

LA TROBE UNIVERSITY

2025 RESEARCH IMPACT

ANNUAL REPORT



LA TROBE
UNIVERSITY

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ACKNOWLEDGEMENT OF TRADITIONAL OWNERS:

La Trobe University proudly acknowledges the traditional custodians of the lands where its campuses are located in Victoria.

We recognise that Indigenous Australians have an ongoing connection to the land and the University values their unique contribution to both the University and the wider Australian society.

OUR RESEARCH HAS IMPACT

I am delighted to introduce La Trobe University's 2025 *Research Impact Annual Report*. This report showcases the many ways in which our research has contributed over the past year to fulfilling the United Nations' Sustainable Development Goals (SDGs) and realising tangible benefit for the communities we serve.

At La Trobe, we understand excellent research to encompass not only academic discovery but also the difference we are able to make across our local, national and global communities. Impact is therefore a cornerstone of La Trobe's Research & Innovation 2030 Strategy and the SDGs provide a framework for evaluating its delivery.

To this end, we have invested in world-leading concentrations of research excellence with particular focus on two of the SDGs – SDG 3 (Good Health and Wellbeing) and SDG 2 (Zero Hunger) – which align with our research strengths in health and the care economy, biomedicine, sustainable agriculture and nutrition.

Alongside these focus areas, La Trobe is committed to growing equitable development and workforce participation in our regions, contributing to a suite of SDGs including SDG 8 (Decent Work & Economic Growth), SDG 9 (Industry & Innovation), and SDG 10 (Reduced Inequalities).

Our success in driving positive change has been recognised with outstanding results in the international 2026 Times Higher Education Sustainability Impact Ratings. La Trobe ranks in the global top 50 across all six of our rated SDGs, with three of these in the global top 10. We are third in the world for Good Health & Wellbeing.

Among the highlights of our health sciences impact shared in this report are the Victorian Virtual Emergency Department, which by 2025 had managed more than 500,000 calls and attracted a \$437 million investment from the Victorian State Government, and the Social Attention and Communication Surveillance (SACS) tool developed by the Olga Tennison Autism Research Centre, which has now been translated in 12 languages across more than 20 countries. As a leader in sustainable agriculture, La Trobe launched the ARC Research Hub in Protected Cropping, demonstrated a yield increase of 100% for our vertical farming partnership, and reached over 200,000 learners in our Plants for Space program.

In infrastructure, 2025 saw the launch of Australia's first NVIDIA DGX H200 supercomputer, hosted by La Trobe's Centre for Artificial Intelligence in Medical Innovation (ACAMI), and a \$2.5 million investment in nanomanufacturing facilities. La Trobe's research has also supported inclusive workforce participation through initiatives such as the expanded Nexus regional teacher placement program and the Neurodiversity Employment Toolkit developed for the Victorian Public Sector Commission.

I would like to congratulate all the researchers and teams whose work is featured in this report, recognising also that these outcomes reflect a shared commitment across La Trobe University to research that drives real change.

– Professor Chris Pakes, Deputy Vice-Chancellor (Research & Innovation)





Times Higher Education
**Sustainability
Impact Ratings**

GLOBAL TOP 10

3 GOOD HEALTH
AND WELL-BEING

#2 IN AUSTRALIA
#3 IN THE WORLD

5 GENDER
EQUALITY

#2 IN AUSTRALIA
#7 IN THE WORLD

10 REDUCED
INEQUALITIES

#5 IN AUSTRALIA
#10 IN THE WORLD

GLOBAL TOP 50

6 CLEAN WATER
AND SANITATION

#5 IN AUSTRALIA
#14 IN THE WORLD

2 ZERO
HUNGER

#2 IN AUSTRALIA
#30 IN THE WORLD

13 CLIMATE
ACTION

#10 IN AUSTRALIA
#39 IN THE WORLD

RESEARCH IMPACT 2025 HIGHLIGHTS

SDG14 LIFE BELOW WATER

692

Square Kilometres of Coastline

Mapped by HyperEst

SDG8 DECENT WORK AND ECONOMIC GROWTH

20,000+

Downloads

Of Vic Gov’s Neurodiversity Toolkit Technologies

SDG8 DECENT WORK AND ECONOMIC GROWTH

\$30M

State and Federal Funding

For La Trobe’s Nexus Program

SDG3 GOOD HEALTH AND WELLBEING

\$437M

Investment in VVED

The Northern Health–La Trobe Virtual ED Partnership

SDG2 ZERO HUNGER

US\$35M

Collaboration for Global Food Security

The ENSA Project

SDG2 ZERO HUNGER

100%

Increase in Yield

Through Vertical Farming Technologies

SDG9 INDUSTRY, INNOVATION, INFRASTRUCTURE

\$1.78M

To Commercialise WISDs

La Trobe’s Wine Industry Smoke Detectors

SDG3 GOOD HEALTH AND WELLBEING

45,000+

Children Screened

Using La Trobe’s SACS tool

SDG6 CLEAN WATER AND SANITATION

2,400

Turtles Saved

Through the 1 Million Turtles Project

SDG2 ZERO HUNGER

200,000+

People Engaged

Through Plants For Space

SDG9 INDUSTRY, INNOVATION, INFRASTRUCTURE

\$2.5M

For Nanotechnology Diagnostic Devices

New Certified Australian Facility

SDG10 REDUCED INEQUALITIES

100

Different Countries

Have schools signed up to FARLabs

SDG4 QUALITY EDUCATION

12,500+

Have Completed

La Trobe’s SOLAR Lab Short Courses

SDG5 GENDER EQUALITY

5,000+

Participated In

La Trobe’s Prep-to-Play AFL Injury Prevention Project

SDG6 CLEAN WATER AND SANITATION

\$20M

For a Sustainable Murray–Darling Basin

The MD–WERP Project

ZERO HUNGER

Achieving food security depends on sustainable agriculture, resilient food systems and equitable access to nutritious food. La Trobe advances **SDG 2** through research and partnerships that improve crop productivity, strengthen soil health, and support climate-resilient farming practices.

We drive innovation in agri-tech and food systems to enhance sustainability, reduce environmental impact, and ensure reliable access to safe and nutritious food in Australia and globally.



2

ZERO HUNGER

#2 IN AUSTRALIA

#30 IN THE WORLD

PROTECTING AUSTRALIA’S CROPPING FUTURE

Australia’s protected cropping sector – the fastest-growing food-producing sector in the country, with a farmgate value of \$1.3 billion – faces a significant knowledge gap that is limiting adoption and competitiveness. Despite offering higher yields, improved quality, and resilience against climate variability, pests, and disease, controlled-environment farming remains under-utilised across horticultural and medicinal agriculture.

La Trobe University’s Australian Research Council (ARC) Research Hub for Protected Cropping (PC Hub) was launched in 2025 to directly address these gaps through cutting-edge research to advance smart agricultural systems, precision fertigation, optimised plant breeding, and sustainable waste valorisation, while exploring bioactive compounds for food and medicine.

The PC Hub features Australia’s only protected cropping facility with full medicinal agriculture compliance capability, bringing together leading researchers and industry partners to accelerate knowledge transfer from lab to paddock.

Led by La Trobe’s Institute for Sustainable Agriculture and Food (LISAF), the PC Hub is a five-year partnership between three research providers, six industry partners and the ARC.



- ✓ **Industry value:** ‘The research team’s work to understand toxic weed species and their risks has been invaluable for strengthening industry-wide food safety’ (Angela Candeloro, Director at Tripod Farmers Group)
- ✓ **Engagement:** Plants For Space has engaged over 200,000 people through school visits, museum events, and online activities
- ✓ **Pioneering:** Our vertical farming technologies have demonstrated yield increases of up to 100%

HYDROPONIC FARMING: FROM THE LAB INTO THE REAL WORLD

In 2025, La Trobe University researchers advanced hydroponic farming by translating earlier prototype research into a commercially viable food production system. Hydroponic farming enables significantly higher yields with a smaller physical footprint than conventional agriculture, supporting more efficient use of land, labour, and production inputs.

Through a commercial pilot, start-up company Yield X and La Trobe researchers successfully scaled their vertical farming technology in a production environment. The system demonstrated yield increases of up to 100 per cent, marking a substantial improvement in productivity and efficiency.

Led by Dr Alex Stumpf, the project highlights how La Trobe research supports resource efficient, scalable food production systems. The system’s rotational crop design integrates planting, maintenance, and harvesting within a single corridor, reducing labour complexity, freeing up floor space, and cutting operating costs per plant by up to 50%.

The farm, operated by Butler Market Gardens, now supplies hydroponically grown basil to major Australian retailers including Coles, Woolworths and Costco. This has embedded research-driven innovation directly into mainstream food supply chains, supporting sustainable production at commercial scale.

ZERO HUNGER

CUTTING SYNTHETIC FERTILIZER DEPENDENCE

La Trobe University researchers are advancing new crop technologies that could help farmers reduce dependence on synthetic nitrogen fertilizers by harnessing plants' natural nitrogen-fixing capacity.

Nitrogen fixation is a natural process, carried out by certain plants and soil bacteria, that converts nitrogen gas into forms plants can use. In Australia, for example, legumes are estimated to fix 3.5 million tonnes of nitrogen each year, worth over \$3.5 billion. This process supports healthy ecosystems and plays a critical role in global food production. However, because most crops lack this natural ability, modern agriculture has become heavily reliant on synthetic nitrogen fertilizers, imposing significant financial and environmental costs.

Through the US\$35 million international project [Enabling Nutrient Symbioses in Agriculture](#) (ENSA) project, Dr [Dugald Reid](#) and his team from the [La Trobe Institute for Sustainable Agriculture and Food](#) (LISAF), are using genetics and CRISPR gene editing to develop soybean and cowpea varieties that continue fixing nitrogen even when grown in nitrate-rich soils (see [Nature publication](#)).

Throughout 2025, the team prepared for controlled-environment and field evaluation of the gene-edited cowpea and soybean lines, with large-scale trials now underway in the multiple North American locations to determine whether the edited plants maintain nitrogen fixation and deliver yield benefits under real farming conditions.

Dr Reid is also part of the [N2CROP](#) collaboration, funded by the Novo Nordisk Foundation, which focuses on improving legumes for intercropping systems such as faba beans grown with wheat or oats. The program examines yield benefits, nitrogen contributions, and management challenges in mixed cropping. 2025 controlled-environment trials at La Trobe have been harvested, with further field trials planned once sufficient seed quantities are available.

These projects are the foundation for future farming systems that maintain productivity while significantly reducing dependence on synthetic nitrogen fertilizers through gene-edited crops that have been tested under real field conditions.

HOW LASERS KEEP TOXIC WEEDS OUT OF YOUR SALAD

In 2025 new research from the [La Trobe Institute for Sustainable Agriculture and Food](#) (LISAF) took aim – with a laser – at the leafy greens you'd find in a supermarket salad. Baby leaf salad is highly sensitive to weed contamination, including weeds which can be toxic to humans.

Because these crops are harvested for direct consumption, growers have very limited herbicide options, and manual weeding is slow and expensive. Contamination can lead to entire crops being rejected by processors.

Research team leads Dr [Ali Bajwa](#) and Dr [Hoang Thanh Nguyen](#) in collaboration with industry partners including Progressive Growers and Tripod Farmers, focused on evaluating innovative non-chemical weed control methods, including weeding with lasers.

The La Trobe researchers ran field trials using the lasers and comparing results with pre-emergent herbicides and conventional practices. Results from spinach and wild rocket show that going over a field twice with the laser provided stronger weed control and reduced contamination at harvest, while causing minimal crop injury. These findings demonstrate the value of laser weeding for weed management approaches.

Tripod Farmers have been using a laser weeding unit, attached to the back of a tractor which uses image-based detection to identify and zap weeds.

Angela Candeloro, Director at Tripod Farmers Group said the collaboration with La Trobe marked an important step forward in helping growers adopt practical, science-backed solutions to reduce weed contamination in baby leaf crops.

"We're proud to support research that directly benefits growers, enhances product safety, and contributes to more sustainable weed management across the industry. The research team's work to understand toxic weed species and their risks has also been invaluable for strengthening industry-wide food safety," she said.

2 ZERO HUNGER



#2 IN AUSTRALIA

#30 IN THE WORLD



OAT RESEARCH HELPING PRODUCERS AND CONSUMERS

Despite growing evidence that dietary fibre is essential to human health, most people consume far less than recommended. Oats are an exceptionally rich source of beta-glucan, a soluble dietary fibre that supports gut health and helps reduce the risk of heart disease.

The challenge is getting enough of it into the diet. The most promising path for increasing beta-glucan intake is by incorporating oats into the processed foods people already eat every day. This means that food producers need a reliable supply of oats with consistently high beta-glucan content.

Researchers from the La Trobe Institute for Sustainable Agriculture and Food (LISAF) have delivered a resource to help develop oat varieties with reliably high beta-glucan across diverse growing conditions, giving food producers confidence in the nutritional quality of their products.

