

# United Nations Sustainable Development Goals

2020 Macquarie University Alignment







<u>The 2030 Agenda for Sustainable Development</u>, 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

"Macquarie University adheres firmly to our commitment to the principles of sustainability in all we do" Our University: A Framing of Futures, 2013 .



# A Framing of Futures: 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.

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.





# **Operations (Waste, Water, Energy)**

Macquarie University focuses its efforts on resource efficiency – using less, not creating more, whilst maintaining and enhancing the functional requirements and occupant experience. The focus is being efficient in what we use, whilst not overburdening the campus with infrastructure to create a resource we don't require.



As at  $1^{st}$  July 2020, the University has entered into a which will see 100% of the electricity being supplied to campus being sourced from a renewable source. This will reduce our annual carbon emissions from 48,000 CO2e(t) to 3,400 CO2e(t) – or 92%; this is significantly more than our original 2030 target of a 40% reduction.

As at 1<sup>st</sup> July 2020, 100% of the electricity being supplied to MQU's Macquarie Park campus will supplied from a renewable source as a result of the new Energy Supply agreement with Red Energy.

This will reduce our annual carbon emissions by approximately 92%, which is significantly more than our original 2030 target of a 40% reduction and continues to move us closer to a <u>carbon neutral position</u>.





# The Built and Physical Environment

The core principles underpinning Macquarie University's Ecologically Sustainable Design are embedded in the <u>Campus Masterplan</u>, <u>Design Excellence Strategy and Urban Design Guidelines</u> and flow through into Design Briefs, Consultancy Agreements, Building Contracts and Maintenance Agreements.



Ecologically Sustainable Design: <u>The Incubator</u> is a recipient of multiple local and international awards for Architecture, Good Design and Sustainability.





## Learning, Teaching and Research

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.

<u>Learning and Teaching Strategic Framework 2020–2024</u>, Objective 1. A distinctive Macquarie University pedagogy that:

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

In seeking to contribute to the <u>United Nations Sustainable Development Goals (2015-2030)</u>, Macquarie University seeks to align its core activities of Learning, Teaching and Research to the SDGs.

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, a total of 7,282 research publications by Macquarie University staff had some focus on Sustainable Development Goals 1 to 16.

|                             | •                                              | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 5 Year Total<br>Publications |
|-----------------------------|------------------------------------------------|-------|-------|-------|-------|-------|-------|------------------------------|
| 1 mm<br>Úv <b>ÝÝ</b> tÍ     | SDG 1: No Poverty                              | 5     | 3     | 1     | 2     | 2     | 6     | 19                           |
| 2 HOUR (((                  | SDG 2: Zero Hunger                             | 9     | 9     | 14    | 14    | 18    | 12    | 76                           |
| 3 and will blood            | SDG 3: Good Health and Well-being              | 613   | 646   | 723   | 771   | 922   | 624   | 4,299                        |
| 4 COLUMN                    | SDG 4: Quality Education                       | 16    | 11    | 14    | 29    | 25    | 23    | 118                          |
| 5 death                     | SDG 5: Gender Equality                         | 7     | 12    | 9     | 13    | 16    | 15    | 72 p                         |
| 6 GEAN MODES AND SANCESTION | SDG 6: Clean Water and Sanitation              | 12    | 3     | 2     | 10    | 12    | 4     | 43                           |
| 7 Canada Sana               | SDG 7: Affordable and Clean Energy             | 30    | 37    | 34    | 85    | 101   | 67    | 354                          |
| 8 MICHINE MIRAM             | SDG 8: Decent Work and Economic Growth         | 28    | 20    | 14    | 32    | 33    | 31    | 158                          |
| 9 AND SHIP CHARLES          | SDG 9: Industry, Innovation and Infrastructure | 6     | 7     | 2     | 3     | 10    | 12    | 40                           |
| 10 RESIGNATIONS             | SDG 10: Reduced Inequality                     | 11    | 10    | 14    | 16    | 29    | 14    | 94                           |
| 11                          | SDG 11: Sustainable Cities and Communities     | 23    | 27    | 30    | 45    | 40    | 34    | 199                          |
| 12 CONSUMPTION AND PRODUCTS | SDG 12: Responsible Consumption and Production | 20    | 12    | 22    | 35    | 30    | 30    | 149                          |
| 13 ACROS                    | SDG 13: Climate Action                         | 106   | 112   | 82    | 108   | 116   | 94    | 618                          |
| 14 UST MELOW MAIN           | SDG 14: Life Below Water                       | 59    | 66    | 64    | 69    | 78    | 65    | 401                          |
| 15 CHT CHILDRE              | SDG 15: Life on Land                           | 47    | 49    | 46    | 69    | 68    | 31    | 310                          |
| 16 MG STREEG.               | SDG 16: Peace, Justice and Strong Institutions | 43    | 40    | 57    | 74    | 78    | 40    | 332                          |
|                             | Total Publications                             | 1,035 | 1,064 | 1,128 | 1,375 | 1,578 | 1,102 | 7,282                        |





