

# United Nations Sustainable Development Goals

## 2024 Macquarie University Alignment

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*Image credit: Joanne Stephan*

## **Macquarie University Alignment: UN Sustainable Development Goals**

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The [2030 Agenda for Sustainable Development](#), adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership.

They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

## **Macquarie University contributions to the UN Sustainable Development Goals**

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*“Macquarie University adheres firmly to our commitment to the principles of sustainability in all we do” [Our University: A Framing of Futures, 2013](#) .*

### *Priority 6*

Developing a vibrant and sustainable campus, clearly at the centre of a rapidly changing neighbourhood in the international, cosmopolitan city of Sydney.

This commitment includes:

- Undertaking world-changing, impactful research that contributes to solving and addressing global challenges;
- Ensuring students leave the University prepared to contribute as active citizens to an environmentally healthy and equitable society;
- Actively seeking to meet changing social, environmental and economic conditions and reduce the negative impact of our actions upon our environment and society;
- The responsible consumption of energy, water, food, products and transport;
- Actively supporting sustainability in our local community and region;
- Having a reputation for being the place to learn, to work and to connect with the local and global community.

Leading on from this, Macquarie University is currently developing the next sustainability strategy that will guide our initiatives and efforts through to 2030. This strategy will ensure that our goals align with the UN SDGs, while recognising indigenous knowledge, and cement our commitment to the UN SDGs.

The focus at Macquarie University is to seek to understand the impact of our actions and activities and make informed decisions around good sustainable practices.

## Macquarie University's SDG Impact

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In June 2024, Macquarie University ranked 24<sup>th</sup> globally in the *Times Higher Education* (THE) Impact Rankings. The university has been recognised in several subcategories, including SDG 6, 12 and 17.

Top rankings include:

- 6<sup>th</sup> for SDG6: Clean Water and Sanitation
- 12<sup>th</sup> for SDG12: Life Below Water
- 25<sup>th</sup> for SDG17: Partnerships for the Goals
- 27<sup>th</sup> for SDG15: Life on Land

## Environmental Sustainability

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Macquarie University was among the first Australian universities to commit to 100 per cent renewable electricity, driven by our dedication to developing a sustainable campus. In 2020, the university signed a Power Purchase Agreement (PPA) with [Red Energy](#) to obtain our electricity from a 100 per cent renewable electricity source.

As a result, the University's total carbon emissions from electricity (Scope 2 emissions) have been reduced by 97%. For FY2022, overall emissions from Scope 1 and Scope 2 have been reduced by 90% - see [Sustainability Target Tracking Report](#). This is significantly more than our original 2030 target of a 40% reduction under the 2014 Campus Masterplan and continues to move us towards a [carbon neutral](#) position.

Progress towards our energy efficiency has been boosted by the installation of roof-top solar panels on campus buildings. The university currently has a combined generating capacity of 746 kW, with more on the way. Solar, combined with our energy efficiency initiatives, has seen a steady reduction in our total energy use since 2009, despite the growth in floor area.

In 2019, Macquarie University developed a Sustainable Bonds Framework which was the winner of Environmental Finance Bonds Award. Our student accommodation, central courtyard and Lincoln buildings were built using funds from the bonds and awarded 5-star green star rating by the Green Building Council of Australia in 2022. In addition, the naturalisation of Mars Creek, also funded through the bonds, has encouraged eels to migrate upstream with the animals spotted in the headwaters of the creek for the first time in more than 20 years. Similarly, native birds including the superb fairy wren and red-browed finches now inhabit the re-vegetated riparian area.

In our day-to-day operations, the university works to focus our efforts on resource use efficiency. Macquarie University has already significantly reduced landfill waste, greenhouse emissions, and potable water consumption while also protecting flora and fauna diversity on campus.



Image credit: Central Courtyard Adam Scarf

Our revitalized Central Courtyard buildings have received a 5-star green star rating from the Green Building Council of Australia, including the new student accommodation building.

## Social Sustainability

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In 2022, MU progressed diversity and inclusion (D&I) goals and embedded D&I principles into daily operations. D&I goals were prioritised as a focus area of the [Operating Plan 2020-2024](#) and associated principles incorporated as critical drivers.

