



Our Goal

2020 has been an exciting year for the University of Sydney and our support for the United Nations [Sustainable Development Goals](#) (SDGs).

The University launched a new [Sustainability Strategy](#), a commitment that encompasses our operations, education, and research. Our vision is that *The University of Sydney will build and inspire communities to create a culture of sustainability both locally and globally. In our responsibility to care for Country on which our campuses lie, we will enact change. Putting our research and education into practice, we will enrich and transform lives now and for future generations.*




To further this commitment, the University also release a statement pledging [action on climate change](#).





What we are doing?

Our faculties and schools showed their commitment as well, for example:

-  The University of Sydney Business School realigned its strategic vision, [Business Not as Usual 2.0](#), became an advanced signatory of the United Nations Global Compact, Principles for Responsible Management Education (PRME), and released its 2018-2019 progress report: [Transforming management education beyond shareholder primacy](#).
-  The University of Sydney Law School declared a [climate emergency](#) which included a list of actions align with and to support the goals of SDG13.
-  The University has started work on creating a living lab across our campuses including the pouring of a new recycled-material concrete (Professor Ali Abbas) and solar powered benches as a collaboration between the University Infrastructure and research spin-off Gelion (Professor Thomas Maschmeyer) to test Gelion's Endure energy storage battery.

A student voice

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Our community participated in and supported the development and launch of these new commitments, with one student noting at the strategy's launch in September that "the strategy does not represent a new policy for a lot of students, this is a blueprint for us for our futures." (Prue Wilkins-Wheat)



What are we doing?

The core aim of SDG1 is to end poverty everywhere by 2030. While the goal highlights significant poverty in parts of Southern Asia and sub-Saharan Africa, poverty also affects Australians. As a nation, we pride ourselves in providing equal opportunities to everyone, but there are disproportionate rates of disadvantage among pockets of Australian society.

In 2019, The University of Sydney awarded \$4,200,390 of scholarships and bursaries to our students including grants to assist students coming to University from disadvantaged backgrounds or who had suffered disruptions to their education. This included over \$2.2M to students entering the University by our Early Offer, Year 12 (E12) scheme which helps relieve the financial burden of first year at and support throughout their University journey.

We offer a wide range of education and research that engages with poverty, related issues and potential solutions across all faculties and schools of the University. For example, the Sydney Institute of Agriculture has a research theme dedicated to [development agriculture](#), aiming to help provide for the world's poorest people and the Sydney Policy Lab has a research stream focussed on [commissioning human services in NSW](#).

At a glance

Units of study
21



Publications
3*



- At least 21 units of study across six faculties and schools have a focus on 'poverty' and other units of study support the topic.
- Example units of study:
 - [EDPB5016](#) Global Poverty, Social Policy and Education
 - [PACS6924](#) Democracy in the Developing World
 - [SUST5004](#) Sustainable Development and Population Health
- More than 175 researchers investigate the determinants and impacts of poverty and work to address it across at least eight faculties and schools.
- The US Studies Centre has [recommended support to address the millions in poverty](#) as a result of the COVID-19 crisis.
- The Policy Lab has developed [principles for the response to COVID-19](#) addressing economic and social harms.



What are we doing?

The zero hunger goal champions change in food and agriculture systems to ensure global food security. Degraded landscapes and climate change threaten our ability to produce food and many of the world's citizens still suffer from malnutrition and undernourishment. In spite of Australia's general high standards of development, [21% of Australians have experienced food insecurity](#) in 2018-2019.

The University offers a range of opportunities to learn about and research challenges in food. For example, the Sydney Environment Institute has a strategic focus on [Food Systems](#), we have a world leading [Sydney Institute of Agriculture](#) and the University ranks [3rd in Australia and 34th globally in agricultural sciences](#), and the Charles Perkins Centre has a research focus on [nutrition](#).

In addition to the range of education and research supporting food security and eliminating hunger, our academics advocate to for direct solutions and policy. [Professor Roger Magnusson](#) is calling for international guidelines to address the challenges of healthy diets and sustainable food systems. [An opinion piece](#) published in the British Medical Journal calls on the Director-General of the WHO and the UN High Commissioner for Human Rights to jointly lead the process. Global policy moves such as this can make lasting changes and contribute heavily to SDG2.

At a glance

Units of study
115



Publications
74



- At least 115 units of study across seven faculties focus on 'food' and other units of study support the topic.
- Example units of study:
[CHNG5606](#) Advanced food processing
[PUBH5039](#) Public Health Nutrition Essentials
[AGEN3008](#) Indigenous Land and Food Knowledge
- More than 222 researchers research food production, processing, nutrition, and systems across at least eight faculties and schools.
- The Sydney Institute of Agriculture focuses on [quality food](#) and improving food industry standards.
- The US Studies Centre describes [the impact of COVID-19 on agriculture and supply chains](#), risking a food crisis.



