UNSW

Australia's Global University
The University of New South Wales

Accelerating the Asia Pacific towards the Sustainable Development Goals

UNSW
Institute for
Global Development

This publication was prepared by the
UNSW Institute for Global Development (IGD)

The IGD was established under the UNSW's Strategy 2025 as a critical component of the University's ambitious agenda for global impact. The IGD directly responds to UNSW's strategic priority of Social Impact, specifically delivering on the vision to 'tackle real-world problems through partnerships that bring together our students, staff, alumni and the community, aligning our efforts with UNSW's expertise and research strengths, Australia's aspirations and the United Nations Sustainable Development Goals.'

The IGD links up and leverages UNSW expertise on development priorities in and around Australia, contributing to critical alliances and evidence-based practice to achieve social impact through technology and science. This is achieved through collaboration with the Australian government, industry, and strategic partners in and around the Asia Pacific region.

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UNSW
Australia's Global University

In a global, crisis-ridden context of climate change and disaster; food, water, and energy insecurity; and conflict, displacement, and migration, the University of New South Wales' expertise is playing a critical role.

Universities are crucial to the achievement of the Sustainable Development Goals (SDGs) globally. Our unique position as creators and disseminators of knowledge and as key drivers of innovation, economic development, and societal wellbeing puts us in a position to lead and effect change. With a proud history as a trailblazer in issues of social justice and social impact since its establishment, the University of New South Wales (UNSW) has been strengthening its commitment to the SDGs and to furthering our ambitions and efforts.

The following pages provide examples of UNSW's impact on society through thought leadership, innovation and engagement; knowledge exchange and academic excellence; and research quality. In particular, UNSW's global reputation as one of Australia's leading research universities is a key reason for its enduring partnerships with industry, government, and the United Nations in the service of pressing developmental challenges and disruptions of the twenty-first century.

In 2023, UNSW ranked in **18th place globally** in the **Times Higher Education (THE) Impact Rankings** - the first global attempt to measure university progress around SDGs adopted by all United Nations states.

1 NO POVERTY

End poverty in all its forms everywhere

The Social Policy Research Centre (SPRC) at UNSW tackles critical social issues with a focus on poverty, inequality, wellbeing and justice. They have particular expertise in the extent and nature of poverty in **Australia** as well as **China, Indonesia, Bhutan, Maldives, Nepal** and **Pakistan,** where the SPRC has produced research and analysis on poverty reduction and child protection, including for the **World Bank** & **UNICEF**. Strategic initiatives include research on the impact of SDG 1 on child poverty internationally.

UNSW's long-term partnership, research and impact collaboration with **the Australian Council of Social Service (ACOSS)** is sharpening the national focus on poverty and inequality in Australia through high-quality research, policy development and advocacy to effect change. Backed by a consortium of 13 NGO and philanthropic partners, the collaboration monitors trends in poverty and inequality over time, explores drivers, and develops solutions to sharpen the focus and stimulate action to tackle these policy challenges.

Yuwaya Ngarra-li is an initiative that promotes two-way learning between Walgett's **Dharriwaa Elders Group** and a range of UNSW faculties. Through the Yuwaya Ngarra-li partnership, the Dharriwaa Elders Group and UNSW work in partnership to improve the wellbeing, social, built and physical environment and life pathways of Aboriginal people in Walgett by collaborating on evidence-based programs, research projects and capacity building, and by evaluating this model of 'CommUNIty-Led Development' as a way of working with other Aboriginal communities.

UNSW is committed to research, education, and partnerships that tackle poverty, inequality, wellbeing and justice.

Our centres, our people and our projects tackle socio-economic issues, enabling and empowering people, particularly disadvantaged groups, to improve their quality of life.

2 ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

In pursuit of zero hunger, our collaborative projects are reducing salt in diets worldwide and co-designing better aquaculture processes to support sustainable livelihoods in Papua New Guinea, Vietnam and Indonesia.

The UNSW Future Food Systems Cooperative Research Centre (FFSCRC) was created to support innovation and growth across the value chain. The FFSCRC consortium brings together leading experts and laboratories across the many disciplines needed to transform the sector to create global impact in sustainable, nutritious and secure food systems. FFSCRC partners with the **George Institute for Global Health,** a leading independent global medical research institute with major centres in **Australia, China, India** and the **UK**, and a network of experts and collaborators.

TGI's food policy team work globally to reduce death and disease caused by diets high in salt, harmful fats, added sugars and excess energy. In 2013 The George Institute was designated a **World Health Organisation** Collaborating Centre on Population Salt Reduction, with a remit to support countries worldwide to achieve the new 2025 target for reducing salt by 30%.

The Food and Health Cluster in the School of Chemical Engineering drives innovation in the interconnected research areas of health, food process engineering and sustainability. Researchers are delivering real-world impact in food science, nutrition and engineering, assessing population-wide nutrition status to identify gaps in infant nutrient intakes with a view to improving public health. Professor Jayashree Arcot's work at the intersection of chemical engineering and public health nutrition is addressing micronutrient malnutrition in the Asia Pacific region through food-based interventions.