#### What MQU is doing

The UN SDGs were released in 2015 with the aim of <u>SDG1</u> 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.

MQU initiatives to support SDG1 include targeted financial support for students through the <u>Student Success Support Package</u>.

MQU's <u>Community Volunteering</u> enables staff to take time off to volunteer in various community organisations that address a range of issues including poverty.

Through the PACE (Professional and Community Engagement) program students, working with a range of community partners, get to work on projects. See <u>MQU PACE program takes student to Vietnam to work with Action for Poverty.</u>

#### Curriculum

MQU offers a <u>Bachelor of Arts with a Major in Refugee Studies</u>

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

ANTH3023 Development Studies: Poverty and Global Justice

**ECON8057 Economic Development** 

**GEOP1010 Introducing Human Geography** 

GEOP2020 Geographies of Violence: Bodies, Spaces and Power

## **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 19 research publications by MQU staff that had some focus on SDG1 No Poverty.





## What MQU is doing

The UN acknowledges that we are not on track to achieve <u>SDG2</u> Zero Hunger by 2030. Statistics show the number of people who suffer from hunger is increasing, compounded by the impact of COVID 19.

MQU's <u>Applied BioSciences</u> 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.

MQU students have cofounded a social enterprise - <u>Benevolence Financial Group</u> - based at the Macquarie University Incubator. They offer high-quality financial services at no cost to their customers and invest in social impact projects fighting inequality in Australia and globally.

MQU's <u>Student Success Support Package</u> also includes food vouchers for students.

#### Curriculum

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

**ANTH2003 Food Across Cultures** 

**HSYP8008 Global Nutrition and Food Security** 

SOCI3020 The Global Politics of Food and Eating

#### **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 76 research publications by MQU staff that had some focus on SDG2 Zero Hunger.





## What MQU is doing

<u>SDG3</u> emphases the vital link between ensuring healthy lives and promoting well-being at all ages, to achieving sustainable development.

MQU offers a range of wellbeing services that are available to students at any time during their studies. <a href="https://students.mq.edu.au/support/wellbeing">https://students.mq.edu.au/support/wellbeing</a>

MQU is committed to creating a happy and healthy workplace that values inclusivity and work-life balance. A range of wellbeing services are offered to staff. <a href="https://staff.mq.edu.au/work/wellbeing">https://staff.mq.edu.au/work/wellbeing</a> Month — A range of webinars and resources were offered. <a href="https://staff.mq.edu.au/work/wellbeing/staff-wellbeing-whats-online;">https://staff.mq.edu.au/work/wellbeing/staff-wellbeing-calendar-2020</a>

Through the <u>PACE International</u> program MQU students spent time at a local Health Centre in Fiji where they applied statistical ideas and methods to assist in solving some complex health challenges faced by some of the poorer communities in Fiji.