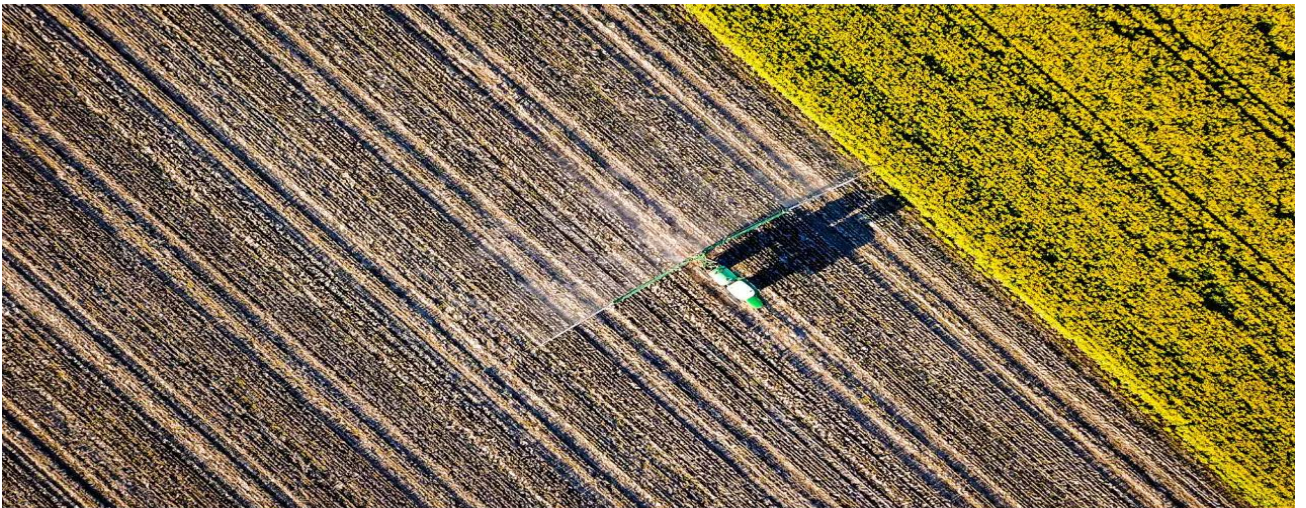
2 ZERO
HUNGER



A student voice

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“I’m from a rural background and the idea of having more sustainable food producing systems by improving climate change resilience and adapting to the effects of climate change, if we could do them all at once, that’s amazing.” Savannah McGuirk, PhD candidate (Soil sciences and remote sensing)





What are we doing?

This goal aims to ensure a consistent level of good health and wellbeing globally. Challenges highlighted include child mortality, the prevalence of key infectious and non-communicative diseases, unhealthy behaviours, and developing the capacity of countries to support health systems and risk reduction. While Australia ranks well for life expectancy, we face chronic health risks and there are health-related disparities among populations of Indigenous and non-Indigenous Australians.

In 2020, the impacts of the coronavirus COVID-19 has devastated global communities and our researchers have risen to the challenge, with a range of expertise and efforts to improve recovery efforts. The University has been committed to ensuring a safe environment for research and education, and provided a range of support to its community during the COVID-19 pandemic.

The University has a range of centres and institutes that focus on aspects of good health and wellbeing, such as the Charles Perkins Centre, which uses partnerships and collaborations to combat non-communicative diseases, and the Marie Bashir Institute for Infectious Disease and Biosecurity.

At a glance

Units of study
292



- At least 292 units of study focus on ‘health’, ‘wellbeing’ and other units of study across all seven faculties support the topic
- Example units of study:
OLET1616 The Science of Health and Wellbeing
MUSC1604 Music, Health and Wellbeing
LAWS6920 Global Health Law

Publications
5,429



- More than 774 researchers research health and wellbeing across at least seven faculties and schools.
- Professor Edward Holmes was a key contributor in unlocking the SARS-CoV-2 virus that causes COVID-19 in humans and was awarded NSW Scientist of the year in recognition.
- University of Sydney epidemiologists are supporting the diagnosis process to improve detection and health-decisions.
- The University ranks 1st in Australia and 8th globally in oncology.



What are we doing?

Quality education is critical to sustainable development. Inclusive and equitable education enables people to address challenges to sustainability and improve their quality of life. Globally, education is inconsistent for children of all school ages and often lacking in areas affected by conflict. Australia ranks well in education by global standards, but there is a gap in school attendance between Indigenous and non-Indigenous students and affecting remote and rural areas.

The University has several centres or initiatives that aim to improve outcomes from education. The China Studies Centre offers a range of opportunities for students to develop an understanding of China's politics, culture, and economy. The National Centre for Cultural Competence (NCCC) is co-developing a range of service learning opportunities to provide intercultural placements for students. The NCCC also provides professional learning material to staff, students and our community better understand different cultures, particularly those of our First Nations people.

We have a range of education and research initiatives supporting quality education.

At a glance

Units of study
101



Publications
29



- At least 101 units of study focus on 'education' and other units of study support the topic.
- Example units of study:
 - [EDEC3011](#) Professional Experience in Early Childhood Education
 - [EDMT6125](#) Special Education: Inclusive Schools
 - [EDUF3135](#) Aboriginal Community Engagement
- More than 76 researchers research the education of children and adults across at least three faculties and schools.
- The Sydney Policy Lab offers [LabClass](#), which is training that aims to develop strategic collaborations across the University.
- The University has [an alliance with the Taronga Conservation Society Australia](#) to provide transformative wildlife conservation education.
- Economists have found global [inequities in financial returns of a university degree](#).



What are we doing?

Gender equality is fundamental to our sustainable future. Despite many advances, gender inequality and gender-based discrimination still holds back sustainable development. In a [2016 gender gap report](#) by the World Economic Forum, Australia ranked 46th, demonstrating there is much work to be done locally.

The [University of Sydney is committed](#) to gender equality and improving workplace culture and, globally, was [one of the first universities to admit women](#) on the same basis as men. The University supports women in leadership, and recently shared advice from [prominent female academics on what makes a good leader](#). Our Sydney Ideas program runs regular events to share our work on [gender, equality and diversity](#).

The Faculty of Science runs a [Women in Science \(WISCI\) project](#) to progress gender equity in the faculty. Read about some of the [scientific breakthroughs by Sydney Science women](#). The Faculty of Engineering offers a range of [scholarships for women](#) to encourage more female participation in engineering.