The **UNSW Aquaculture Research Group** (ARG) conducts research and capacity building activities to improve aquaculture production for food and income security in the Asia Pacific. For over 10 years, Associate Professor Jes Sammut has collaborated with the **National Fisheries Authority** in **Papua New Guinea**. Professor Sammut and his team lead a fish farming research project which includes teaching better aquaculture practices to people in remote villages. This includes how to dig ponds, manage water quality, feed fish, identify the sex of fish, and increase fishpond yields. This project has become part of a long-term strategy to address food and income security through fish farming research in the Asia Pacific region. ARG also collaborates with the **PNG University of Technology** in Papua New Guinea, **Can Tho University**, the **Cuu Long Rice Research Institute** and the **Research Institute for Aquaculture** in **Vietnam**, and the **Ministry of Marine Affairs and Fisheries** in **Indonesia**.

Ensure healthy lives and promote well-being for all at all ages

UNSW is the lead academic institute for the **Asia Pacific Observatory on Health Systems and Policies** (APO) and the **UNSW School of Population Health** is one of five universities across the Asia Pacific region that provides policy research inputs to the APO. Focusing on providing evidence-based policy advice, the School has provided advice to Pacific leaders to address pertinent policy challenges, including the ageing Pacific population, the use of digital health to achieve universal health coverage goals, and health system governance and financing reform.

The **Global Health Equity and Justice Research Group at the Kirby Institute** is an interdisciplinary group, grounded in principles of community engagement, equitable partnerships, and improved access to health care for vulnerable and key populations globally, with particular emphasis on the Pacific and Asia. The group has wide-ranging expertise, including in HIV, sexually transmitted infections, human papillomavirus (HPV) and cervical cancer, tuberculosis as well as broader sexual, reproductive and maternal health issues. The Kirby Institute has a long-term partnership with the **PNG Institute of Medical Research**, collaborating to improve HIV viral load testing and detection of drug resistance in **Papua New Guinea**, which has the highest burden of HIV in the Pacific region.

The George Institute's (TGI) Global Injury Research Program is a designated **WHO Collaborating Centre on Injury Prevention and Trauma Care**, aiming to improve the safety of men, women and children, especially those in low and middle income countries, and optimise their care and rehabilitation in the event of an injury. Research undertaken in **Fiji** and **Samoa** by TGI resulted in significant policy changes that are helping to reduce salt intake in Pacific Island countries.

UNSW Medicine & Health is the lead academic institute for the Asia-Pacific Observatory on Health Systems and Policies, providing guidance on the role of digital health, including telemedicine and peer-supported clinical decision-making; policy responses and planning for an ageing Pacific population.

4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

UNSW is one of 16 member universities of the **Australia and New Zealand School of Government** (ANZSOG), a regional education institution, which provides teaching and government-focused research relevant to the public sector. To address the need for increased support to universities and think tanks in the Pacific, particularly with reference to policy and administrative capacity-building for the civil service along the lines of ANZSOG, UNSW is expanding mentorship and training opportunities for civil servants in the Pacific on policy responses to pressing developmental challenges.

UNSW's School of Education is actively engaged in high-impact projects in the education system in Australia and abroad. For example, the **UNSW Gonski Institute for Education** brings together world-leading scholars, policymakers and practitioners to conduct research that will help to improve academic and wellbeing outcomes throughout Australia, particularly for disadvantaged students and those in rural and remote areas, with implications for educating disadvantaged students worldwide.

The **Australia Graduate School of Management (AGSM)** at the UNSW Business School offers innovative, experiential, world-class programs designed to equip a new generation of leaders to make an impact in an accelerating world. In addition to degree programs and short courses, UNSW is offering opportunities for senior civil service and security personnel from the Asia Pacific to obtain certification and training.

UNSW's commitment to increasing social impact includes ensuring a more equitable, diverse, and inclusive student community. Through its ambitious **Gateway Equity** target, UNSW is committed to ensuring that 25 per cent of commencing undergraduate domestic students will be from low-socio-economic backgrounds and/or socio-educationally disadvantaged schools by 2027.

UNSW is offering mentorship and training for civil servants in the Asia Pacific on policy responses to pressing develop-ment challenges.

UNSW partners with one of Africa's newest universities, **Gulu University, Uganda** to develop programs for Gulu University academic staff, and support visiting research fellowships and PhD scholarships (in both directions) in areas of shared interest such as mental health, justice, renewable energy, and infectious diseases.

Achieve gender equality and empower all women and girls

The Gendered Violence Research Network (GVRN) is a joint initiative of the **UNSW faculties of Arts, Design & Architecture and Law & Justice**. The GVRN undertakes rigorous and reliable multidisciplinary research, which focuses on real-world outcomes, uniting UNSW's significant domestic and international research expertise to respond, prevent and end gendered violence in Australia and beyond.

GVRN's activities include providing extensive training, advisory and research activities around preventing family violence in **Papua New Guinea** and preventing sex trafficking and domestic violence in Asia. Recently, the GVRN has performed evaluations of Commonwealth and State gendered violence prevention programs.

UNSW's increasing focus in the region includes engagement with **UN Women** to support building safer university campuses in **Timor-Leste**, including interacting to support the development of action plans to prevent gendered violence. In **Papua New Guinea**, UNSW is exploring the development of secure digital platforms for women to network, obtain legal advice, seek funding and engage in advocacy on issues related to gendered violence.