For the second consecutive year, the university was recognised by the [Workplace Gender Equality Agency](#) as an Employer of Choice for Gender Equity. This achievement builds on the [Workplace Gender Equity Strategy](#) and reaffirms long-term commitment in this space.

Following on from lessons learned during COVID-19, the university prioritised the commitment to create an inclusive, flexible work environment to support the wellbeing and work-life balance of staff. [The Flexible Work Framework](#) acknowledges that each person and team have different needs and preferences and that the needs of our stakeholders are diverse. The framework empowers managers and teams to co-design the best flexible work practices for them.

Macquarie University attained gold status at the 2022 Australian LGBTQI Inclusion Awards, a step up from silver achieved yearly since 2018. The university is recognised as one of Australia's top organisations for LGBTQIA+ inclusion and reaffirms our commitment to and action in creating a safe and supportive culture and environment.

One of the highlights of indigenous strategy was the renaming of the university's main campus as the Wallumattagal Campus – a national first that respects and acknowledges the longevity of the relationship the traditional Custodians had and continue to have, with the land on which the university is situated.

## **Governance Sustainability - Learning, Teaching and Research**

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Macquarie University is embedding sustainability in all our teaching programs to ensure our students are equipped to meet the complex challenges of today and tomorrow.

In seeking to contribute to the [United Nations Sustainable Development Goals \(2015-2030\)](#), Macquarie University seeks to align its core activities of Learning, Teaching and Research to the SDGs.

Macquarie University is committed to embedding sustainability into every program we teach to ensure our students are equipped to meet the expectations of business, and deal with the complexities and challenges of today's society.

[Learning and Teaching Strategic Framework 2020–2024](#), Objective 1. A distinctive Macquarie University pedagogy that:

- 1.2. nurtures and encourages students' appreciation of Indigenous knowledge, respect for diversity and global perspectives and commitment to ethical behaviour and sustainable practices

Students can enrol in qualifications and specific units that align with the SDGs. Students also get the opportunity to participate in a range of programs and activities that enable them to engage with the SDGs.


















All Bachelor degrees include at least one [PACE](#) (Professional and Community Engagement) unit. Students get to engage in a practical learning activity where they explore key economic, social, and ethical challenges, and learn about how contemporary organisations address them.

Macquarie University's [Global Leadership Program](#) (GLP) is a co-curricular program that can be taken alongside any course at MQ. The GLP Colloquium Series includes a range of topics such as ['The UN Sustainable Development Goals and You'](#).

The university's National Indigenous Science Education Program uses science, technology, engineering and mathematics (STEM) to place Indigenous secondary school students in STEM leadership positions at school, in the community and at university events so they gain the confidence, motivation and skills to complete school and pursue pathways to higher education.

Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023 a total of **9,864** research publications by Macquarie University staff had some focus on Sustainable Development Goals 1 to 16. Further, as a result of research collaborations, several publications were co-authored with institutions in other countries/regions. The data is presented in the following table.



|   | <b>UN Sustainable Development Goals</b>               | <b>2018 – 2023 Publications</b><br>Scholarly Output |
|---|---|---|
|    | <b>SDG 1: No Poverty</b>                              | 204   |
|    | <b>SDG 2: Zero Hunger</b>                             | 249   |
|    | <b>SDG 3: Good Health and Well-Being</b>              | 3634  |
|    | <b>SDG 4: Quality Education</b>                       | 666   |
|    | <b>SDG 5: Gender Equality</b>                         | 329   |
|    | <b>SDG 6: Clean Water and Sanitation</b>              | 368   |
|   | <b>SDG 7: Affordable and Clean Energy</b>             | 983   |
|  | <b>SDG 8: Decent Work and Economic Growth</b>         | 572   |
|  | <b>SDG 9: Industry, Innovation and Infrastructure</b> | 623   |
|  | <b>SDG 10: Reduced Inequalities</b>                   | 635   |
|  | <b>SDG 11: Sustainable Cities and Communities</b>     | 648   |
|  | <b>SDG 12: Responsible Consumption and Production</b> | 445   |
|  | <b>SDG 13 Climate Action</b>                          | 741   |
|  | <b>SDG 14: Life Below Water</b>                       | 566   |
|  | <b>SDG 15: Life on Land</b>                           | 840   |
|  | <b>SDG 16: Peace, Justice and Strong Institutions</b> | 629   |
|  | <b>SDG17: Partnerships for the Goals</b>              | 1845  |
|   | <b>Total</b>  | <b>9864</b>   |



## What MQU is doing

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The UN SDGs were released in 2015 with the aim of [SDG1](#) being to end poverty in all forms by 2030. Citizens in certain parts of the world are more vulnerable to poverty; however, the socio-economic impact of COVID 19 has seen poverty levels increase globally.