At a glance

Units of study
109



Publications
41



- At least 109 units of study focus on ‘gender’ and other units of study support the topic.
- Example units of study:

[GCST1602](#) Introduction to Gender Studies

[LAWS6034](#) Gender, Violence and the Criminal Law

[WORK6115](#) Managing Diversity and Inclusion at Work

- More than 23 researchers research the gender-related issues across at least three faculties and schools.
- Business school academics are researching [the impact of COVID-19 on the gender equality gap](#).
- [Women-centric policies are key](#) for economic recovery during the COVID-19 pandemic.

6 CLEAN WATER AND SANITATION



What are we doing?

This goal aims to ensure the availability of clean water and at least basic sanitation worldwide by 2030. Efficient and well-managed water resources and services and protected water ecosystems are key in the provision of access to water and sanitation. Global water scarcity and the lack of access to basic sanitation is so important that the [United Nations declared 2018-2028 the International Decade for Action on Water](#) for Sustainable Development.

The University offers a [humanitarian engineering major](#) that looks at the needs of global communities with a focus on sustainability, including developing communities and addressing issues of sanitation and clean water. Our [civil engineering study area](#) aims to improve the way communities live by providing research and education into systems for managing drinking water, sewage, floodwaters and irrigation.

The preservation of potable water for drinking and sanitation purposes is acknowledged in the [new Sustainability Strategy](#) contains targets to reduce the amount of potable water by 30% by 2025. The first initiative towards this target was to switch the irrigation on the University's famous Quadrangle lawns from potable water to water from our underground rainwater recapture tanks.

We have considerable education and research activities that support the aims of SDG6.

At a glance

Units of study
52



Publications
13



- At least 52 units of study across seven faculties focus on 'sanitation' and 'clean water' and other units of study support both topics.
- Example units of study:
[ENVI1003](#) Global Challenges: Food, Water, Climate
[SOIL2005](#) Soil and Water: Earth's Life Support Systems
[CIVL5351](#) Geoenvironmental Engineering
- More than 174 researchers research the issues related to clean water and sanitation across at least seven faculties and schools.
- An ongoing project looks at [tackling water-borne diseases in Fiji](#).
- A Sydney Nano team won a national water research challenge for [water capture](#).
- Sydney geoscientists have found that [human impacts on regional rivers](#) have made the area more susceptible to drought.



What are we doing?

This goal supports access for all to affordable, reliable and sustainable energy. It is important because access to modern energy supports many of the other Sustainable Development Goals. More than 10% of the world's population lacks access to modern electricity. Access to energy in Australia is good, yet in renewable energy and energy efficiency we score below the OECD average.

The University has increased its on-site generation of solar energy across 23 of its building on the Camperdown/Darling campus to 1.2MWhs annually. Increasing our generation and use of renewable energy sources, both on and off-site, has been included in our new Sustainability Strategy where we aspire to increase our on-site generation to 3MWhs annually.

We have a range of activities supporting affordable and clean energy in education and research, for example the Faculty of Engineering has a core focus on energy, resources and the environment.

At a glance

Units of study
36



- At least 36 units of study across five faculties focus on 'energy' and other units of study support both topics.
- Example units of study:
SUST5003 Energy and resources
LAWS6964 Global Energy and Resources Law
ELEC5206 Sustainable Energy Systems

Publications
214



- More than 40 researchers research solutions for clean and affordable energy across at least five faculties and schools.
- A recent Sydney Ideas event involved a range of researchers discussing the affordability of a clean energy transition.
- Professor Anita Ho-Baillie was awarded \$2.5m in federal funding for research on solar energy.
- Research is working on nanoscale batteries to transform storage of renewable energy.



SDG7: Affordable and Clean Energy

7 AFFORDABLE AND CLEAN ENERGY



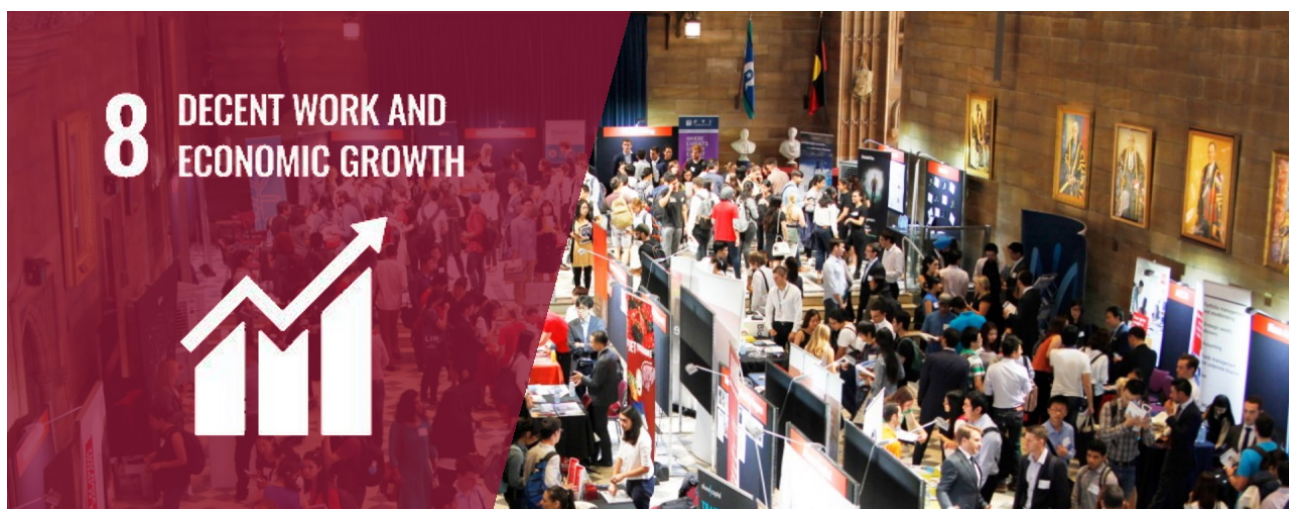
A student voice



Master of Sustainability student, Rodrigo Martinez Ramirez, describes his capstone project: “My masters degree also helped me better understand what is the role of the industry in climate change mitigation. I worked with GECA, an ecolabelling organisation that develops standards for environmentally preferable products. My research project was focussed on the development of standards specifically for carbon reduction and renewable energy.”



