

SUSTAINABLE DEVELOPMENT GOALS



UNIVERSITY OF NEWCASTLE
PROGRESS REPORT 2023



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ACKNOWLEDGMENT OF COUNTRY

The University of Newcastle acknowledges the traditional custodians of the lands within our footprint areas: Awabakal Nation, Darkinjung Nation, Biripai Nation, Worimi Nation, Wonnarua Nation and Eora Nation. We also pay respect to the wisdom of our Elders past and present.



A BETTER FUTURE FOR ALL

2023 has brought with it significant new local and global challenges. The 2023 Sustainable Development Goals Progress Report is an opportunity to reflect on how our University community has rallied together to create a better future for all.

Despite the ongoing challenges of the post-pandemic landscape, the climate crisis, and political unrest within many parts of the world, we have continued to collaborate on outstanding teaching, learning, research and innovation. I am grateful for the resilience and determination of our University community in working together to achieve real-world impact in the face of continued uncertainty.

We have continued to make progress towards the Sustainable Development Goals, strengthened by our values of Excellence, Equity, Engagement, and Sustainability. Our researchers are developing innovative solutions to the world's most pressing problems. Our students are developing the skills and knowledge they need to make positive contributions. Our staff are committed to operating our University, and engaging in the wider community, in a sustainable manner.

I am proud of the initiatives we have led, partnered on, established, and supported in our work to find solutions to global challenges. The work that is happening every day at our University contributes to creating a more sustainable and equitable future.

Some of the year's highlights include our work in progressing SDG 10 on Reduced Inequality, through advancing Indigenous knowledge, with our University being named the first university in Australia to receive a 'Cygnet Award' for Indigenous Cultural Competency from Science in Australia Gender Equity (SAGE). I am also proud of the University's Professor Penny Jane Burke being appointed a UNESCO Chair in Equity, Social Justice and Higher Education – a globally-prestigious role that will see her working to improve the lives of marginalised groups around the world, including victim-survivors of gender-based violence.

The 2023 report reflects on the work we have done, and on our commitment to the Sustainable Development Goals. These positive stories are important so that we celebrate success but also continue to inspire our University community to focus on delivering global impact.

I am hopeful that together we can overcome the challenges we face. We have the knowledge, the skills, and the passion to make a difference. Through collaboration and innovation, we will bring about our bold vision for a better future.

Professor Alex Zelinsky AO
Vice-Chancellor and President

BUILDING MOMENTUM TOWARDS THE SDGs



We are pleased to highlight the **collaboration between CIFAL Newcastle and the University of Newcastle** in the University of Newcastle's 2023 SDG Report, which focuses on four critical areas: *Equity, Indigenous Knowledges, and Transformative Education; Global Health and Well-being; Sustainable Cities and Communities; and Climate Adaptation and Clean Futures.*

These areas capitalise on the University of Newcastle's strengths as demonstrated through its strong performance in the Times Higher Education Impact Rankings, where we are placed 28th internationally in terms of commitment to the SDGs, demonstrating our work in addressing major global concerns.

In 2023, we hosted a variety of successful activities and events, reaching over 3000 beneficiaries. We are very pleased with an increase in our events and activities with a specific focus on the Asia-Pacific region and our partners in this area.

The strategy orientation of CIFAL Newcastle for 2024 is solidly founded in the four main focus areas. We intend to broaden our impact by launching new programs, collaborating with local and international partners, and undertaking research. This includes certifying short courses from the University of Newcastle, partnering with the *UNESCO chair in Equity, Social Justice, and Higher Education*, and continue our work and collaborations across the Asia-Pacific region. These endeavours attempt to have a significant impact on long-term development and building momentum towards the SDGs.

I encourage everyone to join us in this critical task and be the generation that produces a more sustainable and equitable future for all. Your participation, engagement, and contributions are key as we work to make a long-term difference on the world's most important issues. We can all benefit from a brighter, more sustainable future if we work together.

Professor Jennifer Milam
Pro Vice Chancellor Academic Excellence
Executive Director CIFAL Newcastle





OUR GOALS

The University of Newcastle is continuing to align our strategic priorities to the United Nations Sustainable Development Goals (SDGs). Our University's values of Excellence, Equity, Engagement and Sustainability, reflect these SDGs and set the standards that we expect, encourage and nurture in our staff and students. They direct our decision making, and position us to achieve our purpose.

In 2023 we have focused on strengthening the economic and environmental sustainability of our operations, programs, education, research and development. We are taking leaps toward carbon neutrality and zero waste and have implemented leading water recycling strategies. We are working with government and industry partners to explore opportunities to further connect our campuses with our region and we are focused on Well-being and creating vibrant, connected communities. We are committed to being a leading advocate and driving force for excellence and equity in higher education. Our campuses will be digitally enabled, environmentally responsible, safe, vibrant, and accessible, adding a new dimension of engagement and collaboration beyond our physical boundaries for students, researchers and the world.