The university is a partner with the organisation Action on Poverty, taking up [placements for students](#) as part of their course credit.

Through the [PACE](#) (Professional and Community Engagement) program students, working with a range of community partners, get to work on a range of projects. For example, MQ students have participated in a PACE project with the Cambodian Organization for Children and Development (COCD) where they have evaluated and redesigned COCD's core programs relating to root causes of poverty.

Students in Macquarie Business School work in teams to participate in [World Vision's Student Challenge](#) annually. The challenge called on Macquarie University undergraduates and postgraduates to find solutions to encourage a Generation Z audience to engage with World Vision's current climate work and its long-standing 40 Hour Famine.

## Curriculum

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MQ offers a [Bachelor of Arts with Major in Social Justice](#)

Examples of units that include a focus on 'poverty':

[ANTH3023 Development Studies: Global Economic Inequality, International Aid and Human Rights](#)

[ECON8057 Economic Development](#)

[GEOP1010 Introducing Human Geography](#)

[SOC12040 Economic Life, Inequality and Society](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 204 research publications by MQ staff that had some focus on SDG1 No Poverty.



## What MQU is doing

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The UN acknowledges that we are not on track to achieve [SDG2](#) Zero Hunger by 2030. Statistics show the number of people who suffer from hunger is increasing, compounded by the impact of COVID 19.

MQ's [Applied Biosciences](#) researchers are working in partnership with other organisations to develop novel solutions and affect transformational change in major biological challenges to the environment, food production and health.

The university's Plant Growth Facility has been used by [researchers](#) to test the properties of an indigenous species in the rice family of grasses that holds significant potential to combat global hunger

MQ's [Student Success Support Package](#) also includes food vouchers for students. To provide continued support, MQ has partnered with several NGO charities to encourage volunteering efforts by our staff that include tackling food insecurity for the local community.

The university's Department of Health Systems and Populations have recruited local students into a co-designed study aiming to [combat food insecurity](#).

In early 2023, researchers from MQ's School of Health Sciences and School of Social Sciences joined a collaboration known as the [Australian Household Food Security Data Coalition](#), seeking more open reporting of the prevalence of food insecurity across Australia.

## Curriculum

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Examples of units that include a focus on 'hunger':

[ANTH2003 Food Across Cultures](#)

[HSYP8008 Global Nutrition and Food Security](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 249 research publications by MQ staff that had some focus on SDG2 Zero Hunger.





## What MQU is doing

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The vital link between ensuring healthy lives and promoting well-being at all ages, to achieving sustainable development is emphasised in [SDG3](#).

MQ offers a range of wellbeing services that are available to students at any time during their studies - <https://students.mq.edu.au/support/personal/wellbeing>. MQ is committed to creating a happy and healthy workplace that values inclusivity and work-life balance.

The university hosts an online psychological care service, underpinned by research. [Mindspot](#) is a free program of assessments, treatments and other online resources.

MQ staff are also engaged with the community. The Macquarie University [Centre for the Health Economy](#) has sought the views of mental health care providers towards finding ways to attain more value from funding in the area of mental health. The [Centre for Emotional Health](#) conducts research to further the understanding of emotional disorders and improving treatment, across the lifespan.

## Curriculum

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MQ offers a:

[Master of Public Health](#)

Examples of units that include a focus on 'health and well-being':

[ANTH2002 Illness and Healing](#)

[ECHE1300 Health and Wellbeing](#)

[MEDI2005 Human Health and Disease Processes](#)

[MEDI8105 – Interprofessional Healthcare](#)

[HSYP8104 Disease Prevention and Health Promotion](#)

[EDUC8210 Disability Equity Education](#)

[GEOP8020 Healthy Places: Planning for Diversity, Equity and Wellbeing](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 3,634 research publications by MQ staff that had some focus on SDG3 Good Health and Well-being.