SDG8: Decent Work and Economic Growth



What are we doing?

The goal for decent work and economic growth promotes sustainable and inclusive economic growth and productive employment for all women and men. Stable and decent employment is critical to eradicating poverty and ensuring equitable standards of living. While the unemployment rate seems stable in Australia, the focus is often on ensuring minimum standards of safety and wages for employees and across supply chains.

As part of its duty to provide decent work and pay conditions for its staff, the University has an Enterprise Agreement in place that provides the University and its staff the freedom to bargain for better wages, greater flexibility, and working conditions to suit their individual needs. It also sets out the conditions of employment between the University and most academic, professional and English-language teaching staff.

We have a range of research and education that supports decent work and economic growth. Since the COVID-19 pandemic, more work at the University has shifted online, yet both students and staff continue to participate in their education and research activities.

At a glance

Units of study
99



Publications
47



- At least 99 units of study across four faculties focus on 'fair' or 'decent work' or 'economic growth' and other units of study support both topics.
- Example units of study:
[CLAW3207](#) Legal Regulation of Employment
[HSBH3014](#) Workplace Injury Prevention/Management
[WORK3203](#) Gender, Diversity and Inclusion at Work
- More than 193 researchers research solutions for clean and affordable energy across at least eight faculties and schools.
- The University has a [Women and Work Research Group](#) that aims to build sustainable careers and more equitable workplaces for women.
- Researchers have conducted surveys to examine [how work patterns have changed in response to COVID-19](#), with more employers supporting working from home into the future.
- Experts share their research into how we can [close the gender pay gap](#).



SDG8: Decent Work and Economic Growth

8 DECENT WORK AND ECONOMIC GROWTH



A student voice



Master of Sustainability graduate Madeline Combe highlighting the integrated nature of sustainability: “Every single thing we do somehow links back to sustainability and that’s from the social aspects, the economic aspects and the environmental – these are all inextricably linked.”



SDG9: Industry, Innovation and Infrastructure



What are we doing?

This goal focusses on providing infrastructure that supports sustainable development. Economic growth and the continued provision of health, education, and decent standards of living rely on a foundation of infrastructure. Innovation, science and technology are crucial to the development of sustainable infrastructure and manufacturing solutions. This is particularly relevant for Australia, as our [population approaches 30 million](#).

The University aims to improve outcomes for communities with our research and education, for example [student engineering projects](#) that aim to use technology for sustainable outcomes.

One of the key aims of the University's new Sustainability Strategy is to encourage and facilitate the use of our campuses as a 'living lab' where we can test research in real world conditions. One such experiment is to test the capabilities of Professor Thomas Maschmeyer's zinc-bromide Endure energy storage battery. This was done in collaboration with our University Infrastructure (UI) team to design a bench with lighting and device charging abilities. [Six benches were installed on our campus](#) to provide light to dark zones that have no existing services infrastructure

At a glance

Units of study
66



Publications
17



- At least 66 units of study across eight faculties focus on 'innovation' and 'infrastructure' and other units of study support both topics.
- Example units of study:
[ITLS5200](#) Quantitative Logistics and Transport
[HSBH2009](#) Innovations in eHealth
[BADP2002](#) City Form and Development
- More than 180 researchers research innovative solutions for infrastructure and with industry across at least seven faculties and schools.
- [Professor Thomas Maschmeyer has won the Prime Minister's Prize for Innovation 2020](#) for his work in recycling and battery technology.
- Researchers have created carbon-dioxide-loaded, [environmentally friendly cement](#).
- Work to [reduce emissions from copper mines](#) may support more sustainable energy.



SDG9: Industry, Innovation and Infrastructure

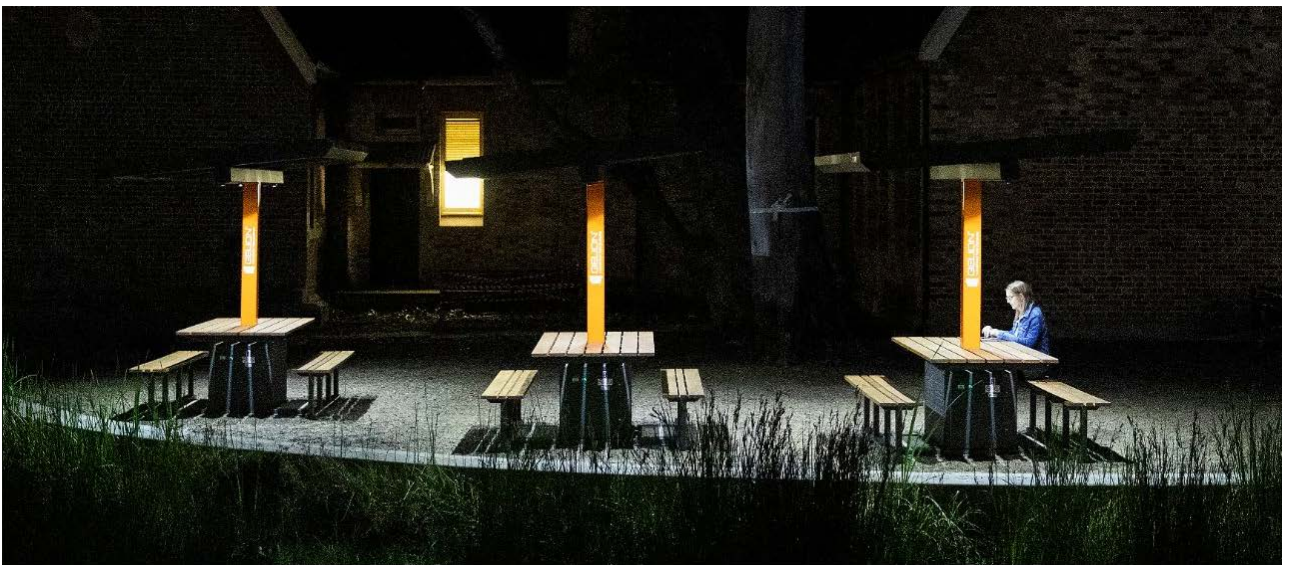
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