In partnership with PepsiCo, LISAF researchers created one of the most complete genetic maps available for oats, providing a foundation for identifying the genes that control beta-glucan content, along with growth and resilience.

The long-term collaboration draws on La Trobe University’s longstanding expertise in plant cell wall science and supports the

development of oat varieties with improved nutrition, sustainability and taste.

“Australia’s oat industry contributes around \$400 million per year to the national economy, making advances in oat science a win for farmers, food companies and consumers alike,” says LISAF Professor Monika Doblin.

This genetic map is now embedded in oat research worldwide. A major 2025 study comparing 33 oat genomes drew on the LISAF-PepsiCo resource and identified genes linked to flowering time and plant height – findings that have direct implications for breeding under warmer, more variable growing conditions.

Large breeding programs in the United States have used the same genetic map to sharpen the focus on beta-glucan. A 2025 study using more than 1,000 breeding lines identified 44 durable genetic markers for beta-glucan and other key traits, while a separate project demonstrated that beta-glucan content can be reliably predicted across multiple years and environments.

2 ZERO HUNGER

#2 IN AUSTRALIA

#30 IN THE WORLD



ZERO HUNGER

“As pressures on our environment grow, so too do the challenges facing food production. Our world leading research and training is delivering innovative solutions for sustainable and nutritious food systems to meet global demand in the decades ahead.

From the seeds we sow to the agribusinesses we help create, we’re proud to contribute to Sustainable Development Goal 2.”

–Professor Chris Blanchard, Director of the La Trobe Institute for Sustainable Agriculture and Food.

2 ZERO HUNGER



#2 IN AUSTRALIA

#30 IN THE WORLD



INSPIRING 200,000+ LEARNERS THROUGH PLANTS4SPACE

The [ARC Centre of Excellence in Plants for Space](#) (P4S) is an international research consortium designed to enable humans to survive and thrive in space while transforming the sustainability of food and bioresource production on Earth. Key outcomes for P4S include developing nutritionally complete plant-based foods and building a future-ready workforce.

La Trobe is one of five Australian universities in the consortium, leading education and engagement through the [Institute for Sustainable Agriculture and Food](#) (LISAF).

Throughout 2025, Plants for Space Education and Engagement Manager Dr [Frazer Thorpe](#) and his team worked with thousands of people – noting the growing interest in careers that will develop the future of food. “We’re nurturing a STEM-positive society with the knowledge, skills, and attitude to think critically and solve problems so humans can survive and thrive,” he said.

Since launching in 2024, the team has engaged over 200,000 people through school visits, museum events, and online activities, including how and why scientists are growing plants for space and its Earth-bound benefits to help eliminate food shortages.

The La Trobe team share research stories to inspire students about the possibilities for their future careers. Engagement reports and surveys after the events show high interest from participants, with students often telling the team they have been inspired to change career choices.

To raise awareness of P4S research and support the development of current and future workforces, the La Trobe team has worked with more than 1,000 teachers across Australia.

They have delivered hands-on workshops and professional development programs including hydroponic plant growth systems, zero-waste food processing and nutritional analysis, alongside STEM research kits and curriculum-aligned resources.

SDG2 ZERO HUNGER

200,000+

People Engaged

Through Plants4Space

GOOD HEALTH AND WELLBEING

Promoting physical, mental and emotional health and wellbeing for all individuals across all stages of life is essential for building inclusive, equitable, and prosperous societies.

La Trobe contributes to SDG 3 through research that advances disease prevention, treatment, rehabilitation and health system innovation. Through our partnerships, we deliver digital health solutions, strengthen workforce capacity, and improve access to care.

3GOOD HEALTH
AND WELL-BEING



#2 IN AUSTRALIA

#3 IN THE WORLD

VICTORIAN VIRTUAL EMERGENCY DEPARTMENT

Victoria’s emergency care system faced unprecedented strain during the COVID-19 pandemic, with hospitals overwhelmed and ambulance demand surging. Traditional models could not keep pace with the need for timely, safe care, particularly for vulnerable populations such as aged care residents and rural communities.

In response, Northern Health partnered with La Trobe University to develop the Victorian Virtual Emergency Department (VVED), a telehealth model enabling patients to connect with emergency clinicians via secure video consultations. This innovation streamlined triage, reduced unnecessary hospital visits and improved access to care. Its success led to statewide adoption and permanent integration into Victoria’s health system.

What began as a pilot in October 2020 to deliver a pioneering telehealth model offering non-life-threatening emergency care online, has now been integrated within statewide health networks as a free, permanent state-wide service.

The partnership connects patients with emergency clinicians via secure video consultations, enabling timely assessment, treatment, and referral without the need for physical attendance.

Since its inception, over 75 per cent of VVED patients have avoided a trip to the hospital, easing the burden on physical emergency departments.



- ✓ \$437 million investment in 2025
- ✓ 75% VVED patients avoided hospital visit
- ✓ More than 500,000 calls



In 2025, the Victorian Government announced a \$437 million investment to make VVED permanent and almost triple its capacity. This funding ensures free, 24/7 emergency care for families across the state and reflects confidence in VVED as a cost-effective, scalable solution that strengthens resilience and sets a benchmark for virtual health delivery in Australia.

By March 2025, VVED had managed more than 500,000 calls, with over 75 per cent resolved virtually. These efficiencies saved millions in transport and inpatient costs while freeing resources for critical cases.



3

GOOD HEALTH AND WELL-BEING



#2 IN AUSTRALIA

#3 IN THE WORLD

VAKA HEALTH FOUNDATION

Across rural Africa, preventable illness persists because healthcare services may be too far away, too expensive, or simply unavailable. Communities are left behind by systems and technologies not built for their realities.

The Vaka Health Foundation was established in 2019 by Associate Professor Yangama Jokwiro, from La Trobe’s Rural Health School, Professor Peter Williams, and Dr Admore Jokwiro to improve health outcomes by building systems designed for the people who need them.

This includes the MyCpdZw app which assists healthcare workers in Zimbabwe to undertake professional development. To date, more than 30,000 workers have completed more than one million training activities.

The program has also expanded access to health care through the ZimSmart Villages initiative, where since early 2024, Vaka has established 28 telehealth and e-health centres powered by satellite internet. These centres delivered over 4,000 consultations in 2025, more than doubling the previous year’s reach, and facilitated over 50,000 remote screenings for hypertension and diabetes. Services that once required long, expensive travel can now be accessed locally for under 10 USD, significantly improving the continuity of care.

The Foundation also offers the VakaAfya and BatsiHealth platforms which offer AI-assisted cardiovascular screening for just 5 USD, making risk assessment affordable in low-income settings.

Vaka’s work has been widely recognised and has earned global acclaim, including the 2022 AAMEG Best Workforce and Industry Development Initiative Africa Award, and the 2025 Virtual Care Leadership Excellence Award from the MENA Telehealth Organisation, which was awarded to Dr Admore Jokwiro for pioneering accessible telehealth in low-resource settings.



CHANGING THE AUTISM DIAGNOSIS PATHWAY

The average age of Autism diagnosis in children remains at about 3–4 years, despite research showing early identification of autism is key to improved outcomes, including access to supports and services.

La Trobe University’s Olga Tennison Autism Research Centre (OTARC) has been driving global change for both healthcare workers and parents to recognise the early signs of autism from as young as 12 months old. The Social Attention and Communication Surveillance (SACS) tool was developed by OTARC’s Associate Professor Josephine Barbaro.

The SACS method identifies a set of behaviours or ‘early signs’ that are characteristic of Autistic children. Originally implemented in Maternal and Child Health services in Victoria, it is now used by health systems across the world. It has been translated into 12 languages and disseminated across more than 20 countries.



In Australia, the SACS has been used to monitor over 45,000 infants and toddlers in the Victorian and Tasmanian Maternal and Child Health (MCH) systems alone. China has used it to screen 1 Million babies. The free ASDetect App has been downloaded over 120,000 times. Thousands of professionals have been trained in its use, including over 250 professionals in 2025 providing healthcare to the Torres Strait Islands, Queensland and Tasmania.

Throughout 2025 OTARC trained healthcare workers across Australia in the method, including professionals from The Torres and Cape Hospital and Health Service (TCHHS).

“Having so many TCHHS staff trained in utilising this program is a huge benefit to children and their families in our communities. With our growing allied health and maternal and child health teams, we are able to put in supports for children and their families across our region who require it,” reflected Fiona Hall, former Acting Executive Director of TCHHS.

GOOD HEALTH AND WELLBEING

MINDCARE COLLECTIVE: DEMENTIA PREVENTION FOR MULTICULTURAL AUSTRALIA

3 GOOD HEALTH AND WELL-BEING



#2 IN AUSTRALIA

#3 IN THE WORLD

Dementia is rising and Australia’s multicultural communities are among the most affected. In 2021, 44 per cent of people living with dementia in the community were born outside of Australia, according to the Australian Institute of Health and Welfare.

Researchers at La Trobe University, led by Professor [Bianca Brijnath](#) and Associate Professor [Josefine Antoniadou](#), identified a critical gap in dementia research and practice: the limited availability of culturally appropriate, evidence-based programs to support dementia prevention and care in multicultural communities.

The [MindCare Collective](#) is La Trobe University’s flagship response to this challenge. The Collective [brings together interconnected projects](#) that advance dementia prevention and care through co-design, digital health innovation, and culturally responsive community-based interventions.

[MindCare resources](#), launched in December 2025, equip community sector workers to deliver culturally tailored, in-language workshops that support dementia risk reduction from mid-life onwards. Available in Vietnamese, Hindi, Greek and Arabic, the resources improve accessibility to evidence-based, culturally appropriate learning materials, enabling communities to take practical steps towards better brain health.

Early feedback highlights meaningful impacts on participants’ everyday health behaviours. One Vietnamese-speaking participant described becoming more mindful about medication use, sleep and cognitive activity following the MindCare workshop:

“Before, I wasn’t always careful about when I took my medication.

Now I follow the instructions more closely, pay more attention to my sleep, and try to exercise my mind. I also try to go to bed earlier, as watching videos late at night can make it easy to forget about sleep.”



AI-POWERED PALLIATIVE CARE ASSESSMENT TOOL FOR AGED CARE

Australians are living longer, but many are still not dying well. Fewer than five per cent of the 1,700 Australians who die in aged care each year have an advanced care plan, which means many people receive treatments they do not want and miss out on coordinated and compassionate care.

Clinical Nurse Consultant Melinda Livens advocates planning for death should be as normal as preparing a birth plan. “We are still a bit death illiterate as a community. We do not like to talk about dying, but we need to change that,” she says.

With funding from [Aged Care Research and Industry Innovation Australia](#) (ARIIA), Professor [Hanan Khalil](#) and her team collaborated with Sunraysia Community Health Services and Monash Health to create the [Palliative Care Assessment Toolkit](#), or PCAT, to support nurses in rural aged care.

The toolkit provides a practical checklist, best practice guidance for anticipatory medicines and clear referral pathways, helping staff begin earlier and more consistent conversations.

The 2023 to 2024 pilot in five Mildura region aged care homes achieved significant improvements, with end-of-life care

plans increasing from about 55 to 88 per cent and medication availability rising from 55 to 100 per cent.

Psychological and spiritual support improved, communication with families became smoother, and staff confidence in recognising deterioration increased.

According to Melinda Livens, the benefit is that people are not going to the hospital unnecessarily; “families are more prepared,” she said.

In June 2025, a new [ARIIA](#) funded project began to transform the PCAT into an AI-supported digital tool to streamline assessments and support consistent, evidence-based decision-making.

The tool will be particularly beneficial for rural and regional aged care facilities, where access to specialist palliative care can be limited.

GOOD HEALTH AND WELLBEING

INVOLVING COMMUNITIES TO SHAPE BETTER HEALTH RESEARCH

At La Trobe, we place a strong emphasis on involving the public, communities and consumers in our health research to ensure it is inclusive, relevant and grounded in lived experience. Through our growing network of consumer panels, people with lived experience help influence research design and ensure research translates into meaningful health outcomes.

Our [Rural Health Consumer Panel](#) includes more than 290 members from regional, rural and remote Australia, and works alongside researchers on diverse projects, partnering with leading health and research organisations.

It is part of our [broader network of consumer panels](#) including the Olivia Newton-John Cancer Research Institute Patient Advocates panel, the ReGEN Think Tank focused on gender-based violence prevention, the Multicultural Health Inclusion Group, and the Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) and Long COVID panel, embedding community voices across diverse areas of health research and innovation.

Researchers from any organisation are welcome to engage with these panels. Find out more here: latrobe.edu.au/research/consumer-panels

3

GOOD HEALTH AND WELL-BEING



#2 IN AUSTRALIA

#3 IN THE WORLD



THE STAT MODEL: REDUCING WAITING FOR HEALTH SERVICES

Long waits for community rehabilitation and outpatient health services can lead to poorer health outcomes and significant frustration for patients. Traditional approaches to managing waitlists often fail to address the underlying balance between supply and demand, leaving patients waiting unnecessarily.