Dr Joyce Wu, of the **UNSW School of Social Sciences**, is currently the Gender and Social Inclusion Advisor for the Australian Government's **Australian Centre for International Agricultural Research** (ACIAR): South Asia, South-East Asia, Pacific Island Countries, assisting ACIAR to implement a gender lens into their agricultural research and ensuring that women have the opportunity to benefit from research and development.

In partnership with the UN in Papua New Guinea, UNSW is exploring the development of secure digital platforms for women to network, obtain legal advice, seek funding and engage in advocacy on issues related to gendered violence

Ensure availability and sustainable management of water and sanitation for all

The **UNSW Global Water Institute** (GWI) is a world leader in water research, innovation and problem solving, and a truly multidisciplinary venture. Drawing on water expertise from 400 researchers, seven faculties and 13 specialist centres across the University, the Institute has created Australia's most advanced water knowledge hub.

GWI provides secretariat support for the **Water Policy Group**, partnering to produce the Global Water Policy Report—the result of a global survey of water ministers and national water agency heads—and specific reports tailored to the Asia Pacific region.

In collaboration with the **Water Authority of Fiji,** GWI also supported the inclusion of a side event at the **UN 2023 Water Conference** where Pacific Ministers shared the challenges facing Pacific Island Countries and Territories and discussed the concrete actions that must be taken to meet SDG 6.

The **Water Research Centre** (WRC), part of the School of Civil and Environmental Engineering in the Faculty of Engineering, has over 60 years of experience providing multidisciplinary research in water resources, engineering and developing tools to improve aquatic and atmospheric environments. Much of WRC's work is relevant to the Asia Pacific, including the research of A/Prof Martin Andersen who is is investigating seawater ingress into drinking water aquifers in the Pacific, and its effect on water quality.

Australia's most advanced water knowledge hub, the UNSW Global Water Institute, provides support to Pacific Island governments, communities and private sector to provide solutions to the estimated 1.8 million people in the region who are living without safe sanitation

Ensure access to affordable, reliable, sustainable and modern energy for all

The **UNSW Energy Institute** comprises the largest and most diverse grouping of energy experts in Australia, and for more than 30 years, UNSW has carved a formidable reputation as one of the world's leading research and technology hubs for energy innovation. The first PERC solar cell was invented in the labs at the **School of Photovoltaic & Renewable Energy** (SPREE) in 1983 and today powers more than 85% of all new solar panel modules all over the world, a development for which Scientia Professor Martin Green was awarded the **2022 Millennium Technology Prize**.

SPREE continues to be at the forefront of leading-edge research and development in the field of renewable technology as our economies transition away from fossil fuels. For example, Professor Richard Corkish is leading the **Énergie Renouvelable Vanuatu** (UNSWERV) project, which has had several thesis projects associated with it. The project addresses basic communications and lighting needs for health and education in remote villages, using solar energy.

Technical innovation is complemented across UNSW with specialists working on policy analysis, economic and market design, laws, standards and regulation, social acceptance and energy equity. Associate Professor Paul Munro, from the UNSW **School of Humanities & Languages**, for example, works on political ecology analysis of **Vanuatu's** grid electricity policies, helping to provide off-grid renewable energy access.

Scientia Professor Rose Amal, Co-Director of the **ARC Industrial Transformation Training Centre for Global Hydrogen Economy** is pioneering research on affordable renewable fuels, which will be transformational for Small Island Developing States, which are dependent on aviation and shipping fuels for commerce and movement.

In 2023, UNSW's Professor Renate Egan was named co-chair of the **Australia-India Solar Taskforce,** which aims to accelerate solar PV deployment and enhance supply chains across the two nations.

The PERC solar cell was first invented at UNSW in our labs in 1983 and today powers more than 85% of all new solar panel modules all over the world

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

UNSW Law & Justice is facilitating leadership from the business and human rights sectors to examine how Australia's legal framework can ensure that business practices detect and prevent modern slavery, through methods such as mandated corporate disclosures. With the support of the Australian **Department of Foreign Affairs and Trade** (DFAT), Dr Mario Gomez and Professor Melissa Crouch are working on a project that seeks to reimagine vulnerability in light of COVID-19 in **Sri Lanka**. Law & Justice is the home of the **Australian Human Rights Institute**, which works in partnership with government, industry and human rights defenders through advocacy, education and public engagement to work towards a world where each person and community can realise their rights.

UNSW UNOVA is a transdisciplinary research and development lab, founded in **UNSW Business School**, which brings industry partners and government, together in research to inform policies and practices with positive societal impact. With the support of the **Australia-ASEAN Council of DFAT**, UNOVA's research demonstrates the effect of e-commerce and the current state of women's digital entrepreneurship initiatives in **Indonesia**. UNSW UNOVA's short courses (Skills@UNOVA) are designed to help people maximise their potential and develop skills to meet challenges in a rapidly changing digital economy, regardless of their starting points.

Dr Joyce Wu, from the **UNSW School of Social Sciences,** is currently working on an evaluation with the **International Food Research Institute**, 'Gender-Sensitive Risks and Options Assessment for Decision Making (ROAD)' to Support Work in Freedom Phase 2', an **International Labour Organization** programme in **Bangladesh, Nepal** and **Lebanon**, funded by the UK Government. The programme aims 'to reduce vulnerability to trafficking and forced labor of women and girls across migration pathways leading to the care sector and textiles, clothing, leather and footwear industries (TCLFI) of South Asia and Arab States.'

Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

UNSW is host for the $15M NSW Decarbonisation Innovation Hub, supporting critical sectors to collaborate and increase the uptake of new technologies to decarbonise NSW.

UNSW is home to the **New South Wales Decarbonisation Innovation Hub,** which is led by UNSW Scientia Professor Deo Prasad. The flagship government initiative works to achieve the goal of reaching net zero emissions by 2050. The Hub brings together government, industry and researchers to fast-track decarbonisation technology.

The **UNSW Centre for Infrastructure Engineering and Safety** facilitates advanced research in all aspects of civil engineering infrastructure, including building structures, bridges, tunnels, roads, railways, pavements and materials. Its vision is to be the leading internationally recognised research centre in the region for investigating, understanding and predicting the safety and behaviour of engineering infrastructure. The Centre's Professor Adrian Russell has been involved in an ARC-funded project which aims to prevent catastrophic dam failures worldwide, saving lives and the environment.

Founded by 2021 NSW Australian of the Year, Scientia Professor Veena Sahajwalla, the **UNSW Centre for Sustainable Materials Research and Technology (SMaRT)** is renowned for pioneering innovative environmental solutions for the world's biggest waste challenges. The SMaRT Centre is behind the invention of Green Steel, an important technology that is enabling the decarbonisation of steel production, which accounts for 7 per cent of global carbon emissions. The SMaRT Centre is also at the forefront of innovative MICROfactorie technologies, which convert waste materials, such as glass, plastic and textiles into new value-added materials and products, such as engineered green ceramics.

Reduce inequality within and among countries

UNSW strives to be an international exemplar in equity, diversity, and inclusion, and in 2017 was the first Australian university to appoint a Deputy Vice-Chancellor Equity Diversity & Inclusion. In 2021, UNSW awarded over $6 million in Equity Scholarships to almost 1,000 students, and in 2023, the University committed to a new ambitious target, which will see 25 per cent of commencing domestic undergraduate students drawn from sectors of society historically under-represented in higher education by 2027.

UNSW is committed to improving the wellbeing, social, built and physical environment, and life pathways of Indigenous peoples, in Australia and the region. Professor Megan Davis is Chair of the **UN Expert Mechanism on the Rights of Indigenous Peoples** and has provided instrumental leadership for constitutional reform in Australia. Through the **Yuwaya Ngarra-li partnership,** UNSW is conceptualising and testing a new model of 'CommUNIty-Led Development', where the University is embedded in and responsive to community needs and priorities rather than academic paradigms or metrics.

UNSW researchers, led by Professor Daniel Robinson, have supported the implementation of the **Nagoya Protocol** in 11 Pacific Countries, helping to protect traditional knowledge, promote local bio-economies, and encourage fair and equitable benefit sharing to improve outcomes for the local producers all across the Pacific. Nutrition researchers at **The George Institute for Global Health's centre in India** recently concluded a study assessing the indigenous food systems of vulnerable tribal communities in India, promoting resilient, nutritious, and sustainable food systems.

Millions of people are displaced by catastrophic natural events, conflict, human rights abuses and climate change impacts. The **Andrew & Renata Kaldor Centre for International Refugee Law** creates safe, lawful and sustainable mobility pathways for refugees and displaced people. They are examining how countries have used humanitarian corridors to provide safe passage, and how community sponsorship schemes and migration opportunities can open up additional avenues for protection.

Focusing on global financial stability, banks' systemic risk and financial institutions, the **Institute of Global Finance** (IGF) seeks the promotion of global prosperity and reliable and effective global governance. Serving as a leading finance advisory body for policymakers, IGF collaborates closely with works with **NYU Stern Business School's Volatility and Risk Institute** and undertakes research work hand in hand with major regional research centres located throughout the Asia Pacific. IGF has strong and valuable relationships within the finance industry and regulators.

The **Social Policy Research Centre** partners with government and NGOs in the Asia Pacific to improve the wellbeing of people with disabilities. A project in **Indonesia** is exploring the implementation of quota policies, while a project in **China** is examining cultural considerations regarding services and family support for children with disabilities. SPRC has also partnered with **UNSW's Department of Developmental Disability Neuropsychiatry (3DN)** to evaluate the Statewide Tertiary Intellectual Disability and Mental Health Hubs. Evaluations assess the outcomes of the Hub model to improve services.

SPRC has also conducted research for **Australia's Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability** on co-teaching approaches to inclusive education; changing communities' attitudes and behaviours towards people with disability and access to services for people with disability from culturally and linguistically diverse backgrounds.

The **UNSW Disability Innovation Institute** (DIIU) is a world-first initiative that harnesses inclusive, interdisciplinary research to seek solutions alongside people with disability. In 2022, Rosemary Kayess, one of the DIIU's academic leads, was re-elected as **Chair of the United Nations Committee on the Rights of Persons with Disabilities**. In 2023, in partnership with the UNSW Australian Human Rights Institute, DIIU led the Asia Pacific regional consultation process to formulate inputs for the UN Committee on the Rights of Persons with Disabilities' comment on Article 11 of the Convention on the Rights of Persons with Disabilities relating to situations of risk and humanitarian emergencies.

The **Centre for Social Impact** (CSI) is a research and education collaboration between UNSW, **Swinburne University of Technology**, the **University of Western Australia**, and **Flinders University**. CSI's research develops and collates knowledge to understand social challenges and opportunities across issues including health, children and young people, ageing and disability, financial inclusion and employment, population diversity and mobility, education and housing. CSI produces the Australian Social Progress Index – the only tool that holistically measures social equity in Australia.