MQU staff are also engaged with community. See submission to the Royal Commission into Aged Care Quality and Safety - <u>Power to the people: Improving residential aged care quality through better consumer choice</u>

## Curriculum

#### MQU offers a:

Bachelor of Arts with a Major in Global Health

<u>Bachelor of Human Sciences with a Major in Public Health: Policy and Promotion</u> Bachelor of Human Sciences with a Major in Counselling Theory and Principles.

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

ANTH3022 Gender, Sexuality and Global Health

ECHE1300 Health and Wellbeing

ANTH8016 Culture, Health and Disease

ANTH8032 Global Health

**HSYP8103** Health Law and Economics

HSYP8104 Disease Prevention and Health Promotion

## **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 4,299 research publications by MQU staff that had some focus on SDG3 Good Health and Well-being.





#### What MQU is doing

<u>SDG4</u> focuses on 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.

MQU contributes to inclusive and equitable education by offering support to students through scholarships and other support – see Aboriginal & Torres Strait Islander Entry Pathway.

<u>MQU Alumni</u> - Joshua Ross – has co-founded Humanitix – a not for profit that is on a mission to close the education gap by directing money to education programs.

MQU's <u>Walanga Muru</u> (Indigenous Office) partners with high schools and community to ensure Aboriginal and Torres Strait Islander students receive the preparation they need to succeed at school, develop their cultural identity, and have the resilience to overcome life's challenges and emerge as one of tomorrow's leaders.

MQU's <u>LEAP UP</u> Refugee Mentoring program matches high school students from refugee backgrounds (mentees) with MQU student volunteers (mentors). Through mentoring, mentees are supported with their investigations of, and successful transition into higher education.

MQU's <u>Global Leadership Program</u> (GLP) is a co-curricular program that can be taken alongside any course at MQU. 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

MQU offers a range of qualifications in <u>Education</u>, including Indigenous Education and Teaching English to Speakers to Other Languages.

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

ECHE3260 Working with Families, Communities and Other Professionals in Education Settings

EDST8201 Indigenous Education: Strategies and Research

**INED8040 Global Indigenous Education** 

**EDUC3830 Education in a Global Society** 

EDST8210 Teaching Quality Health and Physical Education in Primary Schools

## **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 118 research publications by MQU staff that had some focus on SDG4 Quality Education.





#### What MQU is doing

<u>SDG5</u> 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. <u>Towards Gender Equity 2.0</u> (2019-2021) strategy details MQU's gender equity priorities, progress to date and future plans.

MQU has been celebrating Gender Equity Week since 2018 – see 2020 Gender Equity Week program

MQU is now a recognised WEGA Employer of Choice. See <u>Public Report</u> (2019-2020) submitted to Australian Government Workplace Gender Equality Agency.

In 2019, MQU was awarded <u>SAGE Athena SWAN Bronze</u> 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.

MQU PACE International students work with <u>Empower Pacific</u>, 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

MQU offers a Bachelor of Arts with a Major in Gender Studies.

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

**GEND1020 Gender and Power** 

GEND3010 Gender, Crime and Violence

**GEND1000 Freedom Dreams: Foundations in Gender Studies** 

ANTH3022 Gender, Sexuality and Global Health

SOCI3040 Human Services in the 21st Century: Care, Gender and Institutions

POIR2010 Contemporary Issues in Australian Politics: Race, Nation, Class and Gender

## **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 72 research publications by MQU staff that had some focus on SDG5 Gender Equality.





## What MQU is doing

SDG6 focuses on ensuring access to clean water and sanitation for all.

MQU Lecturer, Roger Moser, worked with colleagues from other international institutions on research projects that looked at <u>Providing Clean Drinking Water through an Access-Based Solution in India</u>

MQUU is a core research partner and host of <u>SmartCrete CRC</u>, whose research programs include the development of <u>resilient sewer infrastructure</u> and creating innovative <u>Engineering Solutions</u>, <u>Asset Management & Sustainable outcomes</u>.