The STAT (Specific Timely Assessment and Triage) program introduced a data-driven model that analyses service capacity and demand to allocate protected appointments. This approach challenges the assumption that waiting is inevitable and has been tested through rigorous research, including the only randomised controlled trial in waitlist management funded by an NHMRC Partnership Project Grant.

STAT has consistently reduced waiting times by 30 to 40 per cent across diverse health services at minimal cost, and its

principles have been embedded in Victorian health policy and management toolkits. It now features as a case study in the NHMRC performance indicator [survey](#) to demonstrate the impact of medical research funding.

The program has attracted over \$1.9 million in competitive funding, produced more than 28 peer-reviewed publications, and supported multiple PhD completions. The research team have provided STAT training to more than 1,000 clinicians from over 150 services across Australia and New Zealand, produced freely available [resources](#), and supported statewide implementation in the community health sector through a collaboration with the [Victorian Department of Health](#).

In November 2025, the STAT model reached an international audience on the US-based [Patient Access Collaborative](#) podcast, with further coverage in [The Conversation](#).

SDG3 GOOD HEALTH AND WELLBEING

I Million

Training Activities in Zimbabwe

The Vaka Health Foundation

SDG3 GOOD HEALTH AND WELLBEING

\$437M

Investment in VVED

The Northern Health–La Trobe Virtual ED Partnership

SDG3 GOOD HEALTH AND WELLBEING

1,000

Clinicians provided with STAT training

SDG3 GOOD HEALTH AND WELLBEING

45,000+

Children Screened

Using La Trobe’s SACS tool

GENDER EQUALITY

La Trobe contributes to [SDG 5](#) by addressing gender-based violence, women’s leadership, and policy reform.

Our research has shaped legislation, strengthened health responses, and amplified women’s representation, advancing gender equality and empowering women across Australia.

5 GENDER EQUALITY



#2 IN AUSTRALIA

#7 IN THE WORLD

TRANSFORMING INJURY PREVENTION IN WOMEN’S AUSTRALIAN FOOTBALL

Women in contact sports face up to double the risk of serious knee and head injuries compared to men, yet women’s sport injuries have historically received far less research and prevention focus. In Australian Football, this gap became evident during the early seasons of the AFLW, when high rates of ACL and concussion injuries highlighted the need for tailored, evidence-based solutions.

In response, La Trobe University partnered with the AFL to develop [Prep-to-Play](#), a warm up, contact skills and strength program designed to reduce injury risk and enhance performance.

Co-led by La Trobe researcher and former AFLW player Dr [Brooke Patterson](#), the program was shaped by both rigorous research evidence and lived experience.

While injury prevention programs are proven to be effective, fewer than 10 per cent of teams typically adopt them, despite strong evidence supporting neuromuscular and strength-based interventions in women’s sport.

Prep-to-Play addressed this challenge through training local physiotherapists to deliver hands-on workshops and support directly to clubs and coaches. In an [innovative clinical trial](#) in 2021-22 in 165 teams and over 2,400 players, teams who received the workshops had almost four times higher odds of adoption, with greater adherence associated with fewer total injuries.

The program has reached more than 1,000 coaches and support staff, reaching more than 5,000 players nationwide. Embedded into AFL [guidelines and standard practice](#), the partnership has also elevated concussion as a top AFL priority, driving education, improved care pathways and long term change in injury prevention culture across the game.

Watch Dr Brooke Patterson explain Prep-to-Play: [Changing Injury Prevention in Australian Football](#)



GENDER EQUALITY

5 GENDER
EQUALITY



#2 IN AUSTRALIA

#7 IN THE WORLD

BETTER WOMEN'S SEXUAL & REPRODUCTIVE HEALTH OUTCOMES

Disparities in sexual and reproductive health care continue to persist for many women in Australia based on socioeconomic status, age and geographic location. The [SPHERE Centre of Research Excellence](#) is an NHMRC-funded network of multidisciplinary researchers from Australia, the UK and Canada, including La Trobe researchers Professor [Kristina Edvardsson](#), Emeritus Professor [Angela Taft](#), [Desireé LaGrappe](#) and Professor [Leesa Hooker](#). SPHERE's goal is to ensure that all women in Australia can access sexual and reproductive health care in a timely manner regardless of where they live.

In the 2024–25 Federal Budget, the Australian Government provided funding for the Australian Institute of Health and Welfare (AIHW) to develop a national sexual and reproductive health monitoring framework, data strategy and reporting. SPHERE-supported research led by Professors Edvardsson and Taft is [cited in the AIHW's 'Termination of pregnancy: topic overview and data strategy'](#), informing policy priorities for

improving access to effective contraception and addressing structural barriers.

SPHERE, through the [AusCAPPS](#) (Australian Contraception and Abortion Primary Care Practitioner Support) Network, has supported over 2,600 general practitioners, nurses and pharmacists to provide evidence-based care for contraception and abortion, and has advanced strategies to increase LARC uptake through the ACCORd trial and discrete choice experiments. La Trobe's Desireé LaGrappe, as part of her NHMRC funded PhD under the SPHERE umbrella, has [developed a robust prevalence measure](#) for reproductive coercion and abuse to inform prevention and intervention efforts. By combining rigorous research with policy engagement and practical tools for clinicians, SPHERE is driving systemic change to achieve equitable access to sexual and reproductive health care for all women in Australia.

CHANGING WHO WE HONOUR: GENDER EQUITY IN PUBLIC MONUMENTS

Australia has more statues of animals than of women. Fewer than 15 per cent of statues in six capital cities depict women. What began as a research-based community campaign has since reshaped government policy, public space and national conversations about whose actions and achievements are publicly commemorated.

Professor [Clare Wright](#)'s commemorative justice project exposed the stark disparity in the representation of women in civic memorials. In response, she co-founded A [Monument of One's Own](#) (AMOO) with journalist Kristine Ziwick, advocating for systemic reform in commemorative practices.

AMOO's research and campaigning have inspired and influenced multiple grass-roots and government initiatives. By June 2025, 57 per cent of new commemorative place names in Victoria honoured women, moving the state closer to its 70 per cent target under [Our Equal State: Victoria's Gender Equality Strategy and Action Plan](#). This shift reflects a structural change in how public recognition is allocated.

The impact is also visible in the built environment; in 2023, following seven years of Professor Wright's advocacy, a statue of Jewish Australian women's rights campaigner Zelda D'Aprano (pictured) was built as part of AMOO's campaign, in partnership with Trades Hall Council and support from philanthropy and unions.

By 2025, Melbourne, Sydney and Canberra had committed to commissioning more statues of women, with several unveiled or approved following direct advocacy. The [Victorian Women's](#)

[Public Art Program](#), now in its fifth year, has so far commissioned 18 artworks recognising women's contributions. This program was influenced by Professor Wright's research.

As Professor Wright noted, "The importance of evidence based research in presenting the stark reality of gender bias in civic commemoration practices cannot be underestimated. Who you choose to put on a pedestal matters."



CLEAN WATER AND SANITATION

6

CLEAN WATER AND SANITATION



#5 IN AUSTRALIA

#14 IN THE WORLD

La Trobe’s research supports [SDG 6](#) through partnerships focused on water quality, monitoring, and sustainable management.

Collaborations with government agencies, CSIRO, and international partners use advanced technologies and data systems to improve water governance, protect ecosystems, and enable evidence-based decision-making for water security.

CONSERVATION DELIVERS MAJOR WINS FOR AUSTRALIA’S FRESHWATER TURTLES

Freshwater turtles across south-eastern Australia are in rapid decline due to habitat loss, road mortality, nest predation, and climate pressures. Addressing these widespread threats requires large-scale, place-based data and active community involvement, both of which have traditionally been difficult to achieve.

The 1 Million Turtles community conservation program, led by Dr [James Van Dyke](#), has become a powerful model for citizen-driven environmental action. What began as a research initiative has grown into a national movement, engaging communities, governments, and citizen scientists in hands-on conservation.



Central to the program is TurtleSAT, a [mobile app and web platform](#) that enables the public to record turtle sightings, nests, mortalities, and predation. The platform now provides a substantial proportion of the national freshwater turtle dataset used by state and federal agencies to assess conservation status and guide management decisions.

By late 2025, volunteers had helped save more than 2,400 turtles, recorded over 1,700 nests, and contributed upwards of 31,000 freshwater turtle records.

On-ground outcomes have been significant. At [Winton Wetlands](#), floating “Turtle Islands” supported a surge in hatchling success, with more than 200 critically endangered short-necked turtles emerging in January 2025 alone. Partnerships expanded through the TURTLE project along South Australia’s lower Murray River, working closely with Traditional Owners and local communities.

The 1 Million Turtles program has also found fans at bars and bookstores – a children’s book, *Mystery of the Missing Turtles*, was published in 2025 to teach younger audiences about nest protection, and a fundraiser ‘Drink Beer Save Turtle,’ in partnership with the International Turtle Survival Alliance, raised funding to support turtle conservation efforts in Australia and Papua New Guinea.

SMARTER WATER QUALITY GUIDELINES FOR METAL TOXICITY IN AUSTRALIA & NZ

Accurate methods for measuring and predicting metal toxicity in water sources are essential for setting environmental guidelines that are both protective and practical. Guidelines must avoid under-protection, which can lead to environmental harm, and over-protection, which can impose unnecessary costs on industry. Because metal toxicity depends on bioavailability, which varies with water chemistry, no single guideline value can protect aquatic ecosystems across all water sources.

Historically, Australian and New Zealand water quality guidelines for most metals considered only water hardness. However, metal bioavailability is also strongly influenced by other water quality parameters, including pH, alkalinity and dissolved organic carbon.

With funding from the International Zinc Association, and in collaboration with multiple partners, La Trobe researchers Dr [Jenny Stauber](#), Gwil Price and Dr [Aleicia Holland](#) developed new bioavailability-based models to more accurately predict zinc toxicity in freshwater systems. This work formed the scientific

basis for updated guideline values and regulatory approaches in Australia and New Zealand.

Building on this foundation, a follow-up project commenced in 2024 in collaboration with WCA, the National Institute of Water and Atmospheric Research and WQAdvice. Funded by the international Metals Environmental Research Associations, the project developed a tiered implementation framework, an on-line bioavailability guideline calculation tool, and training materials to support the application of bioavailability-based guidelines for copper, nickel and zinc.

The updated method for deriving Australian and New Zealand bioavailability-based water quality guideline values was reviewed by relevant government committees in 2025 and will be published on the websites of the Australian and New Zealand governments in mid-2026.

REDUCED INEQUALITIES

10

REDUCED INEQUALITIES

#5 IN AUSTRALIA

#10 IN THE WORLD

La Trobe addresses [SDG 10](#) through research on inclusion, disability, and social justice.

Our collaborations influence policy, improve service access, and support marginalised groups, reducing disparities in health, education, and economic participation across diverse communities.

EXPLORING THE IMPACT OF COLONIALISM IN FIJI THROUGH FICTION

While Fiji is known for its natural beauty, the long-term effects of its colonial history on health and social life are less recognised.

For more than ten years, Associate Professor [Tarryn Phillips](#) has worked with iTaukei and Indo-Fijian communities to examine issues including diabetes, nutrition and inequality. Her husband and research collaborator political analyst [Edward Narain](#), was born and raised in Fiji and is the grandchild of indentured labourers who were brought from South Asia to work on sugar plantations between 1879 and 1916.

The couple used their ethnographic research and lived experience to write *Sugar*, a novel that weaves a murder mystery with the history of colonialism, indenture and its continuing influence on social and health inequalities in Fiji. The book was formally integrated into the *Teaching Culture: UTP Ethnographies for the Classroom* series in 2024. In 2025 it was praised in *The Australian Journal of Anthropology* for helping readers understand the structures that underpin contemporary health challenges, and adopted in university curricula to teach fictionalised ethnography and concepts such as necropolitics in post-colonial health systems.

The writers were invited to give the Ursula K. Le Guin Annual Keynote for Queens University, Belfast, where they presented *Tinkering*, a performance based on a deleted scene from the novel, at the Around the Fire symposium in November 2025. The piece follows a taxi driver navigating the difficulties of caring for a diabetic parent and offered viewers a vivid way to understand the legacy of colonial health infrastructure.

Sugar has influenced professional training. The Fiji Law Society has designated the novel as compulsory reading for new volunteer lawyers, recognising its value in building contextual understanding of colonial history, inequality and social determinants of health in Fiji.

The project also influenced discussions about how Fiji is represented internationally. Professor Phillips’ related research on *Selling Authentic Happiness* was cited in 2025 debates about tourist campaigns that promote Fijians as rich in happiness despite economic hardship, highlighting how these narratives echo colonial tropes.