11 SUSTAINABLE CITIES AND COMMUNITIES

Make cities and human settlements inclusive, safe, resilient, and sustainable

UNSW has considerable research, development, and advocacy expertise supporting disaster risk reduction and humanitarian response. Operating as both a creativity incubator and a multidisciplinary research capability, the **Resilient Futures Collective** draws on the expertise of core specialists drawn from all UNSW Faculties active in understanding and mitigating the cascading and cumulative impacts of natural hazards and related disturbances.

Since 2005, the **UNSW City Futures Research Centre** (CFRC) has grown as a national leader in scholarly applied public interest research on cities to develop evidenced-based solutions for tackling the complex challenges of urban change and growth. Complimenting the CRFC, the newly established **UNSW Cities Institute** is an independent centre, established to lead the reinvention of our cities, advancing highly productive, sustainable, prosperous, healthy and socially just urban futures for New South Wales, Australia and globally.

In 2023, UNSW ranked 9th in the world in the THE Impact Rankings for SDG 11.

Professor David Sanderson is UNSW's Disaster Risk Reduction and Management lead for the **United Nations Development Cooperation Office for the Asia Pacific.** Professor Sanderson co-led the **Resilience Project,** a partnership between UNSW, the **Australia Pacific Security College** at the **Australian National University** and **Australian Red Cross**, which examined how **Fiji**, the **Solomon Islands** and **Vanuatu** are responding to increasingly frequent and severe tropical cyclones and floods. The new **HowWeSurvive** initiative is aiming to leverage systemic change in how community-centred recovery is understood and enacted in Australia and beyond. Professor Sanderson's recent research highlights how corruption increases vulnerability and worsens disasters triggered by natural hazards in the built environment. UNSW's work on Disaster Risk Reduction aligns with the UN development cooperation issue-based coalition on building resilience.

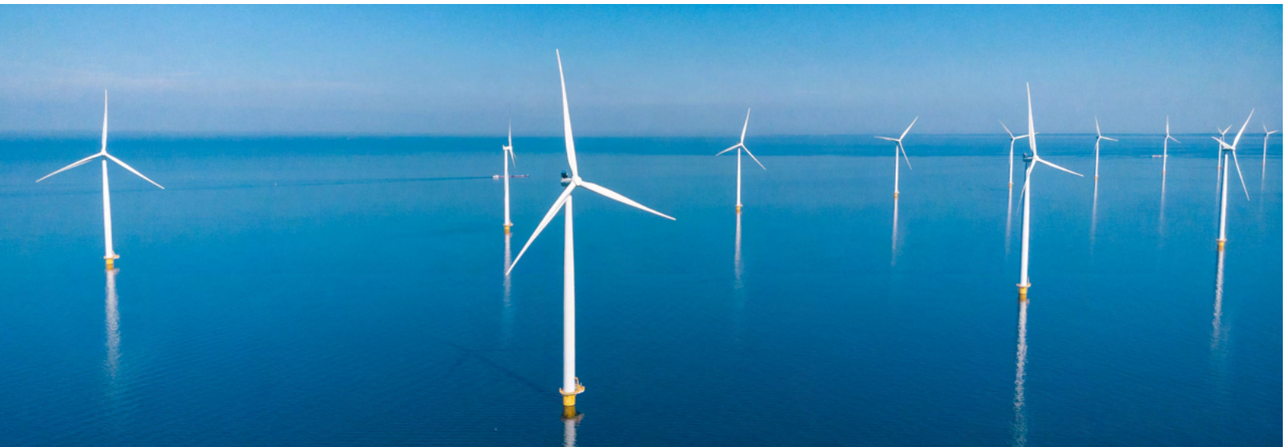
UNSW's academic lead for **Humanitarian Engineering**, Andrew Dansie, is collaborating with the **University of the South Pacific's Tonga** campus to increase data and information on the need for cleaner air in the Pacific and build capacity in-country to monitor air quality.

Ensure sustainable consumption and production patterns

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

The **UNSW Sustainable Manufacturing and Life Cycle Engineering Research Group**, within the School of Mechanical and Manufacturing Engineering, is currently partnered with the **ARC** and **Baxter Australia** to investigate how energy and water flow in manufacturing environments in order to identify hot spots for reduction or reclamation of energy and water usage.

Through the **Institute for Industrial Decarbonisation** UNSW is further investing in its leadership as a national and regional provider of industrial decarbonisation research and development and skills. Working across multiple laboratories and teams within the University, the Institute's initial focus is on developing new methods and technologies for decarbonising processes in construction, mining, manufacturing, industrial chemicals, and critical infrastructure. Professor Stephen Foster's research explores the greening of concrete/cement supply chain, while Professor Rose Amal leads the **ARC Training Centre for the Global Hydrogen Economy** and the **NSW Power Fuel Network**, including research into the development of sustainable aviation fuels.



