisciplinary researchers from the University of Auckland and an isolated valley community in Tairāwhiti Gisborne aims to reshape how the region confronts climate-related challenges.

Their approach integrates mātauranga Māori with scientific innovation to create sustainable, resilient and self-sufficient solutions. Key aspects include developing renewable energy sources, creating circular waste management systems, designing water purification systems, and developing ecological and economical solutions for road construction. It is a transdisciplinary approach and an exemplar model for how universities can rethink what research impact looks like for Indigenous communities.

This research is part of the Circular Innovation Research Centre (CIRCUIT), which Ngā Ara Whetū helped to establish. CIRCUIT connects world-class research with communities and commercial opportunities to develop solutions pertaining to the circular economy.

[circuit.auckland.ac.nz](http://circuit.auckland.ac.nz)

## We tackle three overlapping themes, targeting the intersection that supports transformational outcomes in all three.

### 1. Pathways to Transformation

Politics, policy, and communication are at the heart of advancing sustainability and environmental justice. Well-informed leaders and public make those policies possible. Ngā Ara Whetū works to advance sustainability education through transdisciplinary research, experiential learning, and kaupapa Māori approaches.

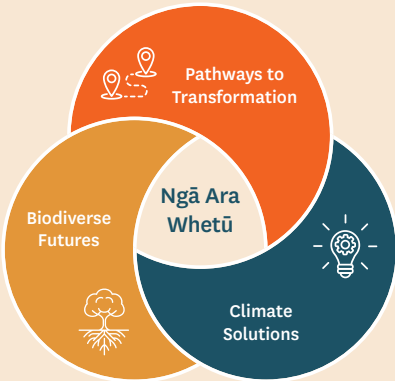
### 2. Biodiverse Futures

Innovative research is critical to help protect and enhance New Zealand's

unique biodiversity. Ngā Ara Whetū's research explores ecosystem function, ecological interactions, and novel solutions to ensure thriving ecosystems that sustain all life.

### 3. Climate Solutions

Ngā Ara Whetū collaborates across the university to develop climate change solutions, focusing on circular economy transitions, decarbonisation strategies, resilient urban design, and providing data for informed decision-making.



### Progress report:

## The first 18 months

From high-profile events to strategic partnerships, transdisciplinary research, and public engagement, Ngā Ara Whetū's first 18 months of achievements reflect a commitment to addressing urgent environmental challenges while fostering sustainable solutions for the future. The Centre's progress so far charts the start of a journey and presents our aspirations for the future.

### Centre Launch Event

The Centre's launch event enhanced its visibility and solidified external partnerships, underscoring its importance in leading national research initiatives. Ngā Ara Whetū was privileged to be joined by the Governor General and the Minister of Climate Change.

### Transdisciplinary Research

Ngā Ara Whetū fostered establishment of two cutting-edge research hubs - the Circular Innovation Research Centre (CIRCUIT), and Pathways for Societal Transformation – that are focused on delivering impactful, cross-disciplinary solutions. Ngā Ara Whetū's inaugural Seed Funding round has catalysed new, innovative projects and hosted a series of seminars on critical environmental topics, uniting researchers from diverse backgrounds to tackle complex climate and sustainability challenges together.

### Policy Influence and Practice

Ngā Ara Whetū has played an active role in shaping national policy by providing expertise in environmental conservation, technology, and education. Through submissions to government, the Centre has contributed to key policy areas such as forestry, emissions reduction pricing agricultural emissions, and environment research strategy., reinforcing its commitment to supporting evidence-based policymaking.

### Public Engagement and Education

Through an engaging online presence, a podcast series, media articles and public events, Ngā Ara Whetū is providing an informed public voice on the importance of science and environmental issues. The Centre has also run workshops, demonstrating our dedication to making research knowledge accessible and relevant to communities locally and internationally.

### Funding and Resource Allocation

Ngā Ara Whetū has successfully supported bids to the University of Auckland's Transdisciplinary Ideation Fund. The team has also facilitated concept development and engagement with key partners for MBIE Research Programmes. The Centre is committed to supporting strategic proposals aligned with its mission and amplifying its collaborative research ambitions.



Listen and subscribe to our **SUSTAIN** podcast series

[www.ngaarawhetu.org/podcasts/](http://www.ngaarawhetu.org/podcasts/)

## Case study:

# Teaching and Learning for a Sustainable World

Dr Sally Birdsall, *Faculty of Education and Social Work*,  
Professor Nikki Harre, *Faculty of Science and Associate*  
Professor Alys Longley, *Faculty of Creative Arts and Industries*

## Building the foundations for high-quality sustainability education

To develop students as advocates and sustainability leaders, requires innovative future-focused education that nurtures values thinking and imagining alternative futures.

The Teaching and Learning for a Sustainable World project is growing a network of educators from the University and wider community who are sharing teaching/pedagogical insights and strategies for teaching sustainability. The project brings together local and international academics and educators and is laying the foundations to co-create innovative research on teaching and learning for sustainability.

An important output was a peer-reviewed report “Trends in interdisciplinary sustainability teaching and learning in higher education: A focus on learner competencies” which was the inaugural publication in Ngā Ara Whetū’s report series designed to contribute to the dialogue and action surrounding climate change, biodiversity, and society.



## Case study:

# Future Urban Industry

Dr Paola Boarin, *Co-founder and Director, Future Cities Research Centre*, and Prof Jacqueline Beggs, *Co-Executive Director, Ngā Ara Whetū*.

## Transforming Urban Industry Zones

As our cities grapple with the impacts of climate-related events and over-loaded infrastructure, we need to transform our approach to urban development to promote thriving, resilient communities.

The Future Urban Industry project focuses on Urban Industry Zones—areas that are often overlooked—by addressing the complex connections between economic, environmental, built, and social systems. A transdisciplinary team of researchers, using innovative methodologies such as an Ecological-Economics Simulation Model, digital twin technology, and sensoryscape analysis, to develop innovative ways of managing these zones in a changing climate.

By rethinking how Urban Industry Zones are integrated into our cities, this initiative aims to build the foundation for more resilient and vibrant urban landscapes across Aotearoa New Zealand.

## Follow us to find out more:

Ngā Ara Whetū is committed to cultivating deep knowledge and creating transformative solutions for the urgent challenges our planet faces—there are many ways to join us:

- Follow our updates at [ngaarawhetu.org](https://ngaarawhetu.org)
- Subscribe to our podcast series [SUSTAIN ngaarawhetu.org/podcasts/](https://ngaarawhetu.org/podcasts/)
- Get affiliated! Become an affiliate (University staff and research centres only).  
Join us today!

Email: [ngaarawhetu@auckland.ac.nz](mailto:ngaarawhetu@auckland.ac.nz)

Web: [ngaarawhetu.org](https://ngaarawhetu.org)



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