BRINGING WORLD-CLASS UNIVERSITY SCIENCE INTO CLASSROOMS WORLDWIDE

Freely Accessible Remote Laboratories (FARLabs), celebrated its [10th anniversary](#) in 2023. Founded by La Trobe University researchers Professor [Brian Abbey](#), Dr [David Hoxley](#) and Professor [Paul Pigram](#), [FARLabs](#) is a government-sponsored program that provides a virtual laboratory network enabling school students to access the state-of-the-art facilities and world-class university research.

The program offers free, live, remote laboratory access to scientific equipment at La Trobe University allowing students to complete scientific experiments across three themes: Nuclear, including measuring radioactivity with Geiger counters; Structure, using x-ray and 3D imaging; and Environment, with a focus on space science. FARLabs remains the only program in Australia to offer an online interactive lab experience of this kind.

The FARLabs content is co-designed with teachers to ensure curriculum alignment. It has achieved international reach with over 1,000 schools signed up across Australia and over 8,000 users across 100 different countries and numerous [positive testimonials](#) from teachers and pupils.

With funding from the La Trobe Institute for Molecular Science, the [Telematics Trust](#) and the [GHD foundation](#), the program

has expanded to include the development of a space science e-virtual laboratory, involving online ‘Humans on the Moon’ events involving Australian and Japanese schools. In 2025, FARLabs hosted an inter-school STEM competition at La Trobe University’s Melbourne campus, where local schools pitched moon base designs to scientists.

Through ongoing collaborations with Japanese schools, FARLabs also hosted STEM immersion days for students from Handa High School in Japan, who visited the FARLabs team in March 2025 and March 2026 to learn about radiation science and plants for space.



REDUCED INEQUALITIES

GABRA BIIK WURRUWILA WUTJA INDIGENOUS RESEARCH CENTRE

La Trobe’s Gabra BiiK Wurruwila Wutja Indigenous Research Centre leads and embeds Indigenous-led research grounded in community priorities, Indigenous governance, and ethical practice.

Director Professor Julie Andrews champions Indigenous leadership, ensuring Aboriginal scholars and community members guide research design, ethics, and outcomes.

A flagship example is the Gabra Stories of Yorta Yorta fruit picking project in Shepparton, announced in September 2025 with a grant of over \$1 million from the Australian Research Council.

This study, led by family and clan groups, explores how Yorta Yorta people’s fruit picking from the 1920s–1970s represented acts of self-determination. The Yorta Yorta are Traditional Owners of the region.

The team has established a research office at La Trobe’s Shepparton campus, strengthening regional research infrastructure and creating a culturally safe space for community-owned knowledge creation.

Central to the work is relationship-building with the community. Researchers are working with 16 family groups, and each will have family facilitators.

“It’s the biggest Aboriginal-led research program right now, and the first for Shepparton,” said Professor Andrews.

The project will produce podcasts, a documentary, oral histories, and family books, preserving community stories for future generations.

Among their achievements in 2025, the Centre produced a report on Aboriginal Cultural Landscape Management for

Transport NSW in partnership with the iMOVE CRC. Transport NSW have endorsed the report’s key recommendations for building environmental resilience in the transport corridor.

Also in 2025, Professor Andrews published Where’s All the Community? Aboriginal Melbourne Revisited, a book drawing on extensive interviews with community members, Professor Andrews research in anthropology, and her own family story.

At its core, the Centre, guided by Professor Andrews, builds Aboriginal community confidence – ensuring research is done with communities, not just about them. “We are impacting Aboriginal community confidence. That is the impact,” said Professor Andrews.

“It’s the biggest Aboriginal-led research program right now, and the first for Shepparton”



10

REDUCED INEQUALITIES

#5 IN AUSTRALIA

#10 IN THE WORLD

SDGIO REDUCED INEQUALITIES

\$1 Million

ARC Grant

For Gabra Stories of Yorta Yorta

SDGIO REDUCED INEQUALITIES

100

Different Countries

Have schools signed up to FARLabs

CLIMATE ACTION

13 CLIMATE ACTION



#10 IN AUSTRALIA

#39 IN THE WORLD

Protecting and restoring ecosystems is essential to addressing climate change, biodiversity loss, environmental degradation, and providing the foundation for social and cultural resilience. Our research and partnerships with communities, industry, government and First Peoples support [SDG 13](#).

ADAPTING TOGETHER: CLIMATE CHANGE, GOVERNANCE AND COLLECTIVE WELLBEING

Climate change is no longer a distant environmental problem; it is reshaping how work gets done across Australia, both in acute and often in quiet, compounding ways that are easy to overlook until they become systemic. La Trobe's [Climate Change Adaptation Lab](#) (CCAL) explores these pressures to understand where the most consequential risks lie – and how to respond to them.

Professor [Lauren Rickards](#) is the Director of the Lab. Since its establishment in 2023, she and her team have worked closely with public sector organisations, conservation groups, catchment management authorities and water utilities to understand how climate change intersects with daily work practices. What they are finding challenges conventional ideas of risk. While extreme events like floods and storms remain critical, Professor Rickards argues that the cumulative impact of everyday climate stresses can be just as damaging.

In 2025, [CCAL](#) partnered with Yarra Valley Water to examine how climate change is affecting the workforce that delivers essential water services across Victoria. Led by Associate Professor [Magnus Moglia](#), the project is working with staff to map climate-related risks. Results reinforce that workforce climate resilience is now central to service reliability, governance and public trust.

Also in 2025, in Central Victoria, the Lab [worked with local government](#) through the Northern Victorian Emergency Management Cluster in collaborative research led by Dr [Lisa de Kleyn](#) and Ashley Fletcher, to understand local government experiences of the 2022 floods. What stood out was the power and necessity of collaboration.

"We saw how valuable collaboration was during the crisis, and the question became how to sustain and institutionalise that cooperation once the immediate emergency had passed," Dr de Kleyn says.

Similar lessons are emerging along Victorian river systems. Through a partnership with the Murray–Darling Basin Authority, the Lab brought together river communities, including Traditional Owners, to design community-based monitoring of river health. The benefits

go beyond data collection.

"By working together, people develop a shared understanding of what water means, what values are at risk, and how we might adapt together," Professor Rickards notes.

At the national level, Professor Rickards' role as a Lead Author on Australia's first [National Climate Risk Assessment](#) sharpened these insights. The Lab led analysis of "Governance Risk" – the danger of adapting too slowly, or in the wrong ways, for the 2025 report.

The Lab's work is grounded in a simple but demanding idea: adaptation must be rigorous, socially informed, and focused on how work 'works' in practice.

"We're trying to orient decision-making to the risks that really matter," Professor Rickards says, "so that when we adapt, we genuinely build collective wellbeing."

Watch Professor Lauren Rickards speak about the Climate Change Adaptation Lab here:
[Insights from La Trobe's Climate Change Adaptation Lab](#)



"By working together, people develop a shared understanding of what water means, what values are at risk, and how we might adapt together."

CLIMATE ACTION

REIMAGINING DROUGHT MANAGEMENT

Drought is an inevitable part of the Australian landscape. It has devastating effects on individuals and the social fabric of rural communities as businesses succumb to its impacts. Climate change modelling suggests that these events will be more regular in the future.

The [Victorian Drought Resilience Adoption and Innovation Hub](#) (Vic Hub) focuses on delivering innovations to enable Victorian farmers and communities to become more drought resilient, and to better respond to a changing climate. The Vic Hub is led by the University of Melbourne’s Dookie Campus, in association with five regional nodes and four university partners including La Trobe University.

La Trobe’s Dr [Tim Clune](#) is the Vic Hub Capacity Building Theme Lead.

Vic Hub is working with Hub Partners to build the capacity and capability of Victorian farmers to make informed decisions that better manage drought risk and enhance drought resilience. They provide thought leadership on how drought should be managed in policy and practical contexts, including identifying opportunities to ensure regional farmers have timely access to relevant resources to prepare, cope and respond to ‘the creeping hazard’ of drought, and that they also have the corresponding perceived ability to act.

After working with growers, Vic Hub reimagined drought management through a four-stage model (good period, uncertain period, drought period, recovery) that aligns with real-life experiences. This framework links emergency management principles (Plan, Prepare, Respond, Recover) to drought cycles. By acknowledging that seasonal uncertainty doesn’t always deliver drought but remains possible, the model empowers

risk-based decision-making matched to individual circumstances. This approach improves farming system capacity to reduce risks, absorb impacts, and build back faster.

Through VicHub, farmers have been able to access these resources to better plan for drought. From [January till September 2025](#), Vic Hub metrics showed 165 organisations actively collaborated with Hub nodes and partners. It delivered 176 projects spanning productivity, risk management, business systems and wellbeing. The Hub also held 57 learning activities with 2,000 participants and shared 29 new resources.

As Dr Clune commented “the Hub is a network. It’s a network that gets stuff done.”

13CLIMATE ACTION

#10 IN AUSTRALIA

#39 IN THE WORLD



✓ 176 projects delivered

✓ Collaborations with 165 organisations

✓ 57 learning activities, with 2,000 participants



GENETIC SOLUTIONS TO MINIMISE METHANE EMISSIONS

The largest source of greenhouse gases on a dairy farm are enteric methane emissions (EME) – methane produced during fermentation of feed in ruminants – which accounts for approximately 70 per cent of total farm emissions.

La Trobe researchers Professor [Jennie Pryce](#) and Dr Caeli Richardson, in partnership with DataGene, Agriculture Victoria, Dairy Australia, and the Gardiner Dairy Foundation, have developed and implemented a [Sustainability Index](#) (SI) in the Australian national breeding program, including predictors of methane, which allows farmers to make conscious breeding decisions to reduce the environmental impact of dairy cattle and the amount of carbon used to produce every kilo of milk solids, whilst balancing genetic progress in other valuable traits such as production, health, and fertility.

The SI is now one of Australia’s three key [breeding indices](#), based on rigorous scientific analysis and industry priorities, which are available to farmers through the [Good Bulls guide](#) and [app](#).

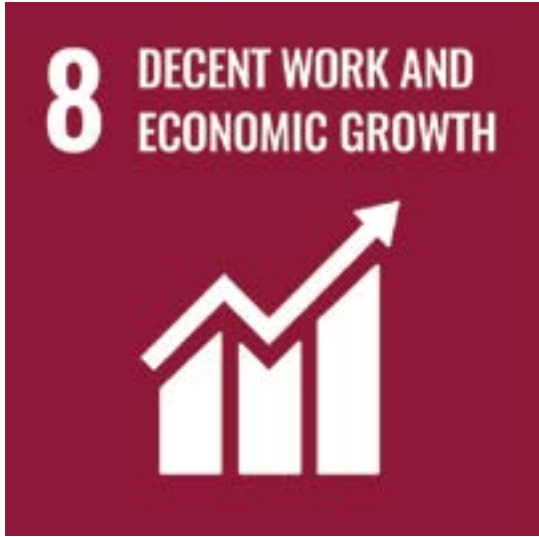
Projections show that using SI could reduce methane intensity by [5–10 per cent by 2050](#).

Building on this leadership, Professor Pryce is now working with national and international partners to deliver the next generation of methane reduction tools for the dairy industry. Through partnerships with the Global Methane Hub, CRC for Net Zero Emissions (CRC–ZNE), Agriculture Victoria, Dairy Australia, and the Gardiner Dairy Foundation, this work is focused on developing robust estimated breeding values (EBVs) for methane emissions.

These EBVs will enable methane reduction to be more directly and transparently embedded into breeding decisions, accelerating genetic progress towards low-emissions dairy cattle while maintaining productivity, profitability, and animal welfare.

In November 2025, Professor Pryce headlined the [2025 Dairy Research Foundation Symposium](#) to present these next

DECENT WORK AND ECONOMIC GROWTH



Promoting equitable development, driving economic growth and creating meaningful employment opportunities in the communities we serve are central to La Trobe’s impact goals.

Through our research-driven innovation and targeted workforce initiatives, we support workforce participation, foster inclusive growth and help generate new industries across regional and global contexts to advance SDG 8.

By partnering with industry and supporting entrepreneurship, start-ups and spinouts, we contribute to building stable, prosperous societies and advancing decent work for all.

BUILDING A SUSTAINABLE TEACHING WORKFORCE THROUGH THE NEXUS PROGRAM

Urban, low socio-economic, regional, and rural schools continue to face significant challenges in recruiting and retaining quality teachers. The Nexus Program, developed by La Trobe University, addresses this issue by placing high-achieving career changers into hard-to-staff schools while they undertake their teaching qualifications through an employment-based pathway.

Launched in 2020 to train and place teachers in Victorian government secondary schools, the Nexus Postgraduate program expanded from the Master of Teaching (Secondary) to include the Master of Teaching (Primary) in 2024.