A student voice



Rodrigo Martinez Ramirez describes his project in the Master of Sustainability: “We looked through the whole lifecycle of a product. That means that we take into account the extraction of resource material, production, manufacture, distribution and end life cycle of a product. In this way, ecolabels contribute to increasing sustainability in the industry from a circular economy perspective.”





What are we doing?

The University acknowledges that its Camperdown/Darlington campus lies on the land of the Gadigal people of the Eora Nation. This land has always been a learning space for many Aboriginal nations, and the NCCC draws strength and guidance from Aboriginal and Torres Strait Islander knowledge, one of the oldest knowledge systems in the world.

The goal to reduce inequalities is meaningful both within and among countries and wherever significant disparities in health and education persist. The [World Economic Forum ranked inequality as the number one risk](#) to global development in 2017. Inequality can be considered in many ways in Australia, such as in [wealth and income inequality](#), [housing affordability](#), and the [disproportionate effect of climate change on Indigenous communities](#).

Diversity and inclusion is one of the core values of the University. The Vice-Chancellor published a message highlighting the need to [call out racism](#) and reminding staff and students about the range of services and support mechanisms offers to celebrate and support [cultural diversity in the University community](#). In particular, the University has a range of programs and scholarships for [Aboriginal and Torres Strait Islander peoples](#). 2020 also saw discussions and action take on systemic and institutionalized racism – [an historic and ongoing challenge](#) that affects our First Nations People.

Much of our education and research supports the goal to reduce inequalities.

At a glance

Units of study
71



- At least 71 units of study across seven faculties focus on 'equality' and other units of study support the topic.
- Example units of study:
[OLET1103](#) Cultural Competence: Fundamentals
[SLSS3603](#) Social Justice, Law and Society
[EDPL6007](#) Racism and Well-being

Publications
42



- More than 56 researchers research inequalities and solutions to those complex challenges across at least seven faculties and schools.
- The [Sydney Policy Lab](#) aims to strengthen our democracy, reduce inequality and help empower communities.
- The University's inaugural India Innovation Challenge addressed [inequality and sustainability](#).
- The Business School recently hosted a symposium on [internationalisation in higher education](#).



10 REDUCED INEQUALITIES



A student voice



“It is time that we had the difficult ground zero conversation – the conversation that many don’t want to have – the inconvenient talk about who we are as a nation, as we continue to count the costs of ignorance, of injustice, of racism and of despair on yet another generation of children.” Professor [Lisa Jackson Pulver](#), Deputy Vice-Chancellor ([Indigenous Strategy and Services](#)).





SDG11: Sustainable Cities and Communities



What are we doing?

This goal promotes sustainable cities and communities, including reducing the impact of disasters on urban residents and reducing the environmental impact of cities. More than half of the world's population lives in cities, so it is important to ensure that cities are sustainable, resilient, inclusive, and safe. In Australia, [key challenges](#) include matching infrastructure development and management with population growth, frequent heat waves and other climate-related challenges, and appropriate integration across all three levels of governance.

The [Ground Up, University of Sydney Community Garden](#) was created near the glasshouses of the Engineering precinct in 2014. The community garden is open to all staff and students of the University. If you do not have the space or resources at home or just enjoy gardening with people, keep your green hands busy by getting involved with the Ground Up Community Garden. The garden is a place to learn to grow and harvest fresh and organic vegetable and fruits while also educating students and the wider community urban agriculture.

A range of research and education occurs to support more sustainable cities and communities. The Sydney School of Architecture, Design and Planning and University of Monash have co-hosted a [Festival of Urbanism](#) for the last seven years. The festival brings together staff, visiting scholars and students to explore the modern challenges in urbanism. In 2019, [the festival focused](#) on the often-disconnected link between urbanism and public health. Our [Sydney Policy Lab](#) is researching how to improve the lives of urban residents.

At a glance

Units of study
109



- At least 109 units of study across seven faculties focus on 'urban' issues and other units of study support the topic.
- Example units of study:
[PLAN9075](#) Urban Data and Science of Cities
[ITLS6103](#) Sustainable Transport Strategies
[ENVI5903](#) Sustainable Development

Publications
124



- More than 28 researchers research inequalities and solutions to those complex challenges across at least four faculties and schools.
- The [Policy Lab looks at Sydney's housing problem](#) and the pressures of affordability putting people at risk.
- Recent research found that [public transport investments offer greater returns](#) in larger cities.
- With climate change upon us, researchers turn their attention to [heat stress](#) and how we can respond.
- An honours student is researching financial frameworks to support [urban resilience](#).



SDG12: Responsible Consumption and Production



What are we doing?

Ensuring sustainable consumption and production promotes resource efficiency, access to basic services, and a decent quality of life for all. More efficient use of resources has co-benefits of reduced environmental degradation and pollution associated with the life cycle of a product. Gaining traction both globally and in Australia are circular economy principles, which rely on design and innovation to consider the whole lifecycle of a product and reduce waste.