Ranked #28

in the world for our commitment to the United Nation's Sustainable Development Goals

In the recent release of the 2023 Times Higher Education Impact Rankings, the University ranked 28th overall in the world for our commitment to the United Nation's Sustainable Development Goals (SDGs), an improvement of two positions from last year. Despite a minor improvement in position, the change is significant as the level of participation increased by 13% with 1591 institutions being ranked.

TOP 10 GLOBALLY



Ranked #6

TOP 5 IN AUSTRALIA



Ranked #1



Ranked #1



Ranked #3



Ranked #3



Ranked #5



Ranked #5



Ranked #2



Ranked #4



Ranked #4



NO POVERTY

RESEARCH

RESEARCH SHOWS SMALL GRANTS HAVE SIGNIFICANT IMPACT ON DISADVANTAGED FAMILIES

Small financial grants can have a significant and lasting positive impact on the lives of the young people they assist, according to new research. The research, led by Dr Julia Cook, Associate Professor Kathy Mee and Dr Jai Cooper from the University of Newcastle, evaluated the local youth mentoring and scholarship program Grow a Star.

Results found that the small-scale nature of this kind of program meant it could respond to applications quickly, allowing the families accessing scholarships important opportunities in a more straightforward and timely manner than with larger-scale support services. The research findings will inform the program's structure and provide critical evidence for other youth service providers.



L-to-R Shane Marshall Grow a Star, Michelle Faithful Grow a Star, Dr Julia Cook UON, Associate Professor Kathy Mee UON and Dr Jai Cooper UON.

\$26 million+
in funding for local business start-ups

TEACHING AND LEARNING

FOSTERING GREATER FINANCIAL LITERACY

Greater Bank employees from across regional NSW have again been enlisted to teach the important life skills of financial literacy to high school students across the state. The Hunter Ambassadors program, now in its third year, is a partnership between Greater Bank and the University of Newcastle. The program aims to improve the financial literacy of young people in the Hunter region by providing them with the knowledge and skills they need to make informed financial decisions.

To date over 2,000 high school students from across New South Wales have undertaken the Finance Academy. Almost 30% of high school students who have participated in the Finance Academy are located in the 10% most disadvantaged socio-economic areas of Australia.

COMMUNITY OUTREACH

GIFTING DAY

This year's Gifting Day was a historic occurrence. The university was alive with thanksgiving and celebration on that day. The campus was a hive of activity as academics, staff, and students anxiously anticipated the chance to recognise and celebrate the enormous contribution that their community's generosity had made to achieving their objective. University of Newcastle's Gifting Day raised more than \$230,000 through the support of 566 donors and ambassadors. The funds raised are used to support Aboriginal and Torres Strait Islander health care students to undertake a transformative leadership program and create an additional nine scholarships through the Shaping the Futures Scholarships to support students experiencing educational disadvantage. Gifting day isn't just about giving material things; it is also about giving priceless gifts of education that helped the institution become a place of learning, development, and constructive change.

\$230,000+
donations received on Gifting Day,
raised to support seven vital projects
including Shaping Futures Scholarships
that will change the lives of many



1st in Australia

In the 2022 global rankings the University was 30th and in Australia 2nd. In 2023 the University rose to 18th globally and 1st in Australia.

UNIVERSITY SCHOLARSHIPS OPENING DOORS FOR STUDENTS IN NEED

The Greater Charitable Foundation Equity Scholarship, which provides up to \$30,000 to five scholars over a maximum of three years as part of a \$150,000 partnership at the University of Newcastle. These scholarships are intended to assist financially disadvantaged students enrolled in various undergraduate programs. Professor Mark Hoffman, Deputy Vice-Chancellor, emphasises the importance of these scholarships in building a more resilient and diverse future. The Greater Charitable Foundation's CEO, Anne Long, emphasises that these scholarships are not restricted to specific disciplines and are intended to alleviate financial difficulties, allowing students to succeed.



Professor Mark Hoffman, University of Newcastle student Grace Walker and Greater Charitable Foundation's CEO, Anne Long

OPERATIONS

STUDENT FINANCIAL SUPPORT

The cost-of-living crisis is impacting all but especially students who face the financial pressures while trying to study. The University of Newcastle is committed to ensuring financial issues do not represent obstacles for learners. There are a range of financial services available to help keep students afloat. These include a range of loans, grants and scholarships to help those who are doing it tough.