In 2025, the Nexus Program significantly expanded its impact on strengthening the teacher workforce across Victoria and New South Wales. Sustained federal and state investment exceeding \$30 million since the program’s inception enabled Nexus to deliver its largest cohorts to date across both primary and secondary, and undergraduate and postgraduate streams.

2025 also saw the launch of the Nexus Undergraduate program in Victorian government Secondary and Special Education

schools, which created a new pathway for education support and Koori Education Support Officers to become qualified teachers while remaining employed in schools. This initiative further reinforced the workforce pipeline by attracting and supporting individuals already embedded in school communities.

Throughout 2024–2025, and in partnership with schools, the Postgraduate program’s expansion into primary education deepened Nexus’s reach and contributed to a more diverse, social justice focused and capable teaching workforce. Participants continued to receive scaffolded practical experience, targeted professional learning and structured wrap-around mentoring, all contributing to strong classroom readiness. School leaders reported high levels of flexibility and proactive engagement from Nexus teachers.

An evaluation of the program published in 2025 showed that most graduates remained in their placement schools, and achieved early career teacher effectiveness by their second year, reinforcing Nexus as a proven response to teacher shortages.

SDG8 DECENT WORK AND ECONOMIC GROWTH

\$30M

State and Federal Funding

For La Trobe’s Nexus Program

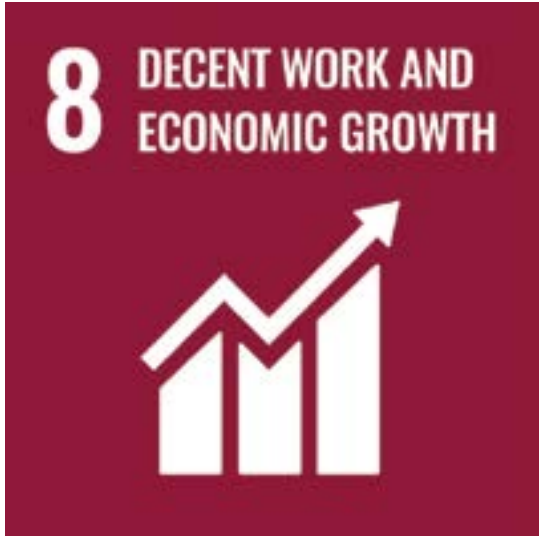
SDG8 DECENT WORK AND ECONOMIC GROWTH

20,000+

Downloads

Of Vic Gov’s Neurodiversity Toolkit

DECENT WORK AND ECONOMIC GROWTH



CO-DESIGNING THE VPSC NEURODIVERSITY EMPLOYMENT TOOLKIT

The Victorian Public Sector Neurodiversity Employment Toolkit is a groundbreaking resource designed to help employers create neurodiversity-inclusive workplaces by providing practical guidance on recruiting, supporting, and retaining neurodivergent employees. Developed by La Trobe University, in partnership with the Victorian Public Sector Commission (VPSC) for employers in the Victorian public sector, the toolkit addresses a critical gap in resources for employers seeking to reduce workplace barriers for neurodivergent individuals.

Neurodivergent La Trobe researchers Dr [Rebecca Flower](#) and [Ellen Richardson](#) developed the toolkit in collaboration with a neurodiverse team at the VPSC. The toolkit was informed by peer-reviewed research and extensive consultation with people with lived and professional experience. It provides actionable advice, such as how to improve communication, adapt recruitment processes, and design inclusive work environments.

This initiative responds to the significant challenges neurodivergent people face in gaining and maintaining employment, and a need among employers for educational resources. Many barriers, such as unclear position descriptions

or onboarding procedures, can be addressed through simple changes that benefit all employees.

Hosted publicly and freely on the [VPSC website](#), the toolkit is designed to meet the needs of both employers seeking to build their capacity to support neurodivergent staff and employees advocating for workplace adjustments. By equipping organisations with clear, actionable steps, the toolkit has the potential to foster more inclusive work environments across the public sector and beyond.

The Victorian Public Sector Neurodiversity Employment Toolkit was published in November 2024 and by May 2025 had been accessed over 20,000 times.

As its profile has increased the Toolkit has been cross-promoted by [Autism Valued](#), the [Australian Association of Psychologists](#), the [Australian Nursing and Midwifery Foundation](#), the Western Australian Government Public Sector Commission 'Guide for hiring people with a disability', and Vanderbilt University Frist Center for Autism and Innovation.

BUILDING HEALTH WORKFORCE CAPABILITY THROUGH RESEARCH-LED EDUCATION

PhysioCaRe

Led by [Dr Amy Dennett](#), PhysioCaRe responds to a well-recognised shortage of physiotherapists trained in cancer rehabilitation. While physiotherapy-led rehabilitation is best practice for improving quality of life for people living with cancer, in 2025 many clinicians still lacked the training and confidence to deliver safe, effective interventions.

[PhysioCaRe](#) addresses this gap through an evidence-based professional-education program combining online learning with interactive workshops, simulation activities, and case-based exercise prescription.

By 2025, four courses had been delivered, upskilling 65 physiotherapists across public and private sectors. The program also established a participant network, outcomes registry, and continuing education resources, supporting lifelong learning and translation of clinical guidelines into daily practice.

Eating Disorder Identification Modules

La Trobe researchers Professor [Leah Brennan](#), Dr [Sian McLean](#), and Dr Hosu Ryu were part of a team which published research in 2025 mapping how eating disorders are taught across Australian health-professional programs. Surveying 205 educators from 42 institutions, the study identified widespread under-training, limited practical experience, and significant educator capacity constraints – clear barriers to high-quality professional education.

The research directly informed the development of the National Eating Disorders Collaboration (NEDC) Eating Disorder Identification [Learning Packages for Tertiary Education](#), providing tertiary educators with access to contemporary teaching resources and training modules to help them better equip graduates with identification skills, with specific application to eating disorders, disordered eating and body image concerns.

Over 120 educators have accessed the Learning Packages since their launch, and pre-post student data shows an increase in the confidence of students to identify warning signs, and a reduction in apprehension to engage with someone about a possible eating disorder.

INDUSTRY, INNOVATION AND INFRASTRUCTURE



Driving innovation and strengthening industry capability are at the heart of La Trobe's contribution to [SDG 9](#). Our innovative ecosystems, precincts and research corridors enable entrepreneurship, support start-ups and spinouts, and foster industry collaboration.

Backed by substantial investment in research infrastructure, flagship institutes and digital capability, we aim to be a partner of choice for industry. Our focus on commercialisation, intellectual property translation and industry-led research ensures that our work contributes to advancing sustainable technologies, building resilient infrastructure and shaping the industries of the future.

NanoMslide: BREAKTHROUGH NANOTECHNOLOGY PLATFORM FOR CANCER

La Trobe University's NanoMslide project is pioneering a breakthrough optical nanotechnology platform that helps identify cancerous cells through vivid changes in colour – without staining, labelling, or complex chemistry.

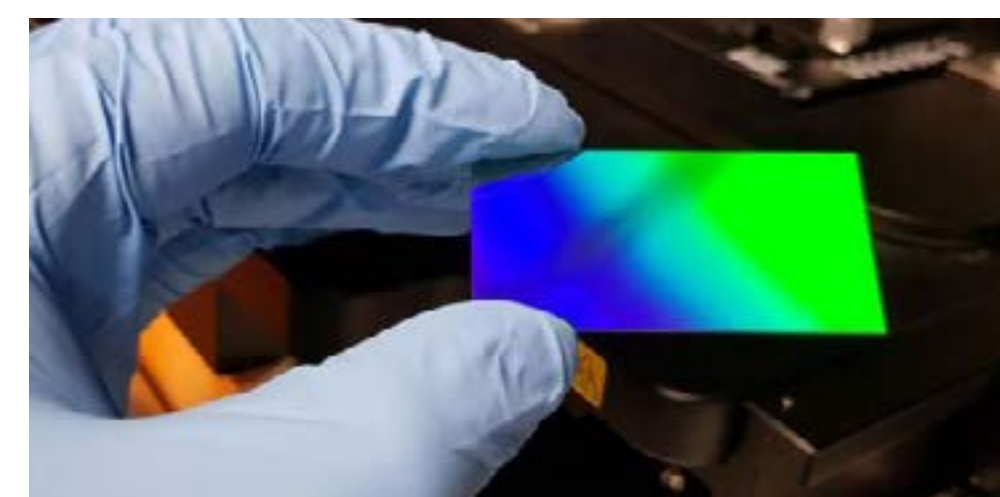
Developed by Distinguished Professor [Brian Abbey](#), along with Senior Research Fellow Dr [Eugeniu Balaur](#) from the La Trobe [Institute for Molecular Science](#) (LIMS) and Professor Belinda Parker from the Peter MacCallum Cancer Centre, the technology applies a novel nanofabricated coating to the surface of a standard microscope slide. This invention, protected by over 40 international patents, transforms a standard microscope slide into an active optical sensing surface that acts like a mini laboratory, enhancing tissue contrast and enabling pathologists to rapidly identify abnormal or cancerous cells without staining (see [Nature publication](#)).

In 2023, [AlleSense](#) was founded to commercialise the NanoMslide, becoming the first major spin-out company based on La Trobe research. Since then, AlleSense has been driving commercialisation and clinical validation in Victorian hospitals. AlleSense has secured more than \$5 million in

commercial support through venture capital investment and the Australian Economic Accelerator (AEA).

In 2025, Professor Abbey and AlleSense advanced the NanoMslide from research prototype to scalable manufacture. This funding will support a new certified Australian facility in the Bioinnovation Hub (BIH) for large-scale production of nanotechnology-based diagnostic devices.

"This project has the potential to transform medical diagnosis by enabling faster, cheaper and more accurate imaging. Through our collaboration with the [Australian Centre for Artificial Intelligence for Medical Innovation](#) (ACAMI), we are also exploring fundamentally new approaches to digital pathology, while in parallel working with the La Trobe commercialisation team to pursue follow-on commercial opportunities arising from the platform," Professor Abbey said.



IMPROVING MOTORCYCLE SAFETY THROUGH CONNECTED VEHICLE TECHNOLOGY

While motorcyclists make up just 0.7 per cent of total vehicle kilometres travelled in Australia, they represent about 20 per cent of all road crash deaths. To address this disproportionate risk, La Trobe University's [Centre for Technology Infusion](#) (CTI) is leading research to improve motorcycle rider safety through connected vehicle technology.

In 2025, CTI trialled a connected motorcycle system that delivers real-time alerts to riders about immediate road hazards. Designed from the motorcyclist's perspective, the system provides early warnings about slippery surfaces, traffic congestion, high-risk intersections, and potential collisions with other vehicles, giving riders more time to respond safely.

The technology enhances awareness of hazards that are often difficult to detect visually and operates within the broader Cooperative Intelligent Transport Systems (C-ITS) ecosystem, enabling safety messages to be shared between vehicles,

roadside infrastructure, and traffic control systems.

Funded by [iMOVE Australia](#), the Queensland Department of Transport and Main Roads, and the Transport Accident Commission, the project is the first globally to deliver evidence that C-ITS warnings can prevent crashes. In the most common crash scenarios, riders reacted significantly earlier when given C-ITS warnings than without them.

Almost 400 riders participated in trials, with [large-scale testing conducted in 2025](#). The project received national and [international recognition](#) and won the 2026 Excellence in Research and Development award at the [ITS Australia Awards](#). Transport Accident Commission CEO Tracey Slatter described the project as 'a great example of the potential that technology can play in keeping riders safe'. ITS Australia CEO Susan Harris highlighted the role of collaboration, noting the importance of university partnerships in delivering robust, evidence-based transport solutions.

INDUSTRY, INNOVATION AND INFRASTRUCTURE



SDG9 INDUSTRY, INNOVATION, INFRASTRUCTURE

\$1.78M

To Commercialise WISDs

La Trobe’s Wine Industry Smoke Detectors

SDG9 INDUSTRY, INNOVATION, INFRASTRUCTURE

Awarded

ITS Excellence in Research and Development Prize

C-ITS for Motorcycle Safety

SDG9 INDUSTRY, INNOVATION, INFRASTRUCTURE

AU’s First

NVIDIA DGX H200 Supercomputer

Launched by La Trobe’s ACAMI

SDG9 INDUSTRY, INNOVATION, INFRASTRUCTURE

\$2.5M

For Nanotechnology Diagnostic Devices

New Certified Australian Facility

“2025 demonstrated the power of collaboration between academia, industry and community, guided by our Research and Innovation 2030 Strategy. Through Eagleworks, breakthrough funding, global partnerships and work-integrated learning, we are transforming ideas into real-world impact – accelerating innovation, strengthening industries, and preparing future talent to drive economic growth and meaningful societal progress.”
Professor Chris Pakes – Deputy Vice-Chancellor (Research and Innovation)



PROTECTING AUSTRALIA’S WINE INDUSTRY USING WISDS

Smoke taint caused by bushfires is a major threat to the Australian wine industry, causing losses of up to \$140 million during the 2020 Black Summer fires. La Trobe University has developed a Wine Industry Smoke Detector (WISD) which delivers a breakthrough solution to protect vineyards from avoidable crop damage and substantial economic losses.