We have a range of education and research activities that support responsible consumption and production. The [Sydney Environment Institute](#) and [The Warren Centre](#) aims to highlight the lifecycle of products to reduce waste and foreground [circular economy principles](#).

The [Waste Transformation Research Hub \(WTRH\)](#) specialises in research linked to the circular economy - how we can reuse and recycle material into usable products. One of their research projects is a new formula eco-concrete pavement incorporating fly ash, ground recycled glass, and, importantly, carbon dioxide into the mix. Recently, the WTRH and the Open Spaces team in our Central Operation Services (COS) [teamed up to pour the new concrete](#), testing its pourability and durability to make it ready for commercial use

At a glance

Units of study

32



Publications

48



- At least 32 units of study across six faculties focus on ‘waste’, ‘recycling’ and ‘responsible consumption’ issues and other units of study support the topic.
- Example units of study:
[GCST5910](#) Health, Pleasure and Consumption
[CAEL2076](#) Upcycled Glass: Introducing Warm Glass
[DESC9147](#) Sustainable Building Design Principles
- More than 923 researchers research inequalities and solutions to those complex challenges across at least five faculties and schools.
- The [Waste Transformation Research Hub](#) aims to help solve Australia’s growing waste problem.
- Innovative projects on [plastics recycling and energy](#) were awarded Cooperative Research Centre Project grants.
- The Warren Centre released its own report on the [circular economy](#).



SDG12: Responsible Consumption and Production

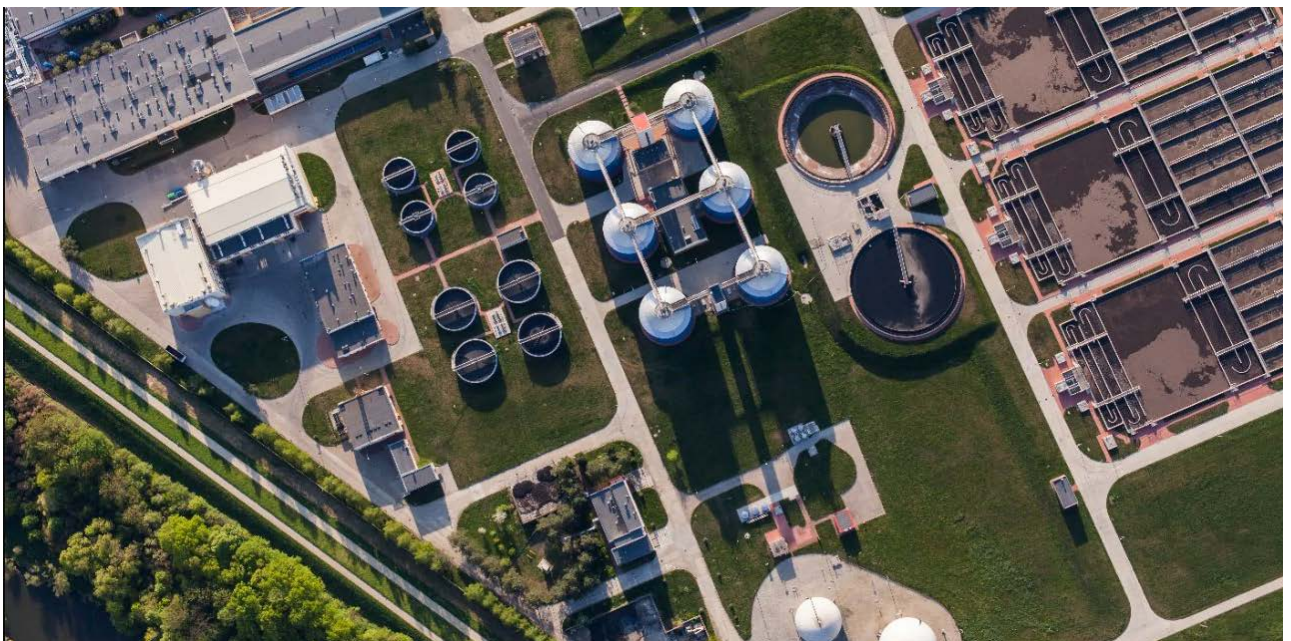
12 RESPONSIBLE CONSUMPTION AND PRODUCTION



A student voice



Rodrigo Martinez Ramirez describes his interest in the circular economy and how it impacted his Master of Sustainability project: “My research project was focussed on the development of standards specifically for carbon reduction and renewable energy. We looked through the whole lifecycle of a product. That means that we take into account the extraction of resource material, production, manufacture, distribution and end life cycle of a product.”





What are we doing?

This goal urges action to combat climate change and its impacts, which now effect every country on the planet. The actions include changes to policy and planning, education, and promoting resilience and adaptation. In Australia, the [2016 State of the Environment report](#) highlights climate change as a key pressure on all aspects of our environment, altering the function of ecosystems and affecting human wellbeing.

The University has made a [commitment to climate action](#) and set targets towards [becoming a more sustainable institution](#) through our education, research and operations. Climate change and action requires a multi-faceted approach and thinking out of the box – we explore these challenges through our Sydney Ideas platform. [One talk involved](#) two professors, a politician and a student publicly consider the risks of the climate change status quo, including armed conflict, and who we can trust to improve it.

The [Sydney Environment Institute](#) facilitates the inclusion of the environmental humanities and social sciences into multidisciplinary responses to environmental crises. In addition to the research students supported by the Sydney Environment Institute and [Master of Sustainability](#), numerous education activities support climate action.