## What MQU is doing

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[SDG4](#) is about access to quality education and how critical it is to sustainable development, and to allow people to address challenges and improve their quality of life.

MQ contributes to inclusive and equitable education by offering support to students through [scholarships](#) and other support – see [Aboriginal & Torres Strait Islander Entry Pathway](#).

MQ's [Widening Participation](#) program matches high school students from refugee backgrounds (mentees) with MQ student volunteers (mentors). Through mentoring, mentees are supported with their investigations of, and successful transition into higher education.

MQ's [Global Leadership Program](#) (GLP) is a co-curricular program that can be taken alongside any course at MQ. The focus is on cross-cultural understanding, leadership, international issues, innovation, and entrepreneurship. The GLP gives students the knowledge, skills and networks they will need to advance in their professional and personal lives.

## Curriculum

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MQ offers a range of qualifications in [Education](#), including:

[Bachelor of Teaching \(Early Childhood Education\)](#)

[Master of Inclusive and Special Education](#)

[Master of Education](#)

[Master of Indigenous Education](#)

Examples of units that include a focus on 'education':

[EDUC3830 Education in a Global Society](#)

[EDST8210 Teaching Quality Health and Physical Education in Primary Schools](#)

[ECHE3330 Inclusive Education](#)

[EDUC8210 Disability Equity Education](#)

[INED8050 Trauma Informed Education](#)

[EDSX8301 Inclusive and Special Education](#)

[SPED8922 – Educational Adjustments for Learners with Blindness/Low Vision](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 666 research publications by MQ staff that had some focus on SDG4 Quality Education.



## What MQU is doing

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[SDG5](#) highlights why enhancing gender equity is fundamental to sustainable development. Female participation in addressing challenges and promoting solutions to global issues must be increased.

Macquarie University launched its first Workplace Gender Equity Strategy on International Women's Day 2017, setting out an ambitious action plan for real and sustainable change towards gender equity, diversity and inclusion. MQ has been celebrating [Gender Equity Week](#) since 2018.

MQ is now a recognised WGEA Employer of Choice. See [Public Report](#) (2022-2023) submitted to Australian Government Workplace Gender Equality Agency. In 2019, MQ was awarded [SAGE Athena SWAN Bronze](#) accreditation in recognition of action taken to address gender inequity in Science, Technology, Engineering, Mathematics and Medicine (STEMM) disciplines and achieve tangible outcomes across the University.

MQ has been recognised as an [Employer of Choice for Gender Equality](#) (EOCGE) by the Workplace Gender Equality Agency (WGEA), for its progress towards gender equity.

MQ PACE International students work with [Empower Pacific](#) a Fijian NGO, on a range of projects including conducting research on community awareness sessions in Fiji for violence against women, sexual and gender-based violence and child abuse campaigns

## Curriculum

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MQ offers a:

[Bachelor of Arts with a Major in Gender Studies](#)

Examples of units that include a focus on 'gender':

[TOOO263 Gender Studies \(refer expansion tabs for the approved units of study\)](#)

[GEND1000 Freedom Dreams: Foundations in Gender Studies](#)

[GEND1020 Gender and Power](#)

[GEND3010 Gender, Crime and Violence](#)

[ANTH3022 Gender, Sexuality and Global Health](#)

[POIX2010 Contemporary Issues in Australian Politics: Race, Nation, Class and Gender](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 329 research publications by MQ staff that had some focus on SDG5 Gender Equality.



## What MQU is doing

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[SDG6](#) is about ensuring access to clean water and sanitation for all.

The MQ Campus seeks to set an example of an environmentally sustainable water manager with how it manages water conservation, re-use and protection of receiving waterways in our catchment. Examples of on-ground initiatives can be found [here](#). Efforts on campus include a large water recycling facility used on university sports fields, over 700,000 litres of rain water tanks, and provision of filtered drinking water fountains across the university's main campus.