There are easily accessible pathways to Student Hardship Vouchers, Student Placement Grants, Student Laptop Grants, Student Loans and Work Development Orders (WDO). There are also a range of scholarships for students experiencing financial hardship, as well as scholarships specifically for Indigenous and refugee students. The Shaping Futures Hardship Fund provides crucial assistance to students facing emergency situations such as a personal crisis or natural disasters, including bushfires and floods.

17.8 %

of students receiving financial aid

AFFORDABLE HOUSING

The University's Student Living branch offers a range of affordable housing for international and domestic students. From self-contained flats to shared apartments and single studios, the on-campus options cater to all at a manageable price. Students are also able to get assistance with off-campus accommodation, and homestay accommodation with family meals is available for international students.



99

Scholarly outputs

1.92

Field-Weighted Citation Impact

2018-2022 University of Newcastle | SDG 1: No Poverty (2023)



Hundreds of students, staff, alumni and members of our community enjoyed Gifting Day celebrations at our Callaghan, NUSpace and Ourimbah campuses, with live music, great food, warm smiles and life-sized foosball.



ZERO HUNGER

RESEARCH

UNDERSTANDING THE FATE OF TOXIC COMPOUNDS IN AGRICULTURAL LAND

Led by Professor Megharaj Mallavarapu, the research team will investigate [the degradation pathways PAFs in biosolids and biosolid-amended agricultural soils](#). They will also generate new knowledge about PFAS in biosolid amended soils and crops. The project brings together expertise in environmental science, chemistry, eco-toxicology and remediation to provide in-depth knowledge and develop practical solutions to ensure the application of biosolids in agricultural land is environmentally sustainable for Australian farmers and communities.



170

Scholarly outputs

4.00

Field-Weighted Citation Impact

25% increase in FWCI over the period 2017-2021

2018-2022 University of Newcastle | SDG 2: Zero Hunger (2023)

TEACHING AND LEARNING

THE MAGIC DROP: SUPPORTING MOTHERS ALONG THE JOURNEY

E-learning course, [The Magic Drop: Supporting Mothers along the journey](#), developed by the [United Nations Institute for Training and Research \(UNITAR\)](#) and the University of Newcastle School of Nursing and Midwifery with [CIFAL Newcastle](#), is offered free as part of the [Global Breastfeeding Education Initiative \(BFEI\)](#).

Offering top-notch learning services, UNITAR is committed to supporting the 2030 Agenda for Sustainable Development. In order to achieve SDGs 2 and 3, which deal with hunger, nutrition, and health, breastfeeding is crucial. It is crucial for protecting children's health, preventing malnutrition, and lowering child mortality. The BFEI at UNITAR strives to support breastfeeding by providing informational resources to a range of audiences, including communities and policymakers. Together with UNITAR, we are dedicated to promoting breastfeeding since it benefits mothers, infants, and communities everywhere. This course is certified by UNITAR and CIFAL Newcastle.

The University of Newcastle is an accredited Breastfeeding Friendly Workplace.

COMMUNITY OUTREACH

UNIQUE PARTNERSHIP PUSHES FOR BEHAVIOURAL CHANGE BY INCREASING NUTRITION KNOWLEDGE

The University of Newcastle and [Rijk Zwaan Australia](#) have partnered to deliver a [free online Culinary Nutrition course](#), aimed at empowering people to improve their eating patterns by increasing understanding of the science behind healthy eating. The online course, developed for health, education and horticultural industry professionals, is now available to all and accessible for free.

Led by University of Newcastle PhD candidate, Accredited Practising Dietitian and qualified chef, Ms. Roberta Asher, the course combines evidence-based nutrition presentations, with practical hands-on culinary activities, supported by experts from vegetable seed breeding company, Rijk Zwaan Australia.

The unique partnership between the University of Newcastle, HMRI Food and Nutrition Research Program team and the vegetable seed breeding company, Rijk Zwaan Australia, was spurred by the common goal of increasing vegetable intake.



Ms Roberta Asher



1st in Australia

In the 2022 global rankings the University was 38th and in Australia 1st. In 2023 the University rose to 29th globally, and maintained 1st in Australia.

400,000+

users accessed 'No Money, No Time' for budget friendly nutrition advice

NO MONEY, NO TIME

The University demonstrates a significant commitment to improving the physical, social and financial welfare of its connected community. No Money, No Time is an online personalised nutrition program to motivate and support young Australians to adopt healthy food habits, while working within a budget. More than 400,000 participants have used the program to examine their eating behaviours to promote nutrition-related health and well-being, and lower chronic disease risk. The program teaches participants to budget for healthy, satisfying meals, as well as providing tips for supermarket shopping, including low-cost food alternatives.