Founded in 2008, the **Centre for Sustainable Materials Research and Technology (SMaRT)** at UNSW aims to develop novel research for sustainable materials and manufacturing processes, build industry partnerships to activate research for real-world impact and to disseminate green materials and manufacturing technologies that benefit industries, local communities, and enhance sustainable economic growth internationally. The key pillars of SMaRT, influencing Australian and worldwide practice, are the **Sustainable Communities and Waste Hub**, the **ARC Microrecycling Research Hub**, and the **ARC Green Manufacturing Research Hub.**

Through its partnership with the **Impact X Summit Sydney, Circular Australia**, and **Business Events Sydney**, UNSW is supporting discussions to better understand the synergies between the transition to a circular economy and climate action. Together, we are focusing on how climate adaptation and resilience provide specialised and sustainable employment opportunities, leveraging lessons and opportunities in Australia to scale within the region.

UNSW is supporting a 'joined-up'approach that coordinates Australian university and industry expertise on climate and the circular economy to support and shape the Australian-Pacific joint bid to host COP31 in 2026.

Take urgent action to combat climate change and its impacts

UNSW hosts over 700 academic staff undertaking research in climate change science, impacts, adaptation, mitigation, solutions, and policy across more than 30 Centres and Institutes. This includes foundational climate science and research into the impacts of climate change on security, law, policy, health, ecosystems, tourism, biodiversity, the built environment, coastal infrastructure, energy, decarbonisation, and water management.

The **UNSW Climate Change Research Centre** (CCRC) is one of Australia's largest research facilities dedicated to physical and biogeochemical climate science. Through novel models and evaluation frameworks, the CCRC is providing answers to questions on climate dynamics, global climate change, and extremes of weather and climate.

CCRC staff engage in a wide array of projects in the Asia Pacific, including to improve extreme rainfall projections for Southeast Asia, understand how El Niño and La Niña affect variations in the Indian Ocean, and downscaling future rainfall on Pacific Islands. With the support of the Global Climate Fund, CCRC is providing regional training to assist with national adaptation plans in developing countries.

The **UNSW Institute for Climate Risk and Response** brings together expertise from the Faculties of Science, Business and Law and Justice. In partnership with industry, the Institute focuses debate on the risks and opportunities of our changing climate. As a leading voice in climate risk and response nationally and in the Asia Pacific, it informs risk management frameworks regarding impacts of climate change for business, government and policymakers.

The **Andrew & Renata Kaldor Centre for International Law** is examining the role of international law in addressing mobility in the context of climate change and disasters and strategies for future law and policy-making. In 2016, the **UN High Commissioner for Refugees** appointed Professors Jane McAdam and Guy Goodwin-Gill to help develop its institutional strategy on climate change and disaster displacement. Their recommendations formed the basis for UNHCR's ongoing strategic engagement in this area.

The **Water Research Centre** (WRC), part of the School of Civil and Environmental Engineering, has over 60 years of experience providing multidisciplinary research in water resources and engineering. Work is underway to build resilience to climate change and its impacts in the Pacific, including research by A/Prof Kristin Splinter to improve coastal protection in the **Cook Islands**, and work by PhD student Eleanor Earl on improving the flood resilience of Pacific Island urban communities.

UNSW hosts the **International Universities Climate Alliance** (IUCA), an initiative established in 2020 by UNSW. The IUCA represents 47 world-class climate research universities across 25 countries, and the global academic lead for the IUCA is UNSW Scientia Professor Matthew England. Through the IUCA's Oceania Chapter, UNSW supported Pacific climate change ministers to participate at the **Australian Circular Economy Forum** and help shape the development of a 2030 circular economy roadmap.

UNSW co-leads the **Australian Centre for Excellence in Antarctic Science** (ACEAS), a consortium of eight Australian universities that seeks to improve projections of future climate and sea level changes, deepen understanding of the effect of climate change on the Antarctic, and identify the impacts of deglaciation on ecosystems.

Comprising UNSW, **The Australian National University** and **Monash University,** the **Universities Climate Consortium** (UCC) consolidates a significant grouping of strategic skills, resources and institutional investment on climate-related issues. The UCC represents about 80 per cent of the significant university-based teaching and research on climate issues in Australia.

UNSW is affiliated with the **UN Environmental Programme International Methane Emissions Observatory** (UNEP IMEO) and is advancing the use of atmospheric measurements of greenhouse gases for verifying the **United Nations Framework Convention on Climate Change National Inventory** submissions.

In 2023, UNSW ranked 2nd in the world in the THE Impact Rankings for SDG 13.

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

The **UNSW Global Water Institute** (GWI) focuses on Healthy Oceans and Coastlines as a core component of its work. This includes activities to protect ecosystems and infrastructure at the intersection of marine and freshwater environments, with a focus on identifying and adapting to anthropogenic threats including storm surge, sea level rise and pollution.

The **UNSW Water Research Laboratory** (WRL) is a world-leading fundamental and applied research organisation tackling the most challenging water engineering problems, WRL maintains CoastSat, an online open-source interactive platform that provides global longitudinal, remote sensing, satellite-derived shoreline position data on sandy coastlines worldwide.

The **UNSW Centre for Marine Science and Innovation** (CMSI) is a multidisciplinary mix of ecological and biological sciences, physical and biological oceanography, environmental impact assessment, as well as coastal geomorphology and engineering. CMSI focuses on researching fundamental knowledge on the functions, processes, interactions and changes in the marine environment and developing innovative solutions for management, conservation and economic developments. As part of the **Sydney Institute of Marine Science** partnership, CMSI's Living Seawalls project aims to revolutionise the way we think about building in the ocean by developing adaptable and affordable mechanisms to bring life back into marine developments across the world.