The university has had a longstanding research [partnership](#) with Sydney Water on ensuring clean drinking water supplies across the greater Sydney region.

Macquarie's [Freshwater and Ecotoxicology Lab](#) is Australia's leading laboratory for groundwater and community ecotoxicology research.

Partnerships with other organisations such as [ANSTO](#) has broadened the reach of MQ researchers to engaging with neighbouring countries' water managers from the Pacific region.

## Curriculum

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Examples of units that include a focus on 'water and sanitation':

[CIVL6101 Water and Wastewater Engineering](#)

[ENVS8205 Environmental Pollution](#)

[ENVS8519 Environmental Health](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 368 research publications by MQ staff that had some focus on SDG6 Clean Water and Sanitation.



## What MQU is doing

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[SDG7](#) focuses on ensuring access to affordable, reliable, sustainable, and modern energy.

In 2020, MQ entered into a new Energy Supply agreement with [Red Energy](#) - a 100 per cent renewable electricity source. With the Red Energy contract for the larger electricity accounts, most of the University's electricity consumption is now supplied by renewable electricity. In April 2021, the small market electricity accounts were rolled into a single energy account with Shell Energy to supply green electricity. As a result, the University's total carbon emissions from electricity (Scope 2 emissions) have been reduced by 97%.

MQ has [secured grants](#) in the 2020 round of [Australian Renewable Energy Agency](#) funding to help address solar photovoltaic (PV) panel efficiency, overall cost reductions and end-of-life issues. Researchers are exploring various forms of energy.

The [Sustainable Energy Research Centre](#) (MQ SERC) is a multidisciplinary team of research experts in renewable energy across photovoltaics materials and devices, hydrogen production, application and safe storage, grid integration and energy economics. Through work on collaborative projects members of MQ SERC demonstrate commitment to work with industry, government, and other researchers to deliver innovative solutions and technologies to drive the renewable energy transition. Projects include Biological Hydrogen Productions.

As part of a Capstone unit, students in the Bachelor of Commerce and Bachelor of Science degree work on projects aligned to SDG 7. For example, a project focussed on aiding in the education and utilization of clean and affordable energy. One student project was aimed at [utilising solar farms](#) in the Australian desert.

In 2023, MQU established the [Transforming Energy Markets](#) research centre, to help facilitate the transition to a clean energy future.

## Curriculum

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Examples of units that include a focus on 'energy':

[MECH4002 Energy Sustainable Design](#)

[ENVS2115 Climate Change, Energy and our Future](#)

[LAWS5069 Energy and Natural Resources Law](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 983 research publications by MQ staff that had some focus on SDG7 Affordable and Clean Energy.



## What MQU is doing

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[SDG8](#) is about promoting inclusive and sustainable economic growth, employment, and decent work for all.

MQ's [Centre for Workforce Futures](#) is a collaborative cross-disciplinary hub whose members draw on past and present knowledge to undertake holistic research and thought leadership with partners in government, industry and not-for-profit (NFP) organisations to address current and future economic, social and policy challenges relating to the organisation of work, working people, work organisation and employment. The Centre's key focus is on facilitating research that enhances understanding, policy, and practice to support the achievement of 'Decent Work' as defined by the United Nations and the International Labor.

[ReWOMEN](#) is a joint venture between the [Centre for Workforce Futures](#), Macquarie Business School and the Institute of the Humanities at Northumbria University (Newcastle, UK). ReWOMEN connects scholars across business schools and humanities departments with stakeholders and policy makers to share key findings across four centuries of women's management and enterprise activities.

MQU's multidisciplinary research priority – [Prosperous Economies](#) brings several different lenses from across the university to facilitate sustainable economic paths for Australia and other nations.

## Curriculum

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Examples of units that include a focus on 'work and economic growth':

[ECON8057 Economic Development](#)

[ECON8017 Ecological Economics](#)

[SOC13080 Economic Futures: Work, Inequality and Power](#)

[MGMT3051 Management Ethics and Social Responsibility](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 572 research publications by MQ staff that had some focus on SDG8 Decent Work and Economic Growth.





## What MQU is doing

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[SDG9](#) is about building resilient infrastructure, promoting sustainable industrialization, and fostering innovation.