OPERATIONS

UNSA PANTRY: A FOOD BANK FOR UNIVERSITY OF NEWCASTLE STUDENTS

In 2023, the University of Newcastle Students Association (UNSA) launched a free breakfast program for University of Newcastle students. The free breakfast program is a valuable resource for students who are struggling to make ends meet. It helps to ensure that all students have access to a healthy, nutritious breakfast, which is essential for their academic success. The free breakfast is part of other initiatives in the UNSA Pantry, which is a food bank for students at the University of Newcastle. In 2023 the UNSA has provided an unprecedented level of food relief, supporting the University student body through a cost-of-living crisis. This year alone UNSA served 20,000 free lunches and partnered with OzHarvest to deliver more than 1400 grocery packs at Free Food Friday. Throughout the year more than 500 students have collected non-perishables from the UNSA Pantry.

20,000

free lunches served by UNSA in partnership with OzHarvest

ORGANIC FOOD RECYCLING

Organic food recycling on campus has increased by nearly 10 metric tonnes since its launch in 2019, allowing the University to produce even more fertiliser and green electricity.

Organic food collection bins allow staff and students to easily identify food scraps, coffee grounds, tea bags and certifiable compostable produce that can be recycled as part of the program.

75%

increase in organic food recycling since 2019



GOOD HEALTH AND WELL-BEING

RESEARCH

NEWCASTLE RESEARCHERS DISCOVER KEY TO REDUCING LEUKAEMIA RESISTANCE

In a world first, Newcastle researchers from the University of Newcastle and Hunter Medical Research Institute have discovered the mechanisms acute myeloid leukemia (AML) cells use to produce 'free radicals' – the byproduct of a cell process that aggressively fuels the growth of cancer cells and limits the effectiveness of current treatments. They also identified a strategy to silence the production of free radicals in leukaemia cells, in turn strengthening their response to current therapies used to treat leukaemia patients. Professor Matt Dun said as Reactive Oxygen Species (ROS) was believed to be a key player in almost all types of cancer, their discovery could potentially be effective for other types of cancer.



PROFILE

Professor Matt Dun

School of Biomedical Sciences and Pharmacy

In 2023 Professor Dun has been awarded more than \$5.8 million in grant funding including 3 philanthropic grants from the Charlie Teo Foundation, RUN DIPG/Tour de Cure Partnership Program, and The Kingdom Foundation. In addition to this, Matt has also received three international awards recognising his contributions to brain cancer research and advocacy. He was also named Lake Mac Ambassador for 2023, an honour awarded to him by Lake Macquarie council for his work as a world leader in childhood brain cancer research – who has also spearheaded efforts to raise millions of dollars through his RUN DIPG charity after the tragic loss of his own daughter, Josie, to the disease.

UNIVERSITY OPENS GLOBAL CENTRE FOR RESEARCH AND TRAINING IN RADIATION ONCOLOGY

The newly opened Global Centre for Research and Training in Radiation Oncology at the University of Newcastle is elevating the standard of cancer care around the world with support from our valued partners and collaborators. Undergraduate and postgraduate students, and international and local clinicians will receive advanced training in the latest radiation therapy technologies using industry-grade equipment donated by international and Australian MedTech partners. This includes an Elekta Linear Accelerator, the first linear accelerator in a university worldwide, as well as Surface Guide Radiation Therapy technology.

The world-first collaborative research and training hub is designed to emulate a functioning radiation oncology facility with its eight-bay simulation laboratory and virtual reality training area. There will also be a focus on developing regions, with CIFAL/United Nations certified virtual short courses and workshops helping to upskill clinicians across the Asia Pacific and Africa.

MORE THAN \$17.6 MILLION AWARDED TO NEWCASTLE RESEARCHERS WORKING TO BETTER SUPPORT PATIENTS AND THEIR CARERS

In the latest Medical Research Future Fund (MRFF) round administered by the Australian Government, researchers from the University of Newcastle, Hunter Medical Research Institute and Hunter New England Local Health District have been awarded more than \$17.6 million in funding. This funding will be used on 10 new projects, including improving access to stroke rehabilitation for people in regional areas and bolstering care for those with asthma, dementia and mental health issues.

\$1M TO IMPROVE SCHIZOPHRENIA TREATMENT

The University of Newcastle and HMRI project will use a precision medicine platform to find improved targeted treatments for schizophrenia and help people living with the condition live healthier and more productive lives.

NOVEL BLOOD TEST COULD QUASH ENDOMETRIAL CANCER

An exciting advancement in the early detection of endometrial cancer (cancer of the uterus lining) has secured \$600,000 to further a novel blood test to identify the disease when highly treatable. Supported by the Cancer Institute of NSW, female reproductive health researchers from the University of Newcastle and Hunter Medical Research Institute have developed and patented a blood test for endometrial cancer able to accurately detect the early stages of the disease.