The WISDs, known colloquially as “wizards”, combine advanced sensor technology, real-time data analytics, and predictive modelling to detect smoke compounds early and provide actionable alerts in real time during smoke events to growers. This innovation enables proactive vineyard management and reduces the damage caused by smoke exposure. Supported by Federal Government funding and Wine Australia, the project has deployed a prototype smoke-detector network across key wine regions. The system combines sensor networks, real-time analytics, and a user-friendly dashboard to guide growers’ decisions.

In 2025, WISD received \$1.78 million through the Australian Government’s Economic Accelerator (AEA) program, which supports collaboration between universities and industry to bring research closer to commercial reality. The AEA grant supports a collaboration between Wine Australia, commercial partner

Goanna Ag and La Trobe for continued validation, development and commercialisation of the WISD tool, positioning WISD for national expansion.

Following bushfire activity in February 2025, Wine Australia released a guide for wine growers in the Western Victoria region detailing how La Trobe’s WISDs are being used to monitor smoke levels and protect the industry.



INDUSTRY, INNOVATION AND INFRASTRUCTURE

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



AUSTRALIAN CENTRE FOR ARTIFICIAL INTELLIGENCE IN MEDICAL INNOVATION

La Trobe University hosts the world's first university-based research centre dedicated to using AI to accelerate medical research and healthcare. The Australian Centre for Artificial Intelligence in Medical Innovation (ACAMI) tackles the high costs, complex clinical processes, and long timelines that slow the development of immunotherapies, vaccines, and advanced medical technologies. By working with industry to integrate AI, machine learning, and big data analytics, ACAMI's research programs include AI-driven cancer diagnostics, digital twin modelling for management of chronic disease, and an AI-enabled clinical decision support tool for predicting emergency admissions.

Beyond research breakthroughs, ACAMI is building workforce capability and aligning with La Trobe's commitment to research impact and sustainable development: making advanced therapies more accessible and affordable, improving patient outcomes, and strengthening Australia's global competitiveness in biomedical innovation.

In 2025 ACAMI launched Australia's first NVIDIA DGX H200 supercomputer, giving scientists the ability to push the boundaries of AI-driven medical and biotech research. The NVIDIA DGX H200 systems enable faster translation of research



into clinical trials and personalised therapies. The NVIDIA DGX H200 suite is capable of quantum simulation, which directly enables ACAMI's partnership with Moderna to develop quantum algorithms for optimisation of mRNA structure.

In 2025 ACAMI also began a collaboration with The Florey Institute of Neuroscience and Mental Health, researching Niemann-Pick disease type C, a progressive neurodegenerative disorder in children, using the DGX H200 systems to assist in the development of gene therapy to treat the disorder.



ARC RESEARCH HUB FOR MOLECULAR BIOSENSORS AT POINT-OF-USE

The ARC Research Hub for Molecular Biosensors at Point-of-Use (MOBIUS), led by La Trobe University, officially commenced in January 2025, bringing together leading researchers and industry partners to advance next-generation molecular biosensors from discovery and development through to translation and commercialisation.

MOBIUS is developing practical biosensing technologies that enable rapid and accurate detection of biological markers outside traditional laboratory settings, combining nanotechnology, advanced manufacturing, and detection science to create scalable and affordable solutions for healthcare, agriculture, biosecurity, defence, water, and environmental monitoring.

MOBIUS is a consortium comprising five university partners and 21 industry partners across the defence, water, and agriculture sectors, including organisations such as Melbourne Water, Victoria Police, Agscent, BeeSTAR and diagnostic-focused partners including AlleSense and AnteoTech.

These partnerships are driving innovation beyond the laboratory, enabling applications such as wearable microneedle devices for hormone monitoring, livestock health sensors, roadside and wastewater surveillance technologies, and next-generation point-of-use diagnostics.



INDUSTRY, INNOVATION AND INFRASTRUCTURE



AGLANTIS SMART IRRIGATION PLATFORM

Manual irrigation systems are labour-intensive for farmers to operate, and misjudging the timing or quantity of water can waste resources and contribute to fertiliser run-off. In partnership with Queensland ag tech company [Aglantis](#), a team led by La Trobe University's Distinguished Professor and Cisco Research Chair [Wei Xiang](#) have developed an AI enabled smart irrigation platform that replaces fixed schedules with responsive automation. In recognition of their groundbreaking success, Xiang's team received first place in the sustainability category at the [Financial Review AI Awards](#).

The system uses compact, solar powered sensors to monitor real-time conditions such as soil moisture, temperature, sunlight and weather patterns. A virtual model of the farm's irrigation system then supports automated pump and valve management. This allows farmers to apply water exactly where and when it is needed, improving efficiency while reducing runoff into nearby ecosystems including the Great Barrier Reef.

Following its commercial launch in late 2024, the system has so far been deployed across more than 15 farms in North

Queensland's Lower Burdekin region, covering up to 3,000 hectares of sugarcane and horticultural crops. More than 160 customers are now engaged, with national distribution underway. The platform has produced measurable operational benefits, including around 20 per cent water savings, up to 50 per cent reductions in electricity costs and 30 to 45 per cent labour savings. At a regional level, this is estimated to equate to more than 210,000 labour hours saved and approximately 900,000 litres of diesel reduced annually. These efficiencies reduce costs while improving day to day working conditions for farmers.



NO POVERTY



La Trobe's research contributes to [SDG1](#) through partnerships addressing economic inclusion and social protection. Collaborations support policy reform and strengthen livelihoods, helping reduce poverty and vulnerability across underserved and marginalised communities.

HOW FINANCIAL INCLUSION BECAME A PILLAR OF GLOBAL FINANCIAL INTEGRITY

The Financial Action Task Force (FATF) sets global standards to combat money laundering and terrorist financing across more than 200 jurisdictions. Research by Professor [Louis de Koker](#) revealed that, in practice, these standards disproportionately restricted access to financial services for marginalised communities and developing economies.

Over more than two decades, Professor de Koker demonstrated that financial inclusion and financial integrity are mutually reinforcing, not competing, goals. In 2003, his research showed that South African banks could not implement inclusive banking models without breaching FATF standards, placing financial regulation at odds with President Nelson Mandela's vision of broad-based economic inclusion. Professor de Koker extended this work collaboratively across Kenya, Indonesia, Mexico, and Pakistan, building a robust evidence base showing that inclusive financial systems reduce, rather than increase, financial crime

risks. This research directly informed the FATF's 2012 revision of its standards, enabling countries to pursue inclusion without undermining integrity.

The impact has been [global and measurable](#). The proportion of adults worldwide with access to formal financial accounts increased from 51 percent in 2011 to 79 per cent in 2025. In June 2025, FATF adopted new guidance further redefining financial inclusion, shifting the focus from mere access to the active and responsible use of financial services.

A senior FATF representative acknowledged the significance of this contribution, noting that Professor de Koker's work drove a real shift in FATF's approach, making an extraordinary difference to global financial policy and socio-economic development.

Watch Professor de Koker speak about his research here: [Reforming Global Financial Standards for Inclusion](#)



Our research contributes to [SDG 4](#) through our work to advance inclusive and innovative education systems.

Partnerships with schools, and international universities enable curriculum reform, teacher development, and digital learning platforms, expanding access to quality education, improving literacy and STEM

TRANSFORMING TEACHING WITH SCIENCE OF LANGUAGE AND READING

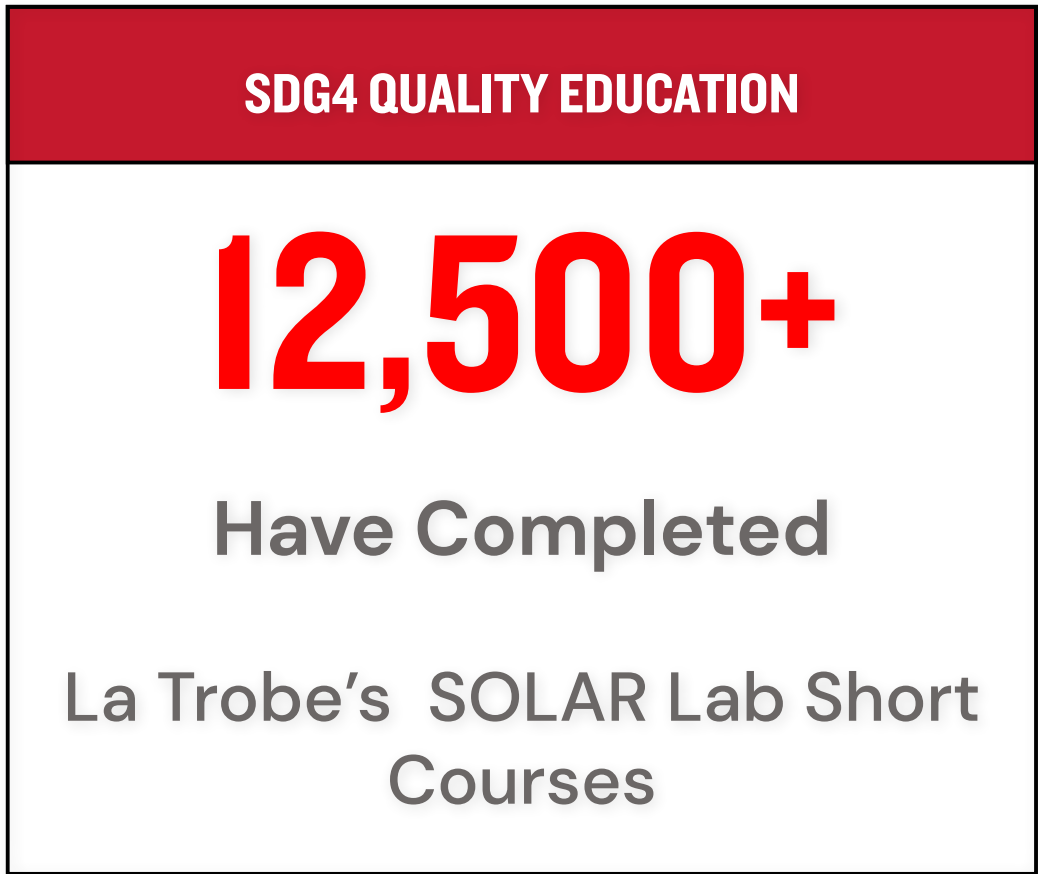
One-third of Australian students are failing to learn to read proficiently, at an estimated cost to the economy of \$40 billion, according to a 2024 Grattan Institute report. A key factor is the persistence of outdated teaching methods, especially in the early years of primary education.

The Science of Language and Reading (SOLAR) Lab, established by Professor [Tanya Serry](#) and Distinguished Professor [Pamela Snow](#), marked its fifth anniversary in 2025 with a string of significant milestones.

Since 2020, more than 12,500 participants have completed SOLAR Lab’s [short courses](#), with some schools now embedding the introductory course into teacher induction programs. Professors Serry and Snow have also contributed to the shaping of Victoria’s mandated synthetic phonics curriculum, national Speech Pathology Australia guidelines, and have built a Language and Literacy subject stream in La Trobe’s Master of Education. Professors Snow and Serry also frequently deliver invited

presentations across Australia and overseas, taking their research into rooms where education policy is shaped.

“An aspirational goal for us both, but one we feel is achievable, is to see Australia in the top 10 OECD countries in international rankings for reading and writing by 2035,” Professor Serry said.



ADDRESSING STAFF SHORTAGES IN HARD TO STAFF SCHOOLS IN AUSTRALIA

Hard-to-staff schools in Australia face persistent challenges in attracting and retaining teachers, particularly in regional and low socio-economic areas. Traditional policy approaches have focused on standardised notions of classroom readiness, which often fail to account for the complex realities of these settings.

The Schools Access Quality Teaching Initiative (AQTI), funded by the Victorian Department of Education and led by La Trobe University, addresses this gap by placing high-performing preservice teachers in hard-to-staff schools and providing support. This includes training in trauma-informed practice, classroom management, and literacy, alongside mentoring and reflective practice.

AQTI promotes understanding of local contexts and community engagement, which principals identify as essential for success. As one principal explained, “That curriculum knowledge is so secondary to the skills that have to be in place so that these children have someone who co-regulates them, supports them, makes them feel safe.”

The program has delivered immediate workforce impact, with many graduates accepting positions in hard-to-staff schools since the program’s conclusion. It has also generated follow-on investment including the award in 2025 of ARC funding to

develop a workforce distribution dashboard. AQTI’s success challenges policy assumptions and supports context-sensitive preparation, longer placements, and stronger partnerships between universities and schools.



AFFORDABLE AND CLEAN ENERGY



Access to sustainable, reliable energy underpins economic and environmental progress. La Trobe supports SDG 7 through research and partnerships that advance renewable energy adoption, improve efficiency, and develop low-emissions technologies.