MQ's [Incubator](#) provides an environment for students, researchers, staff and the broader start-ups in the entrepreneur community to explore, develop and scale their ideas, with infinite potential for real-world impact. The Incubator also hosts a range of webinars – see [Macquarie University Incubator – YouTube](#)

The university is a founding member of the [Macquarie Park Innovation District](#) bringing together people and technology, education and industry, community and creativity.

Bringing technologies and innovation to scale is a key motivator for MQ's [Commercialisation](#) framework.

## Curriculum

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Examples of units that include a focus on 'innovation' and 'infrastructure':

[MGMT3904 Creativity and Innovation](#)

[HSYP8106 Innovation in Leadership, Teamwork and Advocacy](#)

[MMCC8030 Creative Entrepreneurship](#)

[GEOP3030 Liveable Cities: Infrastructure, Mobilities and Place-Making](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 623 research publications by MQ staff that had some focus on SDG9 Industry, Innovation and Infrastructure.



## What MQU is doing

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[SDG10](#) considers reducing inequalities and ensuring that no one is left behind as integral to achieving the Sustainable Development Goals.

Through MQ's [PACE International](#) program students got the opportunity to work with the [Blue Dragon Children's Foundation](#) in Vietnam. The Foundation's services are holistic; including rescue and crisis care for young people in immediate danger, shelter, legal advocacy, and long-term support to return to school and training.

The Regional and Remote Support [Scholarship](#) is designed to engage students from disadvantaged backgrounds and offer pathways into higher education.

MQ is committed to being a campus where Aboriginal and Torres Strait Islander culture is respected and celebrated. In partnership with the Indigenous community, a number of [strategies and initiatives](#) have been developed to provide the foundation for Aboriginal and Torres Strait Islander education at MQ.

MQ, through the [Widening Participation](#) Unit, works to engage students and families from low Socio Economic backgrounds by bringing a taste of university to regional areas.

## Curriculum

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Examples of units that include a focus on 'inequality':

[SOCI3080 Economic Futures: Work, Inequality and Power](#)

[SOCI3070 Social Inequality](#)

[SOCI2040 Economic Life, Inequality and Society](#)

[GEOP3000 Environmental Justice in the Anthropocene](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 635 research publications by MQ staff that had some focus on SDG10 Reduced Inequality.



## What MQU is doing

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[SDG11](#) is about making cities inclusive, safe, resilient, and sustainable.

The [Smart Green Cities](#) research centre brings together researchers from multiple disciplines and faculties of the university to collaborate on themes of sustainable urban systems.

In 2020, MQ was chosen as the core research partner for [SmartCrete CRC](#) (Cooperative Research Centre), an industry led collaborative research partnership focused on delivering breakthrough advancements in the cement and concrete product market.

A partnership between land developer Celestino and MQU has been established for the design of the [Sydney Science Park](#) with specific goals around the use of passive cooling through urban tree canopy and future-proofing of species selection.

The [Connection on the Move](#) research collaboration is exploring the varied forms of connection with place and the related benefits to improve decision-making processes in the design of sustainable and liveable cities.

## Curriculum

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MQ offers a [Master of Sustainable Development](#).

Examples of units that include a focus on 'sustainable cities and communities':

[ENVS8205 Environmental Pollution](#)

[ENVS3102 Urban Climate and Air Quality](#)

[ENVS8229 Sustainable Cities](#)

[ENVS8527 Engaging Society with Sustainable Development](#)

[ENVS2237 Natural Hazards, Disasters and their Management](#)

[ENVS8418 Environmental Planning](#)

[GEOP1080 Urban Planet: Cities and Planning in the Anthropocene](#)

[GEOP3030 Liveable Cities: Infrastructure, Mobilities and Place-Making](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 648 research publications by MQU staff that had some focus on SDG11 Sustainable Cities and Communities.



## What MQU is doing

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[SDG12](#) is about ensuring sustainable consumption and production patterns.

The [Centre for Corporate Sustainability and Environmental Finance](#) at MQ is involved in a range of projects including; Environmental, Social, Governance Investing, Uptake of Clean Technology, Adaptation and Resilience and Regulatory Change.