#### Curriculum

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

**CIVL6101 Water and Wastewater Engineering** 

**ENVS8205 Environmental Pollution** 

**ENVS819 Environmental Health** 

#### **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 43 research publications by MQU staff that had some focus on SDG6 Clean Water and Sanitation.





## What MQU is doing

SDG7 focuses on ensuring access to affordable, reliable, sustainable and modern energy.

MQU has entered into a new Energy Supply agreement with <u>Red Energy</u> which will see 100% of the electricity being supplied to campus being sourced from a renewable source.

Led by Professor Darren Bagnall, the <u>Macquarie University Sustainable Energy Research Centre (MQ-SERC)</u> is a multidisciplinary centre focused on driving innovations in next generation clean energy conversion, storage and distribution technologies that are cost effective, reliable and safe with minimal environmental impact.

MQU researchers are exploring various forms of energy. See Dr Kerstin Petroll's pitch <u>HydGENE</u> <u>Renewables</u> designer microbes that can produce hydrogen gas from feedstock on site and on demand.

MQU has <u>secured grants</u> in the 2020 round of <u>Australian Renewable Energy Agency</u> funding to help address solar photovoltaic (PV) panel efficiency, overall cost reductions and end-of-life issues.

#### Curriculum

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

CIVL3101 Hydraulics and Hydrology

## **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 354 research publications by MQU staff that had some focus on SDG7 Affordable and Clean Energy.





#### What MQU is doing

<u>SDG8</u> focuses on promoting inclusive and sustainable economic growth, employment and decent work for all.

MQU's <u>Centre for Workforce Futures</u> 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 Labour.

<u>ReWOMEN</u> is a joint venture between the <u>Centre for Workforce Futures</u>, Macquarie Business School and the <u>Institute of the Humanities at Northumbria University (Newcastle, UK)</u> 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.

#### Curriculum

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

**ECON8057 Economic Development** 

**ECON8017 Ecological Economics** 

SOCI3080 Economic Futures: Work, Inequality and Power

MGMT3051 Management Ethics and Social Responsibility

## **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 158 research publications by MQU staff that had some focus on SDG8 Decent Work and Economic Growth.





# What MQU is doing

<u>SDG9</u> focuses on building resilient infrastructure, promoting sustainable industrialization and fostering innovation.

MQU's <u>Incubator</u> provides an environment for students, researchers, staff and the broader start-ups and intrapreneur community to explore, develop and scale their ideas, with infinite potential for real-world impact. The Incubator also hosts a range of webinars – see <u>Macquarie Incubator LID Series: The Circular Economy</u>.

<u>Venture Café Sydney</u>, a member of the Venture Café Global network, with the goal of building an innovation community, is championed by Macquarie University.

The <u>Australian Institute of Health Innovation</u> (AIHI) is a research-intensive institute located at MQU and conducts world-class research to catalyse performance improvement in healthcare services and systems in Australia and internationally.

#### Curriculum

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

FOSE8020 Entrepreneurship and Innovation in Science and Technology

MGMT3904 Creativity and Innovation

HSYP8106 Innovation in Leadership, Teamwork and Advocacy

MMCC8030 Creative Entrepreneurship

GEOP3030 Liveable Cities: Infrastructure, Mobilities and Place-Making

#### **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 40 research publications by MQU staff that had some focus on SDG9 Industry, Innovation and Infrastructure.





# What MQU is doing

<u>SDG10</u> considers reducing inequalities and ensuring that no one is left behind as integral to achieving the Sustainable Development Goals.

Through MQU's PACE International program <u>students</u> got the opportunity to work with the <u>Blue Dragon Children's Foundation</u> 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

<u>EnactusMQ</u> (part of a global student organisation) is working with the Nhuubala Yugal Education Centre (Australia) to empower rural youth through community, culture and connection.