7th in Australia

In 2023 the University was ranked 27th globally and 7th in Australia.

TEACHING AND LEARNING

UNIVERSITY OF NEWCASTLE SUCCESSFUL RECIPIENTS OF FOUR PRESTIGIOUS AUSTRALIA AWARD FELLOWSHIPS

Co-funded by Hunter New England Health, partnering with Papua New Guinea’s National Department of Health, [15 field epidemiology training fellows](#) will come to Newcastle representing all levels of government (local, provincial, and national) to undertake a two-week intensive field epidemiology training program.

The University of Newcastle's Field Epidemiology in Action (FEiA) program has been supporting high impact field epidemiology and rapid response team training in the Pacific since 2013. Additional professional development opportunities are urgently needed as national field epidemiology training programs move toward institutionalisation and sustainability.

37%
of all graduates in 2022 were
health professionals

COMMUNITY OUTREACH

DIGITAL INNOVATION TO “eCLIPSE” THE RISING TIDE OF MENTAL AND SUBSTANCE USE PROBLEMS

The University of Newcastle and HMRI launched [eCLIPSE](#), a digital ecosystem accessible via web or app store, designed to provide 24/7 access to high-quality, evidence-based treatments clinical treatment for depression, anxiety, alcohol/other drug use and trauma. The system also provides support for families and friends who are supporting loved ones experiencing these conditions.

THE UNIVERSITY OF NEWCASTLE WILL LEAD THE NSW GOVERNMENT’S CLINICAL PHARMACY TRIAL

The [NSW pharmacy clinical trial](#), announced in February 2023, is aimed at making it easier and quicker for people, particularly women, to access important prescription medications and treatments. The University of Newcastle has been awarded a \$3m grant to run the trial, which will for the first time enable pharmacists to prescribe treatments for urinary tract infections (UTIs) and continue a prescription for the re-supply of the oral contraceptive pill. The project aims to capture robust outcome data to inform government policy decisions on the future scope and role of community pharmacists which would benefit women in NSW.

OPERATIONS

ALMOST \$3M GRANT SECURED FOR SECTOR-FIRST IN INDIGENOUS HEALTH RESEARCH

The University of Newcastle in partnership with the Lowitja Institute has received just under [\\$3 million in federal funding](#) to establish a new committee to help improve health outcomes for First Nations people.

FIRST HEALTH INNOVATION LIVING LAB OPENS IN THE HUNTER

[\\$2.3 million lab](#) is in addition to the NSW Government’s \$835 million John Hunter Health and Innovation Precinct. The lab will focus on areas that have the greatest impact on equity of care for rural and regional communities, including digital health, sustainability in healthcare, medical technology, as well as operations and logistics.

EMPLOYEE ASSISTANCE COUNSELLING PROGRAM

The University of Newcastle is dedicated to the welfare of its staff members and their families. In order to address this, the university is pleased to provide the [Employee Assistance Program \(EAP\)](#), a private, solution-focused counseling service that is offered at no cost to all university staff members. The EAP extends its help to employees' immediate family members, including dependents under the age of 25 and partners, in recognition of the significance of work-life balance. EAP at the University of Newcastle is a helpful tool for dealing with and managing issues that can come up in both personal and professional life. By offering this crucial support, the institution confirms its dedication to fostering a safe environment for both its staff and the people they care about.



4,309
Scholarly outputs

2.21
Field-Weighted
Citation Impact

9.5% increase in Publications YoY
over the period 2017-2021

2018-2022 University of Newcastle
SDG 3: Good Health and Well-being (2023)

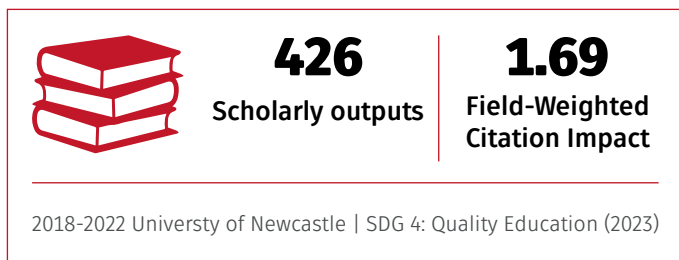


QUALITY EDUCATION

RESEARCH

GLOBAL PARTNERSHIP SUPPORTS INCLUSIVE EDUCATION

University of Newcastle researchers are investigating whether schools in NSW are becoming less inclusive for children with disabilities, thanks to a generous research grant from the JandK Wonderland Foundation. They are led by Associate Professor Jill Duncan, an expert in inclusive education. The research team is concerned about growing evidence of school segregation and the failure of primary and secondary education systems to become more inclusive. The research will investigate if recent changes in school autonomy are having an adverse effect on children with disabilities, with the goal of improving policy and practices to provide inclusive education for all students.