At a glance

Units of study
50



- At least 50 units of study across five faculties focus on 'climate' issues and other units of study support the topic.
- Example units of study:
[PUBH5551](#) Climate Change and Public Health
[SCWK6048](#) Environmental Change for Social Justice
[ENV11003](#) Global Challenges: Food, Water, Climate

Publications
159



- More than 232 researchers research inequalities and solutions to those complex challenges across at least nine faculties and schools.
- Researchers are investigating [carbon sequestration](#) in the Tweed Valley.
- A coalition of women in STEMM call for a [marine protected area](#) around the Antarctic Peninsula.
- Researchers explore the impacts of climate change and [rising sea levels on beaches](#).



A student voice



“Our theme is climate change resilience, so we get to work on a project to develop a sustainable business. The product we’re producing is called Smart Soil. The idea is to improve the fertility and the quality of the soil and that in turn will make food production easier. It also makes water use more efficient and will reduce the amount of nutrients added to the soil and that’s a really good option for mitigating climate change because carbon dioxide will be captured and stored in the soil rather than in the atmosphere, acting as greenhouse gas.” Savannah McGuirk, PhD candidate (Soil sciences and remote sensing)





What are we doing?

This goal aims promote the conservation and sustainable use of oceans and marine resources. Oceans regulate and drive the global systems, like the weather and climate, that provide our drinking water and oxygen, and they provide a key source of protein for more than 3 billion people worldwide ([SDG14](#)). [Australia's marine jurisdiction](#) is the third largest in the world and its contribution of approximately \$50 billion annually to the economy is expected to double within the next decade.

The University manages a research field station, [One Tree Island](#), with one of the highest levels of protection within the World Heritage-listed Great Barrier Reef. It provides staff and students with opportunities to access one of the most vulnerable marine ecosystems. The [Marine Studies Institute](#) is one of the largest marine research and education centres in Australia.

We have a range of research and education activities supporting life below water. [One research project](#), awarded an Australian Research Council PFAS Remediation Research Program grant, in the [School of Chemical and Biomolecular Engineering](#) looks to develop a system that effectively removes per-and polyfluoroalkyl substances (PFAS) from contaminated water. Often referred to as “forever chemicals”, PFAS are persistent pollutants that do not readily break down, accumulating in the environment and often leading to the contamination of water sources and food. It is hoped the technology could also be applied to other difficult to treat pollutants including pesticides, pharmaceuticals and endocrine disruptors.

At a glance

Units of study
39



- At least 39 units of study across six faculties focus on ‘marine’ issues and other units of study support the topic.
- Example units of study:
[BIOL3013](#) Marine Biology
[MARS5007](#) Coral Reefs and Climate Change
[OLET2113](#) Global Ethics: The Great Barrier Reef

Publications
70



- More than 30 researchers research inequalities and solutions to those complex challenges across at least five faculties and schools.
- Researchers have found that the [geologic ‘glue’ that stabilises tropical reefs is at risk](#) from ocean acidification.
- The School of Geosciences has a research focus on [geocoastal research](#).
- The Sydney Environment Institute highlights [ocean ontologies](#) that explore our relationship with oceans. and hosted a recent lecture about the relationships between [sunken human-made infrastructure and invertebrate organisms](#).



What are we doing?

Life on land aims to promote, protect, and restore the sustainable management and use of terrestrial ecosystems. Humanity relies on forests to remove carbon dioxide from the air and approximately 1.6 billion people depend on forests for their livelihood. Biodiversity loss is accelerating, yet the potential for species to contribute to human use is poorly understood. Australia is megadiverse, however our biodiversity is under threat by climate change, habitat fragmentation, deforestation, and land degradation.

The University has a focus on protecting and improving the biodiversity on our sites and is developing a Biodiversity Management Plan. The University's Macleay Museum has the oldest natural history collection in Australia, showcasing a range of historical zoological specimens and has recently been showcased in the new Chau Chak Wing museum.

The University announced the award of a \$3.9 million ARC grant, which enables researchers to apply data science models against real world challenges, such as water storage, biodiversity loss and the extraction of mineral resources. The project is led by Professor Sally Cripps focuses on data analytics related to the long-term impact of resource use on Australia's economy, society and environment. It also lead to the creation of The Data Analytics for Resources and Environments Centre (DARE).

At a glance

Units of study
55



Publications
95



- At least 55 units of study across five faculties focus on 'biodiversity', 'terrestrial ecology', or 'forest' issues and other units of study support the topic.
- Example units of study:
AGRI2001 Plant Management in Agroecosystems
AVBS3004 Wildlife Conservation
OLET1664 Science of Australia's Deadly Animals
- More than 384 researchers research life on land across at least eight faculties and schools, including the School of Life and Environmental Sciences and Sydney School of Veterinary Science.
- Professor Paul McGreevy has been recognized with a Global Animal Welfare Award for his work on animal welfare.
- Researchers share tips on unwanted wildlife visits to the home from the Integrated Ecology Lab.
- The Desert Ecology Research Group investigates the biodiversity of the small vertebrates of arid Australia.



What are we doing?

This goal promotes peaceful and inclusive societies with access to justice for all. The focus is to reduce violence and discrimination, combat corruption, and deliver justice to enable people to contribute to the decisions that impact their lives. Key to this goal is the reduction of violence against children, as half of the world's children experience violence every year. Australia ranks well as a [peaceful country](#), but domestic violence and the rights of Aboriginal and Torres Strait Islander people has room for improvement.

The Faculty of Arts and Social Sciences recently released [new research themes](#), including one on a posthuman reconceptualization of justice via a multispecies lens. The Faculty also has a [Department of Peace and Conflict Studies](#) that is dedicated to education and research that promotes peace with justice.