The **UNSW Centre for Ecosystem Science** (CES) engages in pioneering research on offshore artificial reefs, the first of which was deployed in the ocean off the coast of Sydney in October 2011. CES' recent research has shown that artificial reefs can increase fish stocks in estuaries with little natural reef.

The **Sustainable Development Reform Hub** (SDR Hub) coordinates worldwide activities of the **Global Ocean Accounts Partnership**, a multistakeholder partnership, co-chaired by the **Department of Fisheries and Oceans**, Canada and the **UN Economic and Social Commission for Asia and the Pacific**, which enables countries and other stakeholders to go 'Beyond GDP' to measure and manage progress towards sustainable ocean development. Its key achievements so far have included establishing global and regional communities of practice, supporting pilot activities in over 15 countries and securing high-level political commitments from 17 heads of government to develop national ocean accounts.

The SDR Hub also serves as the interim Secretariat of the **Pacific Blue Shipping Partnership**, an open coalition of Pacific Island Countries (co-chaired by **Fiji** and the **Marshall Islands**) that have established commitments to decarbonise their national maritime transport sectors through efforts to secure large-scale investment in low-carbon infrastructure replacement and development.

UNSW is a member of the **Australian Water Partnership** (AWP), an international initiative, funded by the **Australian Department of Foreign Affairs and Trade**, which draws on Australian expertise to respond to requests for water assistance from partners in the Asia Pacific region. The AWP is actively responding to the SDGs by working collaboratively to implement development activities, share knowledge, build capacity and improve water management approaches.

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

15 LIFE ON LAND

The **UNSW Centre for Ecosystem Science** (CES) produces high-level research impact in relation to the environment and land degradation. The CES is a unique unit within UNSW, with world-class researchers in ecosystem science and a diverse range of scientific expertise in terrestrial ecology, GIS, remote sensing and the use of conservation tools. The CES is involved in the reintroduction of locally extinct species, woodland restoration and strategic adaptive management. Led by Professor David Keith, CES is collaborating with scientists and practitioners from around the world to test the listing criteria on a range of ecosystems and develop novel tools to assist in their implementation. Like the Red List for Threatened Species, the **Red List of Ecosystems** will influence policy, assist allocation of conservation resources and contribute to slowing the loss of the world's biodiversity. This is important to governments and NGOs, who need credible methods to assess risks to biodiversity that are consistent, transparent and theoretically sound to support conservation policy and management.

Established in 2007, the **UNSW Evolution and Ecology Research Centre**'s purpose is to build capacity for and the quality of research in the interaction between ecology and evolutionary biology, drawing together over 50 academic staff from across UNSW. Current projects include 'The repeatability of evolution and its implications for biodiversity', 'The ecology of invasive species', 'Does overgrazing reduce ecosystem functions provided by shrublands?' and 'Mathematical models of infectious disease evolution'.

The **UNSW Earth and Sustainability Science Research Centre** is a transdisciplinary research centre that investigates the drivers and impacts of a changing Earth. Through the greenhouse gas measurement laboratory, the ESSRC is helping partners map the location of greenhouse gas emissions, identify priority targets for mitigation spending, verify their greenhouse gas accounting, and track Net Zero progress. The Centre is uniquely set up to do car- and aircraft-based measurements of greenhouse gas emissions from facilities, farms and large regions.

UNSW is currently designing a longitudinal program that utilises digital technology to better understand upriver land and forest use to reduce harmful impacts on downstream aquaculture and marine resources in **Papua New Guinea** and **Timor-Leste**.

UNSW's Andrew Dansie and Will Glamore have been investigating pontoon design and stability for floating mangrove plantations in collaboration with **UNESCO**. This new system of forestry in coastal areas could function as a new and clean source of local timber resources, improve ecosystem services and livelihoods for coastal communities, and aid in the preservation of shore-based mangroves and sequestration of atmospheric carbon.

In 2023, UNSW ranked 10th in the world in the THE Impact Rankings for SDG 15.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

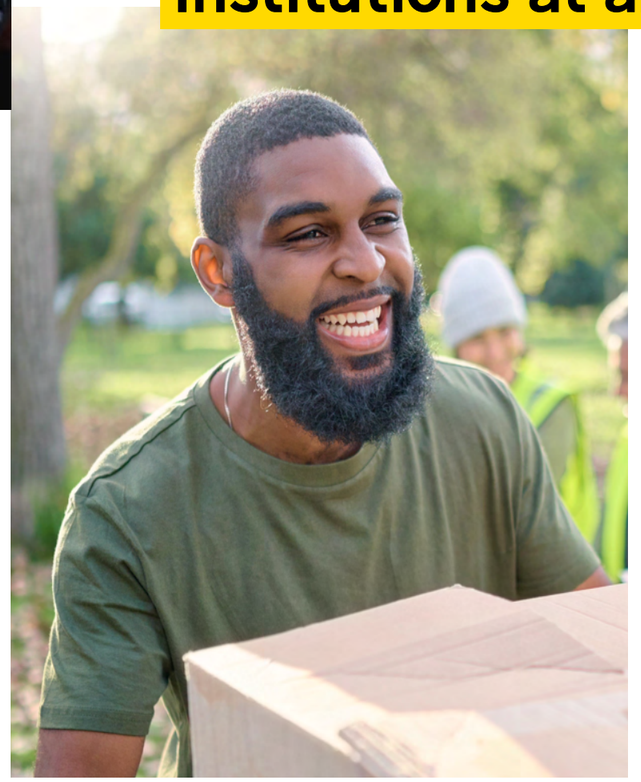
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