TEACHING AND LEARNING

NATIONAL UNIVERSITY TEACHING AWARDS RECOGNISE TWO OUTSTANDING UNIVERSITY OF NEWCASTLE EDUCATORS

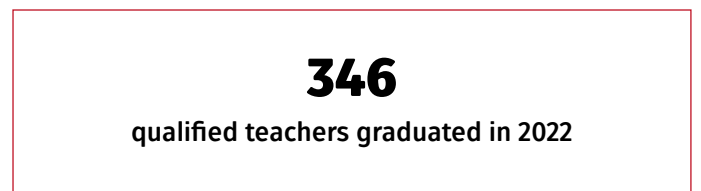
The University of Newcastle is honoured that Dr Marie Hadley and Dr Meredith Tavener, have received Citations for Outstanding Contributions to Student Learning. They have demonstrated a remarkable commitment to improving the caliber of university instruction by receiving these prestigious honours, which were established by the Australian Government in 1997. The Australian Awards for University Teaching (AAUT) were established with the goal of praising and honouring outstanding teaching in the higher education community. These Citations have been awarded to Drs. Hadley and Tavener in honour of their numerous and important contributions to raising the standard of student learning. Citations are only given to people or groups who have worked extraordinarily hard over a long period of time to enhance student learning outcomes in particular jurisdictions.

ONE THOUSAND NEW TEACHERS SET TO BENEFIT FROM QUALITY TEACHING ROUNDS

The highly regarded Quality Teaching Rounds (QTR) program will be greatly expanded thanks to a new partnership between the University of Newcastle and the Australian Government. Over a thousand aspiring educators will benefit greatly from this creative cooperation, which is supported by a \$5 million, four-year deal. It will enhance professional development and encourage teaching quality. Early-career teachers will now have the option to work with more experienced colleagues through QTR, which is known for its capacity to connect educators for the purpose of mutual learning and teaching enhancement. The National Teacher Workforce Action Plan includes this expansion as an essential part of its strategy to improve work satisfaction, retention rates, and the general caliber of instruction and learning. The University of Newcastle is honoured to be at the forefront of this revolutionary project, reaffirming its dedication to raising Australian educational standards by fostering the next generation of outstanding teachers.



Laureate Professor Jenny Gore with a student from Hambleton Public School and QTR participant and Hambleton Public School teacher Kaitlin Heggen.





3rd in Australia

In the 2022 global rankings the University was in the band 101-200th and in Australia 11th. In 2023 the University remained in the band 101-200 globally but climbed to 3rd in Australia.

PRESTIGIOUS AUSTRALIA AWARDS FELLOWSHIPS PROMOTES INCLUSIVE EDUCATION IN VANUATU

One of the University of Newcastle's successful recipients in the prestigious Australian Award Fellowships are '[Women in Leadership: Developing capacity within disability inclusive education in Vanuatu](#)' by Dr Angela Page and Professor Susan Ledger from the University's School of Education. This is a partnership with Vanuatu's Ministry of Education to upskill four visiting Fellows in inclusive education and policy making. This Fellowship seeks to up-skill women in early to mid-career leadership roles within Vanuatu's inclusive education sector to enable them to develop effective policies to transform inclusive education and mitigate against disability discrimination in schools in Vanuatu. Australia Awards Fellowships are funded by the Australian Government and allow the University of Newcastle to build capacity and strengthen partnerships with countries in our region in support of key development and foreign affairs priorities as outlined at Australia Awards Fellowships program. This program was initially established through the University of Newcastle's Pacific Node.



Dr Angela Page with the four visiting Australian Award Fellows from Vanuatu

OPERATIONS

UNIVERSITY OF NEWCASTLE INTRODUCES GRADUATE DIPLOMA IN TEACHING TO HELP COMBAT TEACHER SHORTAGE

The University of Newcastle has launched a [12-month Graduate Diploma in Teaching \(secondary\)](#) to help fast track the pathway for people with degrees who are looking to transition their careers to high school teaching. The program is designed to provide flexibility and high-quality learning for people to become a qualified and classroom-ready teacher, to help address the teacher shortage in NSW.