MQU 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 <u>strategies and initiatives</u> have been developed to provide the foundation for Aboriginal and Torres Strait Islander education at MQU.

MQU, through the Widening Participation Unit, holds <u>LEAP Roadshows and InROADS</u> to engage students and families from low Socio Economic backgrounds by bringing a taste of university to regional areas.

#### Curriculum

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

SOCI3080 Economic Futures: Work, Inequality and Power

**SOCI3070 Social Inequality** 

SOCI2040 Winners & Losers: Inequality in the global age

POOO168 Climate Justice

## **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 94 research publications by MQU staff that had some focus on SDG10 Reduced Inequality.





# What MQU is doing

<u>SDG11</u> focuses on making cities inclusive, safe, resilient and sustainable.

In 2020, MQU was chosen as the <u>core research partner</u> for SmartCrete CRC (Cooperative Research Centre), a research partnership focused on delivering breakthroughs in the cement and concrete product market.

MQU Geography students have designed a <u>waste management</u> plan at the Yanama Budyari Yarramundi Gumada Caring-as-Country Culture Camps at the Yellomundee Regional Park.

MQU Law Schools led the <u>Bright Sparks Program</u> in partnership with Ku-ring-gai Council which aimed to empower high school students to have their voices heard on issues of climate change and sustainability. Students from one of the participating schools (Normanhurst Boys High School) focussed on SDG11 and <u>"devised a plan for future Sydney housing that addressed the ecological footprint of humans."</u>

MQU staff worked with the Salvation Army to produce the film <u>Losing Ground, Holding Place</u>. The film is about how a social housing estate became a home for its residents – a place of safety, refuge, recognition and shared belonging that made it a successful account of place-making.

#### Curriculum

MQU 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

ENVS6237 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**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 199 research publications by MQU staff that had some focus on SDG11 Sustainable Cities and Communities.





## What MQU is doing

<u>SDG12</u> focuses on ensuring sustainable consumption and production patterns.

The Start-up Program at MQU Incubator has enabled Anne Thompson to establish <u>Sustainable Schoolwear</u>; focussed on the principles of the circular economy, and working to embed sustainability in the everyday, creating durable, affordable, ethically produced school wear options that are healthy for kids and the planet.

The <u>Centre for Corporate Sustainability and Environmental Finance</u> at MQU is involved in a range of projects including; Environmental, Social, Governance Investing, Uptake of Clean Technology, Adaptation and Resilience and Regulatory Change.

#### Curriculum

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**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 149 research publications by MQU staff that had some focus on SDG12 Responsible Consumption and Production.





## What MQU is doing

<u>SDG13</u> focuses on taking action to combat climate change and its impacts.

MQU's <u>Professor Lesley Hughes</u> is a Lead or contributing author to a number of publications by the <u>Climate Council of Australia</u>. She was recently given the Tertiary Educator of the Year Award and Overall 2020 NSW Environmental Educator of the Year Award by the <u>Australian Association for Environmental Educators</u> (New South Wales Chapter). Here is Professor Hughes on <u>ABC News Breakfast</u> detailing the latest on climate impacts on the Great Barrier Reef.

MQU researchers in the <u>Blue Carbon Horizons team</u> 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 MQU 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 – see <u>'Hedging against climate change'</u>

## Curriculum

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

**ENVS6116** The Atmospheric Environment

**ENVS8104 Climate Change and Adaptation** 

# **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 618 research publications by MQU staff that had some focus on SDG13 Climate Action.





#### What MQU is doing

<u>SDG14</u> focusses on the conservation and sustainable use of oceans, seas and marine resources.

MQU has a <u>Seawater Facility</u> 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.

MQU Researchers, through the <u>Macquarie University Marine Research Centre</u> are 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'. MQU researchers have been awarded <u>grants</u> under the Australian Research Council Linkage Project scheme to explore ways to protect and manage coastal floodplains of northern Australia from feral animals and rising sea levels.