The university's Staff Café has partnered with one of the university [research facilities](#) to divert food waste from landfill and derive value from a former waste stream.

The university has been tracking its resource efficiency for more than a decade, and publically reporting major consumption and reduction trends [since 2020](#).

## Curriculum

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Examples of units that include a focus on 'sustainable development and environmental pollution':

[ENVS8527 Engaging Society with Sustainable Development](#)

[ENVS8205 Environmental Pollution](#)

[LAWS8055 Environmental Law and Sustainable Development](#)

[GEOP6050 Environment and Society](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 445 research publications by MQ staff that had some focus on SDG12 Responsible Consumption and Production.



## What MQU is doing

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[SDG13](#) is about taking action to combat climate change and its impacts.

MQ's [Professor Lesley Hughes](#) is a Lead or contributing author to a number of publications by the [Climate Council of Australia](#).

MQ researchers in the [Blue Carbon Horizons team](#) have demonstrated that coastal wetlands substantially increase their carbon sequestration as sea levels rise, providing a counterbalance to global warming. Their research was awarded the [2019 Eureka Prize for Environmental Science](#).

Researchers from MQ and Western Sydney University working on the [Which Plant Where Project](#) have looked at whether the tree species that characterise our urban landscapes will be resilient to climate change projected for the next 50 years.

The university's [Biodiversity Node](#) has an extensive body of public-facing research on managing landscape-scale change to natural environments under the effects of a warming climate.

## Curriculum

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Examples of units that include a focus on 'climate change':

[ENVS6115 Climate Change, Energy and our Future](#)

[ENVS8104 Climate Change and Adaptation](#)

[LAWS8051 Climate Change Law](#)

[BIOL7760 – Climate Change Biology: Impacts and Adaptation](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 741 research publications by MQ staff that had some focus on SDG13 Climate Action.



## What MQU is doing

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[SDG14](#) focusses on the conservation and sustainable use of oceans, seas and aquatic resources.

MQ has a [Seawater Facility](#) which supports academic research and undergraduate teaching in environmental and life sciences. Current research include *ocean change, ecology and conservation, impacts of climate change on sea urchin adhesions and oxygen consumption, etc.*

MQ Researchers, through the [Macquarie University Marine Research Centre](#) are currently involved in a range of research projects including '*Estuarine forests: the rising frontier of coastal carbon*', '*Mining the deep oceans: Ensuring compliance with international obligations*'.

MQ's Dr Scott Wilson is the Research Director of [AUSMAP](#) (Australian Microplastic Assessment Project). AUSMAP's work involves documenting and analysing microplastic pollution in Australian aquatic environments. Project Leaders, MQ and the Total Environment Centre, work with a consortium of research, environment, education, government, and sustainable business organisations.

MQ has been a leading organisation for the [Wetlands in Drylands](#) Research Network, an initiative active on four continent.

The Department of Earth and Environmental Sciences is involved in researching and distributing policy-relevant science, critical in helping to prioritise marine areas for [biodiversity conservation](#) and marine spatial planning in the Western Indian Ocean Region (WIO).

## Curriculum

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Examples of units that include a focus on 'ocean and marine life':

[EESC2160 Climate and Oceans](#)

[BIOL8770 Topics in Australian Marine Science](#)

[ENVS3439 Geomorphic Analysis of Rivers and Wetlands for Conservation and Management](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 566 research publications by MQ staff that had some focus on SDG14 Life Below Water.





## What MQU is doing

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[SDG15](#) is about sustainably managing forests, combating desertification, halting, and reversing land degradation and halting biodiversity loss.

MQ has a [Fauna Park](#) on campus. Its main purpose is to provide staff and students with facilities for animal-based research, particularly in animal behaviour. MQ also has a modern and highly sophisticated [plant growth facility](#) with glasshouses and growth cabinets. It has the capacity for a wide range of research projects and is used for undergraduate and postgraduate teaching in biology, while also supporting national and international collaborative research.