COMMUNITY OUTREACH

INSPIRING CENTRAL COAST HIGH SCHOOL STUDENTS TO ENGAGE WITH MATHEMATICS THROUGH FOOTBALL

120 students in years 7 and 8 took part in an innovative educational program "[Maths with Mariners](#)," which was launched by the University of Newcastle in partnership with the Central Coast Mariners. The program helps students improve their mathematical abilities while working with professional football players. Students from the University of Newcastle's programs in Education and Exercise Sports Science and senior athletes from Central Coast Sports College demonstrated to schoolchildren the practical uses of mathematics through soccer-related activities. These interactive tasks, which range from calculating the area of the penalty area to figuring out the ideal angle to "Bend it like Beckham," are made to improve math skills while also motivating teachers to include physical activity into key topics. The University of Newcastle is dedicated to make studying interesting and useful while encouraging a deeper understanding of mathematics among students of all ages, and "Maths with Mariners" is a prime example of this.

UNI STEPS AND THE CHILDREN'S UNIVERSITY

UNISTEPS and the [Children's University Newcastle](#) engages children in learning in its broadest sense. In the Children's University, participating children, between 7 and 14 years, are encouraged to discover new learning experiences outside of the classroom, in their local and regional community and on campus. The children build their own learning program by engaging in extracurricular activities throughout the year, recognising that learning happens everywhere and doesn't have to be constrained by curriculum. Participants that reach 30 hours of learning, collected in their Children's University Passports, are invited to attend a formal graduation ceremony to celebrate and acknowledge the children (and their supporters) and their commitment to learning. In 2023 we have 43 primary school partners with over 1700 students enrolled.

[UNI STEPS](#) engages with primary students, secondary students and community members to help them explore their options throughout their educational journey. With over 70 workshops, activities and events it encourages curiosity, participation in supported learning activities and informed conversations with students about the opportunities available. UNI STEPS was born out of the University of Newcastle's commitment to equity, with a focus on engagement with communities.



GENDER EQUALITY

RESEARCH

CATHOLIC WOMEN'S CALLS FOR CHANGE HEARD AT THE VATICAN ON IWD

The most [extensive global survey of Catholic women](#) ever undertaken, detailing experiences of women in the Catholic Church, was presented by Australian researchers in-person at the Vatican on International Women's Day 2023. The International Survey of Catholic Women (ISCW) was translated into 8 languages and the 17,000+ responses came from participants across 104 countries. Designed and authored by Drs. Tracy McEwan, Kathleen McPhillips and Miriam Pepper from the College of Human and Social Futures at the University of Newcastle, Australia, [the report](#) provides powerful insights into the views and experiences of Catholic women from around the world and details 20 key findings and 14 key recommendations from the responses to inform lasting and genuine change in Catholic institutions, theology, and pastoral practices.

"The survey captured the complex diversity, insights, and shared concerns of thousands of Catholic women from around the world."

– Dr McEwan



(L-R) Dr Miriam Pepper, Dr Kathleen McPhillips and Dr Tracy McEwan led the report

OUR NEW PROGRAM TO HELP REFUGEE WOMEN ENTER CONSTRUCTION WORKFORCE

The University of Newcastle has launched [a program to equip women from migrant or refugee backgrounds](#), who are interested in working in the construction industry, with the know-how to do so. Participants in the Social and Economic Resilience of Young Migrants and Refugee Women Program will be trained by the University of Newcastle and TAFE NSW, and will take part in industry placements in construction projects. The research program will see these women receive the education, training and mentoring they need to develop fulfilling and, life-changing careers. This program is certified by CIFAL Newcastle.



Social and Economic Resilience of Young Migrants and Refugee Women Program participant, Saedah, pictured (left) with Professor Temitope Egbelakin.



237
Scholarly outputs

1.67
Field-Weighted
Citation Impact

2018-2022 University of Newcastle | SDG 5: Gender Equality (2023)



3rd in Australia

In 2023 the University was 27th globally and rose to 3rd in Australia.

TEACHING AND LEARNING

FEMALE FOUNDERS PROGRAM TO BOOST FEMALE-LED STARTUPS IN HUNTER AND CENTRAL COAST REGION

The University of Newcastle's Innovation2Nation (I2N) has launched a [Female Founders Program](#) to boost female-led startups in the Hunter and Central Coast regions. The program provided training workshops, tailored mentoring, and support through I2N's network to a minimum of 10 female-led founders. The program was open to female-led startups that are at the ideation, pre-seed, or seed stage. The Female Founders Program is a part of I2N's commitment to supporting female entrepreneurs and promoting gender equality in the startup ecosystem.