At a glance

Units of study
61



Publications
125



- At least 61 units of study across three faculties focus on 'justice' issues and other units of study support the topic.
- Example units of study:
[SLSS2604](#) Indigenous Social and Legal Justice
[PACS6901](#) United Nations, Peace and Security
[LAWS3468](#) Theories of Justice
- More than 75 researchers research inequalities and solutions to those complex challenges across at least six faculties and schools.
- The [Sydney Social Justice Network](#) aims to foster knowledge for social change.
- The Sydney Environment Institute has a [Justice](#) research stream.
- The Sydney Law School has a research focus on [justice, legal process and the profession](#).
- A graduate of the Department of Peace and Conflict Studies [counters violent extremism in communities](#).



SDG16: Peace, Justice and Strong Institutions

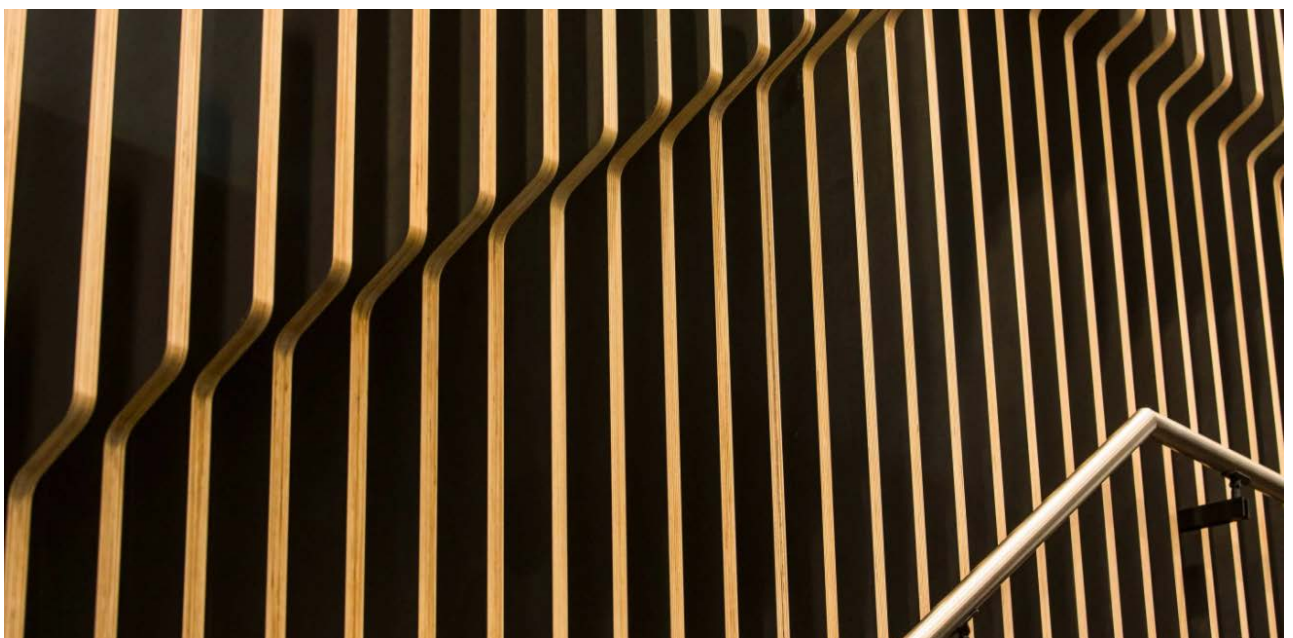
16 PEACE, JUSTICE AND STRONG INSTITUTIONS



A student voice



Master of Sustainability graduate Madeline Combe described why she thinks SDG16 is important: “The justice piece really comes in so strongly when we look at maybe the cost of decarbonising we constantly think about staying within our planetary boundaries and preserving the resources we need to survive and ultimately that transition has to be sensitive to rising inequalities and social justice. People are important, we’re trying to save the planet for people. You cannot have climate justice without social justice.”





What are we doing?

Goal 17 recognises that partnerships are needed to deliver the sustainable development goals. Partnerships toward shared goals are stronger when shared between governments, and between governments, industry and civil society. This goal includes financial, development aid, and policy targets, access to and development of enabling technologies and innovation, capacity-building, trade, and addressing a range of systemic issues.

The University has a range of opportunities to improve global outcomes via partnerships and aims to solve the world's problems by connecting leading researchers and students with partners in industry, business, and government. For instance, the Sydney Policy Lab offers bespoke training for researchers and partners to develop fruitful and sustained connections.

Early 2020 saw the delivery of the University's Unfinished Business, a plan that outlines the priorities that the University will take in 2020 to complete the work remaining in its first integrated Aboriginal and Torres Strait Islander strategy, Wingara Mura – Bunga Barrabugu. Our forthcoming Indigenous strategy highlights the need for partnerships and co-created activities with Aboriginal and Torres Strait Islander peoples.

At a glance

Units of study
55



- At least 55 units of study across all faculties and schools offer students with the opportunity to work on a project in partnership with industry, the community, or students from other disciplines.
- The University offers a range of Industry and Community Project Units (ICPUs) with external partners.
- Example units of study:

ARCH3108 Industry and Community Projects

EDEC4007 Partnering with Families on the Margins

FASS3500 Service Learning in Indigenous Communities

Publications
88



- More than 20 researchers research inequalities and solutions to those complex challenges across at least five faculties and schools.
- A global initiative led by the UN's Food and Agriculture Organisation has launched the Soil Spectral Calibration Library, to which our researchers contributed.
- Associate Professor Paul Jones collaborates with Indonesian partners to research informal settlements and slums.



SDG17: Partnerships for the Goals



A student voice



Master of Sustainability graduate Madeline Combe notes the importance of SDG17 when she says that “no way [that] you look at this problem or any sustainability problem, can you develop a solution without considering partnerships.”