The **UNSW Australian Human Rights Institute** (AHRI) delivers multidisciplinary research that empowers communities and educates the next generation of human rights leaders. Working with more than 100 Associates, AHRI's collaborations with UN agencies have included the **UNDP** in **Bangkok**, **UNICEF** in **Geneva**, and the **Pacific Regional Office of the United Nations High Commissioner for Human Rights** (OHCHR ROP) in **Fiji**. UNSW's **Diplomacy Training Program** (DTP), co-founded at UNSW by President of **Timor-Leste** José Ramos-Horta, has an MoU with OHCHR ROP. Affiliated with UNSW Law and Justice, DTP enables the organisations to work together to provide capacity building training to civil society organisations and human rights defenders on issues such as sustainable development, business and human rights and the climate crisis rights in the Pacific region.

The **UNSW Defence Research Institute** unifies UNSW's defence-related research capabilities with global academic and industry partnerships to develop and deliver ground-breaking defence and security capabilities. The DRI performs research in areas such as artificial intelligence, cyber security, conflict studies and defence-related public sector management. The Institute enables UNSW to bring its research strengths to bear on problems at the intersection of development, politics, and security.

The **Andrew & Renata Kaldor Centre for International Refugee Law** examines the capacity and limits of existing international legal and institutional frameworks and bases for cooperation on refugee protection in various regions, including the Asia Pacific, Europe and Africa.

For over 30 years, the Diplomacy Training Program has supported 3000+ human rights defenders in 60+ countries to build their knowledge, skills and networks



UNSW has a global reputation in the development of Artificial Intelligence, Data Science and Machine learning technology. The **UNSW Capabilities Systems Centre** and **UNSW.ai** are designing programs that provide digital technology to understand and address complex governance and developmental problems that create and perpetuate insecurity and inequality in the Asia Pacific.

UNSW helps to convene representatives of international agencies working in **Afghanistan** and Afghan organisations to discuss security and governance issues surrounding humanitarian and development assistance in Afghanistan and the region.

UNSW is partnering with the **International Institute for Democracy and Electoral Assistance** to support discourse and practice on 'culturally rooted' constitutionalism, focused on new frameworks to assess and narrate a more authentic relationship between norms, institutions, and constitutional experiences within the conditions of transitional states in the Asia Pacific.

In partnership with the **Centre for Peace & Conflict Studies** in **Cambodia** and **Niti Foundation** in **Nepal**, UNSW is establishing a longitudinal program, funded by the **Australian Civil-Military Centre**, that reimagines the provision of development support for public safety in conflict-affected contexts in the Asia Pacific. Through institutional partnerships, the **Australian Graduate School of Management** is offering executive leadership education to police force leaders in the Asia Pacific.

Strengthen the means of implementation and revitalize the global partnership for sustainable development

As a leading global university, UNSW is committed to building strong and lasting alliances locally and across the globe. UNSW's formalised partnerships extend the University's community to unlock new value, impact and benefit.

UNSW is also a signatory institution of the **Talloires Declaration**, the first official statement made by university presidents, chancellors, and rectors of a commitment to environmental sustainability in higher education.

UNSW partners with the UN Development Coordination Office, Regional Office – Asia and the Pacific to accelerate towards the SDGs and achieve social impact.

Serving as UNSW's centre for development thinking and practice, the **Institute for Global Development** (IGD) works to link up and leverage UNSW expertise to facilitate collaborative work on pressing development priorities in and around Australia, and provoke critical conversations to drive global development discourse. Through the IGD, UNSW has a whole of institution approach to support the **United Nations Development Coordination Office** to accelerate sustainable development in the Asia Pacific.

Through this knowledge partnership, UNSW is supporting a 'joined-up' approach that facilitates and coordinates Australian university and industry expertise on climate and the circular economy for government and the UN in the Asia Pacific. The consortium approach is curating a series of high-level interactions among government, industry, academia, and community in Australia and its near region to shape an essential policy narrative on climate adaptation accompanying circular economy and vice versa. Ultimately, this consortium approach will converge on supporting and shaping the Australian-Pacific joint bid to host the **COP31 on climate in 2026** and the Australian bid to host the **Global Circular Economy Forum in 2025**.

Since mid-2022, UNSW and the **United Nations Development Coordination Office, Regional Office – Asia and the Pacific** have jointly curated and convened interactions in **Australia, Thailand, Timor-Leste, Indonesia, Papua New Guinea** and **Fiji** between the UN and academia to pilot knowledge partnerships on development priorities in the Asia Pacific region.

“UNSW has a proud history of expertise and action in climate science, sustainability and addressing global development challenges. We are committed to advancing the Sustainable Development Goals and embedding ‘SDG Thinking' throughout the University”

- Professor Attila Brungs
UNSW Vice Chancellor and President

UNSW Australia's Global University
The University of New South Wales

UNSW Institute for Global Development

We support the Sustainable Development Goals

SUSTAINABLE DEVELOPMENT GOALS