We test and scale solutions that support decarbonisation, accelerate energy transitions, and expand access to affordable, clean energy.

LA TROBE DRIVES CLEANER CONSTRUCTION FOR STATE INFRASTRUCTURE

Major infrastructure projects in Victoria are required to reduce emissions in line with the Victorian Government’s target of net zero by 2045, but there is limited real-world evidence about the performance of low carbon technologies during large construction projects.

The M80 Ring Road Completion in Melbourne’s north is part of Victoria’s Big Build and connects Plenty Road to the North East Link tunnels at Watsonia. Spanning around 14 kilometres, it offers a real-world environment to test low carbon technologies, new energy systems and alternative fuels aimed at reducing construction emissions.

A collaboration between La Trobe University and the M80 project examines how cleaner energy systems perform during construction. Led by Associate Professor Toong Khuan Chan and Dr Elsuida Kondo from La Trobe’s Department of Engineering, the research assesses technical performance, practical challenges and the potential for wider adoption across Victoria’s infrastructure sector.

In 2025, the M80 project trialled hydrogen generation, solar battery units, and rooftop solar systems installed on temporary

site structures and facilities along the path of the road. The electric construction equipment trialled as a substitute for diesel machinery included a forklift, boom lift, tipper trucks, and a piling rig. These trials delivered measurable reductions, including more than 12 tonnes of carbon dioxide saved in one month and substantial cuts in diesel use. The results show that electric construction machinery and renewable energy can reduce emissions while maintaining productivity.

The project also supported one of Australia’s first major trials of a renewable hydrogen generator for temporary site power. This demonstrated the feasibility of hydrogen supported operations and provided insights into approvals, safety, logistics, and integration with existing equipment.

La Trobe researchers analysed energy use, cost performance, operator experience, and industry readiness across these trials. Their findings are informing a transition pathway from 2025 to 2045, outlining when low carbon technologies are likely to become viable for adoption across the civil construction sector.



Credit: M80 Ring Road Completion Project.

SUSTAINABLE CITIES AND COMMUNITIES



Our research supports transport innovation, environmental management, and community resilience, enabling more inclusive, accessible, and sustainable cities, supporting [SDG 11](#).

TRAIN STATIONS REIMAGINED AS PLACES OF CARE AND INCLUSION

Train stations are increasingly used by people experiencing homelessness, often as places of shelter and safety. This presents a complex challenge for transport authorities, who must balance the needs of vulnerable individuals with the expectations of passengers and operational staff.

Care in Transit: Designing for Passengers, Transport Operations, and Homelessness Support commissioned by Transport for NSW to explore how transport environments can be designed and managed to better support rough sleepers while maintaining high-quality service delivery. The project has reframed transport hubs as part of an infrastructure of care, aligning with national, state and local planning priorities. It was led by La Trobe University, with funding from iMOVE CRC and support from the University of Sydney and Inclusive Design.

The research produced Design Principles, Best Practice Guidelines and a Stakeholder Framework that enables transport hubs to function as inclusive and compassionate public spaces, demonstrating how stations and precincts can support people living precariously and sleeping rough without diminishing customer experience or service delivery. The project shows how planning can extend beyond mobility to deliver environments that are safe, inclusive and socially responsive.

Care in Transit received a 2025 Planning Institute of Australia (NSW Division) Planning Research Award for Excellence and was also Highly Commended at the International Healthy City Design Awards in Manchester, UK. This recognition reflects the project’s innovative approach to applying and extending the concept of an ecosystem of care within transport environments, a perspective rarely considered in planning or transport research.

RESPONSIBLE CONSUMPTION AND PRODUCTION



We advance [SDG 12](#) through promoting sustainable production and resource management, collaborations with industry and environmental organisations supporting circular economy practices, sustainable agriculture and responsible supply chains.

LANDSCAPE ASSESSMENT FOR VICTORIA’S RENEWABLE ENERGY LINK

The Western Renewables Link aims to deliver clean energy to Victorians by transmitting renewable power from Western Victoria to the National Electricity Market. The proposed route spans 190 kilometres from Bulgana to Sydenham, crosses five Registered Aboriginal Parties areas, and dozens of named waterways.

Existing legislative frameworks often require developers to assess the impact of new works on Aboriginal cultural heritage, but archaeologists employing conventional assessment strategies such as pedestrian surveys can struggle to identify historically capped ground surfaces.

Based on their recognised expertise in delivering landscape-level predictive assessments in areas affected by mining activities, a team from La Trobe’s Archaeology Research Partnerships worked with global engineering and consulting firm Jacobs to identify the potential implications for Aboriginal cultural heritage of a major transmission project.

landscapes are notoriously difficult to manage from a cultural heritage management perspective, as many affected areas have since developed new topsoils and can now appear unaltered. Dr Greg Hil developed a qualitative predictive modelling approach combining GIS-based elevation-based spatial analysis with archival research, giving heritage practitioners and Traditional Owners the advantage of anticipating sludge deposits and creating adaptive excavation methodologies. In turn, this approach minimises the chance of inappropriate excavation methodologies, data loss, and incorrect site formation analyses.

A spokesperson for Jacobs said the work has had a real impact; “The desktop review prepared by Hil and Kurpiel of mining-related impacts across the Western Renewable Link was instrumental in understanding how sludge accumulations cap natural alluvial soil profiles, along with any associated Aboriginal cultural heritage contained therein. As a result, the findings of the report regularly informed the conduct of archaeological excavations for the Project.”

Historical gold mining transformed Victoria’s landscape. Mining

Wadawurrung Traditional Owners Aboriginal Corporation and AusNet Services have kindly given permission for this information to be shared.



Protecting aquatic ecosystems is essential to biodiversity and sustainable resource use. We advance [SDG 14](#) through research that improves water quality, supports ecosystem monitoring, and informs conservation strategies.

AI SYSTEM MAPS AUSTRALIA’S COASTLINE FROM SPACE

Australia’s coastline is under increasing pressure from coastal development, industrial expansion, and climate change. Traditional water quality monitoring methods can’t provide the real-time, comprehensive coverage needed to protect marine ecosystems and coastal communities.

Harmful algal blooms, toxic runoff, and water quality degradation can develop rapidly, yet remain invisible until they reach crisis levels. Government agencies and environmental regulators need better tools to see what’s happening beneath the surface.

To address this challenge, La Trobe researchers have [developed HyperEst](#), a machine learning framework designed for large-scale aquatic monitoring. The framework is part of La Trobe’s partnership with [CSIRO’s AquaWatch](#) program. AquaWatch monitors and forecasts water quality across Australia and globally using Earth observation satellites and ground-based sensors to provide early warnings of harmful events like toxic runoff and algal blooms.

Led by Professor [Wei Xiang](#), HyperEst delivers significantly improved prediction accuracy for key water quality indicators like chlorophyll-a (which is a marker of algae concentration), compared to baseline NASA algorithms.

As of early 2026, the framework had already generated over 500 high-resolution water quality maps covering approximately 692

square kilometres of Australian coastline. These maps are hosted on CSIRO’s ADIAS platform, serving as an operational benchmark for internal evaluation and strategic review by organisations including the Department of Water and Environmental Regulation in Western Australia and Queensland Government agencies.

HyperEst enables these agencies to visualise coastal water quality trends with consistency across diverse environments. The maps improve visibility of current conditions, help target investigations and interventions more effectively, and enhance oversight of risks associated with port development, maritime infrastructure, aquaculture, and sensitive ecosystem protection. They also allow government agencies to track the outcomes of water management policies over time, providing evidence-based demonstration of improvements.

The experimental results highlight HyperEst’s scalability and robustness, representing a significant step forward in developing globally applicable models for water quality estimation from space observation.

The work advances Australia’s contribution to global water security goals, but its immediate value is closer to home – giving regulators and communities the tools to protect the coastlines, waterways, and marine ecosystems that define much of Australian life.

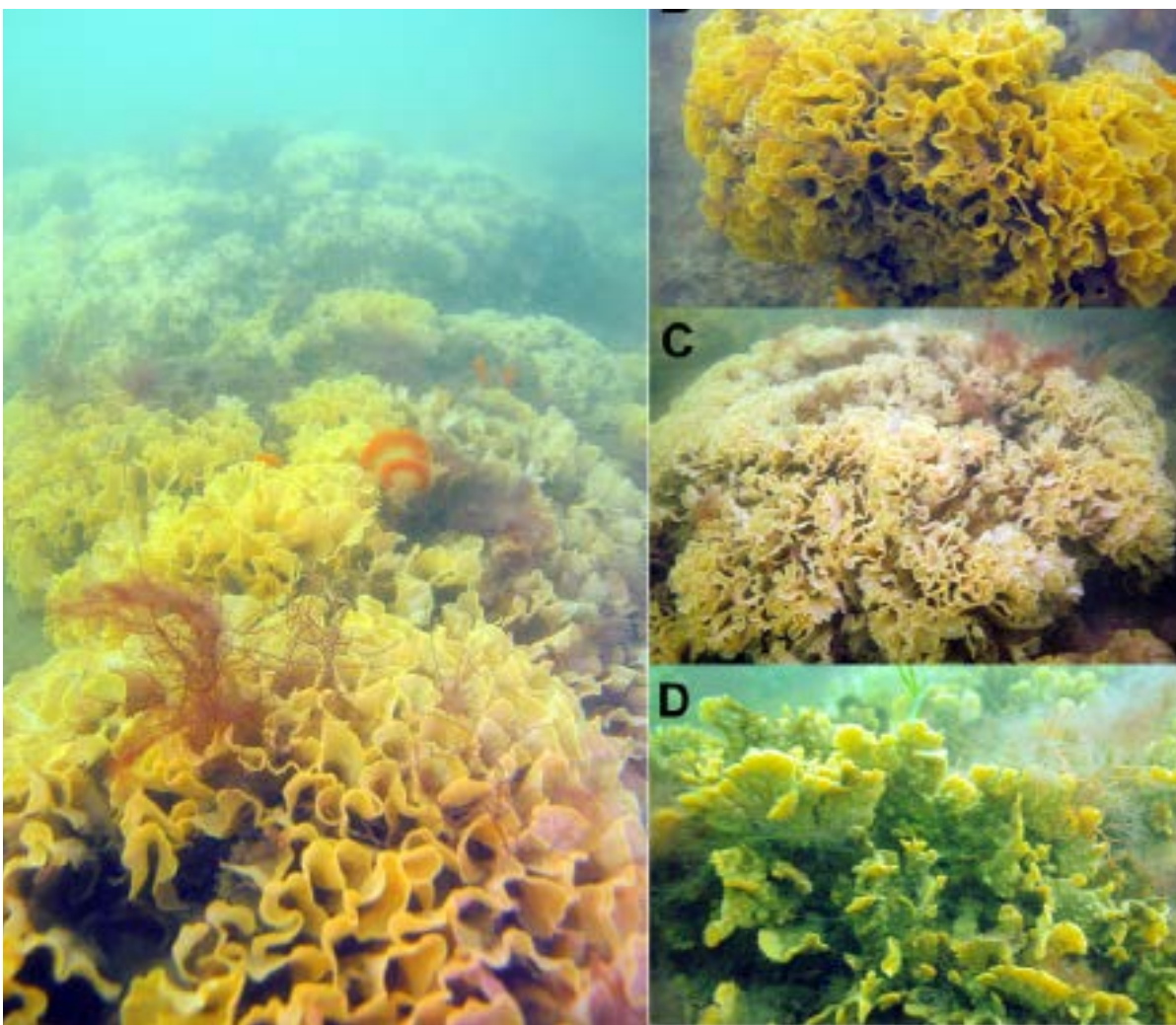
THE SECRET REEFS OF WESTERN PORT

For decades, ecological assessments of Melbourne’s Western Port largely overlooked what lay beneath its turbid waters. Although the bay has been listed under the [Ramsar Convention](#) since 1982, its hidden bryozoan reefs remained undocumented, leaving a significant gap in understanding the region’s biodiversity and management needs.

This changed in 2016, when Dr [Travis Dutka](#) from La Trobe’s [Department of Ecological Plant and Animal Sciences](#) and industry partner Dr Adrian Flynn re-examined historic seabed imagery and confirmed the presence of 1.74 square kilometres of bryozoan reef in the Eastern Arm, an ecosystem with no known precedent in Victoria. Their discovery prompted further underwater surveys, which by 2025 had identified two additional reef habitats in the North Arm and Western Arm.

Subsequent research demonstrated that these fragile, slow-growing reefs provide critical habitat for a diverse range of species, including worms, crustaceans, molluscs, sponges, and juvenile fish not found on surrounding soft sediments.

These findings have had significant implications for the management of Western Port. In recognition of their rarity and



vulnerability, the reefs were formally recommended for listing under the Flora and Fauna Guarantee Act 1988 in 2022.