MQ is a member of the NSW Government Adaptation Research Hub, established to leverage NSW's collective, and multidisciplinary, science capacities to produce relevant and practical research to directly inform the decision making of NSW agencies and communities. The [Biodiversity Node](#) is led by Macquarie University, in collaboration with CSIRO, Taronga Zoo and the Royal Botanic Gardens. They are involved in several projects around [ecological data and information](#), [weeds, pathogens and disease](#), [managing changing landscapes](#), [aquatic and coastal biodiversity](#), [cultural heritage and biodiversity](#).

MQ [Arboretum](#) comprises all the trees and shrubs on campus and provides habitat for many native birds and animals. The Arboretum is used by staff and students for learning, teaching and research. [Campus walks](#) are hosted to provide an opportunity for staff to connect with the natural environment.

MQ researchers from the Department of Earth and Environmental Sciences, engage with collaborators and communities widely across Australia, southern Africa, the Americas and Europe to understand why [wetlands](#) are so important, how they function, and what threatens them.

## Curriculum

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MQ offers a:

[Bachelor of Biodiversity and Conservation](#)

Examples of units that include a focus on 'life on land and biodiversity':

[BIOL3420 Biodiversity and Conservation](#)

[ENVS3439 Geomorphic Analysis of Rivers and Wetlands for Conservation and Management](#)

[BIOL8760 Climate Change Biology: Impacts and Adaptation](#)

[BIOL8870 Regional and Global Conservation](#)

[BIOL8610 Conservation and Management of Wild Populations](#)

[ENVS1017 The Living Environment](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 840 research publications by MQU staff that had some focus on SDG15 Life on Land.



## What MQU is doing

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[SDG16](#) aims to promote just, peaceful, and inclusive societies.

MQ's [Social Justice Clinic](#) (SJC), set up under the MQ Law School, provides much-needed help to some of Australia's most vulnerable people and communities. SJC's innovative model offers students hands-on legal experience under the supervision of experienced human rights and public interest lawyers, providing a powerful learning opportunity for students.

An MQ PACE International student got the opportunity to be placed as an intern with the Centre for Migrant Advocacy (CMA) in the Philippines. CMA is an advocacy group that promotes the rights of overseas Filipinos, both land or sea-based migrant workers and Filipino immigrants – and their families. Here is the [student's](#) account of his experience.

[Wallumatta Legal](#) is an award-winning subsidised legal service hosted at Macquarie. The service leverages cutting edge technology and automation to provide accessible legal advice at a low cost.

## Curriculum

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MQ offers a:

[Bachelor of Arts with a Major in Social Justice](#).

Examples of units that include a focus on 'peace and justice':

[LAWS8055 Environmental Law and Sustainable Development](#)

[GEOP3000 Environmental Justice in the Anthropocene](#)

[LAWS8061 Environmental Planning Law](#)

[LAWS8019 Dispute Resolution Processes and Law](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, there were 629 research publications by MQ staff that had some focus on SDG16 Peace, Justice and Strong Institutions.



## What MQU is doing

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[SDG17](#) is about revitalizing the global partnerships for sustainable development.

Since 2018, MQU has developed a unique partnership in one of Australia's most remote areas. The [Wuyagiba Study Hub](#), or Bush University is a two-way education partnership with local Indigenous students.

Macquarie's [Hearing, Education Application Research](#) Centre has recently been recognised as a World Health Organisation Collaborating Centre. The reach of the centre's work is anticipated to extend to new global partners working on mitigating hearing loss.

The [Centre for Corporate Sustainability and Environmental Finance](#) focuses on collaborations both nationally and abroad to help the global transition to sustainability.

MQU Smart Green Cities is a collaborative hub connecting a range of stakeholders including industry, government, researchers, and community to create liveable urban environments by inspiring change through evidence-based problem solving. See examples [of partnerships and key research areas](#).

## Curriculum

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Examples of units that include a focus on 'partnerships':

[LAWS8099 Professional and Community Engagement](#)

[MQBS3000 Student Leadership in Community Engagement](#)

## Research Publications

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Data has been sourced from Macquarie University's Research Management System (Pure by Elsevier - <https://researchers.mq.edu.au/>). Between 2018 and 2023, a total of 1845 research publications by Macquarie University staff had some focus on SDG17. A significant number of these publications were international publications co-authored with institutions in other countries/regions, alluding to the research partnerships formed.



*Image credit:  
Joanne  
Stephan*