MQU's Dr Scott Wilson is Research Director of <u>AUSMAP</u> (Australian Microplastic Assessment Project). AUSMAP analyses microplastic pollution in Australian aquatic environments. Project Leaders, MQU and the Total Environment Centre, work with a consortium of research, environment, education, government and business organisations.

Through <u>CAPSTAN</u> (Collaborative Australian Postgraduate Sea Training Alliance Network), MQU Post Graduate students have participated in marine science education on board Australia's state-of-theart research vessel, the RV *Investigator*.

## Curriculum

MQU offers a Bachelor of Marine Science.

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

GEOS1130 Blue Planet: Oceans, Climate and Life

ENVS3101 Ocean, Coasts and Climate

**BIOL8770 Topics in Australian Marine Science** 

GEOS2130 Marine Sediments: Records of Past Earth

EESC2160 Climate and Oceans

ENVS3439 Geomorphic Analysis of Rivers and Wetlands for Conservation and Management

#### **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 401 research publications by MQU staff that had some focus on SDG14 Life Below Water.





# What MQU is doing

<u>SDG15</u> focuses on sustainably managing forests, combating desertification, halting and reversing land degradation and halting biodiversity loss.

MQU also has a modern and highly sophisticated <u>plant growth facility</u> 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.

MQU is a member of the NSW Government Adaptation Research Hub, established in 2013 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 <u>Biodiversity Node</u> is led by Macquarie University, in collaboration with CSIRO, Taronga Zoo and the Royal Botanic Gardens. They are involved in a range of projects around <u>ecological data and information</u>, <u>weeds</u>, <u>pathogens and disease</u>, <u>managing changing landscapes</u>, <u>aquatic and coastal biodiversity</u>, <u>cultural heritage and biodiversity</u>.

MQU <u>Arboretum</u> spans the main campus and provides habitat for many native birds and animals. The Arboretum is used by staff and students for learning, teaching and research. <u>Campus walks</u> are hosted to provide an opportunity to connect with the natural environment.

MQU 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

MQU offers a <u>Bachelor of Biodiversity and Conservation</u>

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** 

**IOL8610** Conservation and Management of Wild Populations

**ENVS1017 The Living Environment** 

## **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 310 research publications by MQU staff that had some focus on SDG15 Life on Land.





## What MQU is doing

SDG16 aims to promote just, peaceful and inclusive societies.

MQU's <u>Social Justice Clinic</u> (SJC), set up under the MQU 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 MQU 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 <u>student's</u> account of his experience.

Restless Development is an international non-government organisation that has a global vision of 'Young people taking a leadership role in addressing the most urgent issues facing their countries and the world, supported fully by their governments, their communities, businesses and civil society institutions'. See MQ student share her experience with Restless Development Nepal.

#### Curriculum

MQU 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

POOO168 Climate Justice

#### **Research Publications**

According to data sourced from SciVal: <a href="www.scival.com">www.scival.com</a> and Scopus: <a href="www.scopus.com">www.scopus.com</a>, from 2015 to 2020, there were 332 research publications by MQU staff that had some focus on SDG16 Peace, Justice and Strong Institutions.





#### What MQU is doing

<u>SDG17</u> is about revitalizing the global partnerships for sustainable development.

Macquarie University Centre for the Health Economy (MUCHE) held an Executive Roundtable workshop attended by various government and non-government stakeholders in 2018. The objectives were to explore the value of mental health, and debate what the Productivity Commission could focus upon within their Inquiry. See - The Value of Mental Health Roundtable Report May 2019.

The MQU <u>Lighthouse Lecture Series</u> fosters the exchange of knowledge between industry, government and not-for-profit entities and academics within the Business School. Lecture topics are of national relevance from a social, political or economic standpoint, and draw on the research strengths within the business school.

## Curriculum

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

LAWS8099 Professional and Community Engagement
MQBS3000 Student Leadership in Community Engagement