In 2025, the [Western Port Ramsar Information Sheet](#) underwent its first major update in three decades, incorporating bryozoan reefs into monitoring and conservation priorities. Through the Ramsar Awareness Project, the Western Port Biosphere now actively engages with boaters, recreational clubs, and schools to promote responsible anchoring practices and wetland stewardship, helping to ensure these unique reefs are protected as part of Western Port’s natural heritage.



Healthy terrestrial ecosystems are vital for biodiversity, climate stability and livelihoods. La Trobe contributes to [SDG 15](#) through research that supports land restoration, biodiversity conservation and sustainable land management.

Working with governments, industry and Indigenous communities, we integrate ecological knowledge into decision-making and strengthen environmental stewardship.

FROM INVISIBLE TO INVALUABLE: REDEFINING FARM PROFITABILITY



Fifty-eight per cent of the Australian continent is used for agriculture, and natural capital assets – like soil, water, plants and animals – underpin agricultural production. Yet these assets are not considered in conventional financial accounting.

Director of the [Research Centre for Future Landscapes](#), Associate Professor [Jim Radford](#) is guiding businesses to measure and account for the value that natural capital contributes to their core production and profitability.

“Natural capital generates a range of ecosystem services – like shade, shelter, pest control, waste decomposition, fertile soils and productive pastures – that are critical for livestock growers. It’s not an add-on or a nice-to-have – it is core to production and improves the financial and environmental bottom line of livestock farm businesses,” says Dr Radford.

Through the ‘Farm-scale Natural Capital Accounting’ project, Dr Radford and his team created the methodology and processes to measure natural capital at the farm scale and help farmers understand whether their management is building, maintaining, or mining their farm’s natural capital.

Working with [Farming for the Future](#), an initiative supported by the Macdoch Foundation, the team then analysed the relationships between on-farm natural capital and business performance, demonstrating that farms can simultaneously be productive, profitable, and build natural capital through ecosystem

management and sustainable farming practices.

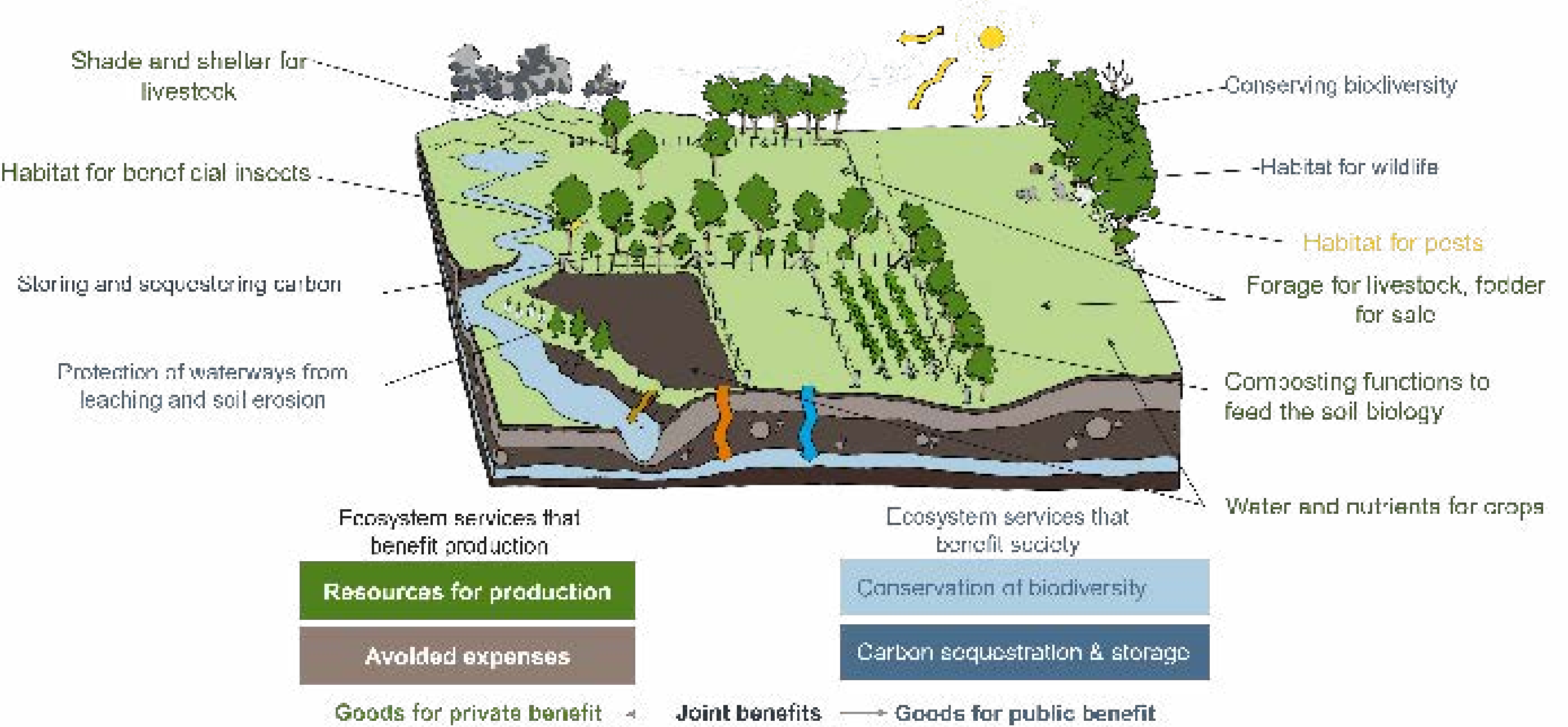
The [2025 Farming for the Future Impact Evaluation](#) shows that 74 per cent of farmers in the program agreed or strongly agreed that combining natural capital with economic reports has the potential to change how natural capital is managed on Australian farms.

The team adapted their natural capital work to support the [Woolmark Plus Nature Positive Farming](#) initiative, a science-based framework for measuring sustainability and environmental performance on Australian wool-growing farms.

Through extensive consultation with Australian wool-growers, certification organisations, buyers and brokers, and global fashion brands, the measures of natural capital were distilled down to 10 core outcome-focused metrics, published by Woolmark in 2025. A key element of the Nature Positive Farming metrics is that they account for regional variation in climate and other environmental factors while maintaining scientific rigour, a feature strongly supported by industry stakeholders. By combining the current status and trend over time of the 10 core metrics into an overall “nature positive farming” score for individual wool properties, the framework establishes a robust, science-based pathway for sustainability reporting and certification.

Watch Dr Radford speak about the project here: [From invisible to invaluable: La Trobe research redefines farm profitability](#)

Natural Capital Generates Inflows (+ some outflows) of Economic Benefit



PEACE, JUSTICE AND STRONG INSTITUTIONS



Inclusive, transparent and accountable institutions are key to sustainable societies. La Trobe supports [SDG 16](#) through research that strengthens governance, justice systems and institutional capacity.

Our research has informed policy reform, improved accountability mechanisms and promoted human rights, contributing to more effective and inclusive institutions.



PHOTO CREDIT: PHILIPPINE NAVY

BUILDING STRONGER MARITIME JOURNALISM ACROSS SOUTHEAST ASIA

Journalists worldwide are increasingly expected to explain complex, fast-moving geopolitical issues while working with fewer newsroom resources. Maritime governance and security in Southeast Asia is a clear example. Reporting in this area is often hindered by limited access to specialised training, scientific expertise, and government briefings, increasing the risk of public misunderstanding and poorly informed policy debates.

To help address this gap, La Trobe University's [Centre for Global Security](#) launched the Southeast Asia Maritime Media Visits Project in April 2025, led by Dr [Lupita Wijaya](#).

The initiative draws on Dr Wijaya's experience as a former journalist covering South China Sea disputes, where maritime issues are technically complex and geographically distant. She recognised that [connecting journalists with experts](#), policymakers, and each other would lead to stronger, more informed reporting.

Through targeted workshops, expert partnerships, and field engagement, participating journalists have already produced more than 50 stories across major regional outlets. Stories have examined maritime environmental protection, the international rules-based order at sea, gender and community perspectives, and the impacts of maritime conflict on traditional fishing communities.

"The most important outcome is building something that did not previously exist," Dr Wijaya said. "That is ensuring journalists

know and trust each other. In Southeast Asia, where exclusive economic zones and maritime boundaries are complex, condensed, and often overlapping, these conditions create shared problems, shared interests, and a need for collective support."

INTERNATIONAL IMPACT OF MORAL INJURY RESEARCH

In 2025, moral injury was formally recognised by the American Psychiatric Association (APA) through an update to the DSM-5-TR, the handbook used worldwide to classify mental health conditions. This milestone reflects years of international research and advocacy, including significant contributions from La Trobe University's Associate Professor [Lindsay Carey](#), CSM.

Associate Professor Carey was a [lead researcher and author](#) in a global collaboration with Harvard University, Duke University and the APA DSM clinical committee. Their work ensured that moral injury was acknowledged as a distinct form of biopsychosocial-spiritual harm, encompassing experiences that lead to a 'moral, religious, or spiritual problem' and consequently 'disrupt a person's sense of right and wrong or their perception of themselves, others or institutions'.

In October 2025, Associate Professor Carey was invited to deliver a keynote address at a [NATO Science and Technology Organization Human Factors and Medicine](#) workshop (NATO-STO-HFM) in Sweden. Addressing military and academic experts from leading institutions and armed forces across Europe and North America, he presented on the meaning, measurement and management of moral injury.

This keynote marked one of the first occasions an Australian researcher served as a keynote speaker at a NATO STO HFM workshop, highlighting La Trobe University's growing international leadership in moral injury research.

PARTNERSHIPS FOR THE GOALS

17 PARTNERSHIPS
FOR THE GOALS



La Trobe's research makes significant contributions to [SDG 17](#) through global, cross-sector collaborations that drive research translation, policy reform, and capacity building.

We have partnerships spanning governments, multilateral organisations, industry, and community groups across Australia, the Indo-Pacific, Europe, Africa, and the Americas involving more than 70 different countries.

TRANSFORMING DEVELOPMENT BY LISTENING TO LOCAL VOICES

International development often operates in a hierarchical manner, with experts from wealthier countries dictating how to solve problems in distant communities.

Dr. [Lisa Denney](#), Director of La Trobe University's [Centre for Human Security and Social Change](#) (CHSSC), and her team are demonstrating a better approach, one that supports and understands how to create positive social change by empowering local communities.

Since 2010, CHSSC has worked directly with communities in Australia's Northern Territory, the Pacific Islands, and Southeast Asia. Their guiding principle is that those most affected by development programs should decide how these programs are designed, implemented, monitored and evaluated.

CHSSC supports and investigates processes of positive social change by centering locally-led and locally-owned initiatives grounded in evidence.

"What matters is the real-world impact of our work, how it benefits the organisations and communities we support," Dr. Denney explained.

One example is CHSSC's partnership with the Warlpiri Education and Training Trust (WETT) and the Central Land Council (CLC), which began in 2019. Together, they have evaluated programs funded by mining royalties, developed frameworks for monitoring and assessing progress, and communicated findings in ways that resonate with Warlpiri communities.

In 2025, La Trobe Senior Yapa Researcher Glenda Napaljarri Wayne, WETT Advisory Committee members and Central Land Council staff presented the WETT methodology at the [World Indigenous Peoples Conference in Education](#). Combined with CHSSC's knowledge-sharing across Australia, the Pacific, and at major evaluation conferences, this work is raising the visibility and legitimacy of Warlpiri-led research nationally and internationally.

In Southeast Asia, CHSSC has examined the links between [disability and human trafficking](#). Their research became the first in the region to document the lived experiences of trafficking survivors with disabilities and the barriers they face in seeking justice and support. In 2025, this research contributed to a series of detailed country reports, translated into several local languages to support national implementation. The work also inspired new disability-inclusive resources in Vietnam and updates to trafficking guidelines and national action plans in Indonesia. The study was presented at the [OSCE Anti Trafficking](#)

[Alliance](#) – highlighting the need for disability-inclusive responses – and in 2025, the findings informed a [Briefing Paper for the U.N. Special Rapporteur](#) on trafficking in persons, especially women and girls, and the U.N. Special Rapporteur on the rights of persons with disabilities.

CHSSC's collaborative approach is shaping how major development partners address accountability in development. Working with the United Nations Development Programme across [six Pacific Island countries](#), CHSSC researchers found that communities had established sophisticated accountability systems that often looked different to models in donor countries. CHSSC advocates for these local systems to be recognised and incorporated in efforts to strengthen accountable governance in the Pacific.

As a result, UNDP supports coalitions of local accountability actors in two countries, advancing governance improvements that reflect their unique cultural contexts and political realities.

"If we can better represent the perspectives of frontline actors of social change, then we achieve more sustainable and meaningful outcomes," Dr. Denney said.

Watch Dr Denney speak about the Centre here: [Transforming International Development through Locally-Led Change](#)





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