OPERATIONS

THE UNIVERSITY OF NEWCASTLE WAS NSW'S FIRST UNIVERSITY TO RECEIVE A CYGNET AWARD

The University of Newcastle is the first NSW university to be [awarded a Science in Australia Gender Equity \(SAGE\) Cygnet Award](#), recognising its work to boost career development support for academic and professional women. To achieve a Cygnet Award, organisations must demonstrate their commitment to removing or reducing barriers to gender equity, diversity and inclusion. The University of Newcastle identified that a lack of dedicated career conversations with supervisors, mentoring, and leadership development disproportionately hindered academic women's readiness for promotion and professional women's identification of career progression pathways. In response, the University has established targeted programs to support both cohorts. A number of targeted programs and initiatives towards gender equity in the University have been rolled out or bolstered by the University following the achievement.

5-star

maximum rating for social equity

OUR GENDER EQUITY DIVERSITY PLAN

Our [Gender Equity Plan](#) is an excellent example of a proactive effort to promote a more inclusive and fairer workplace. The plan highlights our ongoing commitment to gender equity and acknowledges the need for continuous development. The Progress to Equity Plan's main goals are to: increase the number of women entering and remaining in STEMM fields; increase the proportion of women in senior and leadership positions; provide strong support for women's career development through training and leadership programs; address and close the gender pay gap; foster an inclusive and equitable organisational culture; instill accountability for leaders in gender equity; and promote a flexible work environment. The University is positioned as a pioneer in promoting gender equality in the workplace thanks to its multifaceted strategy.



CLEAN WATER AND SANITATION

RESEARCH

WORKING ON COUNTRY: CULTURAL WATERING PROJECT

Historically, First Nations water rights were frequently removed from Australia’s water policies, referred to as ‘aqua nullius.’ Governments have been expected to recognise and safeguard these rights since the 2004 National Water Initiative, but implementation has fallen short due to a lack of experience. Aboriginal and Torres Strait Islander organisations want to change water regulations so that ‘cultural flows’ can promote spiritual, cultural, environmental, social, and economic well-being.

The [Institute for Regional Futures](#) has been engaged by the Aboriginal Watering Program in the NSW Department of Planning and Environment-Water to help prepare cultural watering plans in two locations in the western region for partner organisations. To develop these plans, they are working in partnership with the Toorale National Park Joint Management Committee and the Brewarrina Local Aboriginal Land Council. They support these communities and foster transdisciplinary research and collaboration through close partnerships with First Nations.



Uncle Paul Gordon overlooking a river.

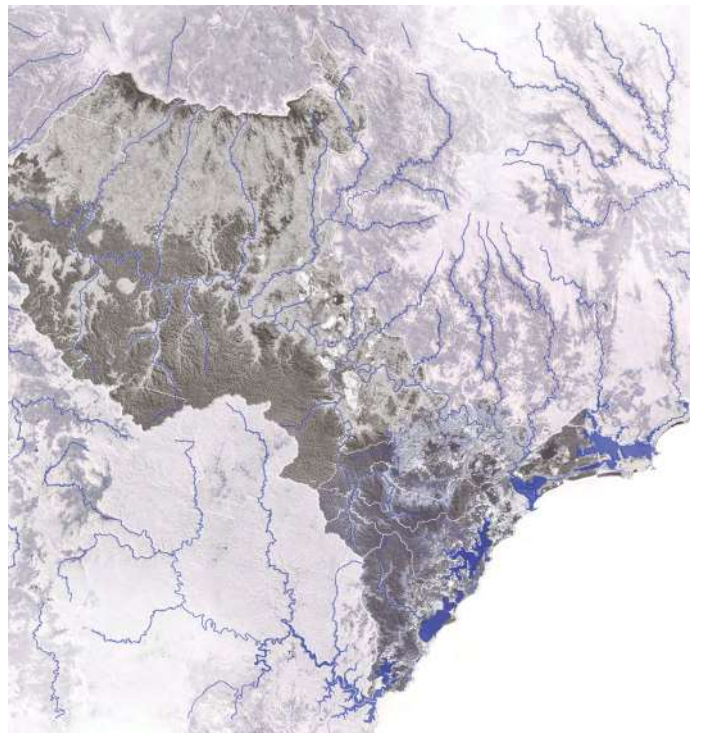
NEW RESEARCH TAPS INTO THE WISDOM OF WATER

The University of Newcastle is exploring the effects of climate change on cities, particularly floods and droughts. They’re [examining the Hunter River basin in New South Wales](#), led by Dr. Irene Perez Lopez, to remodel estuary cities like Newcastle. Their mission is to improve resilience and sustainability while lowering climate risks. Dr. Perez Lopez’s goal is to develop evidence-based design standards for more sustainable and secure towns that incorporate estuarine elements. This research aims to address environmental, social, and economic issues, with the goal of improving climate adaption and our relationship with water. Support for this research can aid in addressing these worldwide concerns.

“We are all connected by our relationships with water. From the Indigenous cultural practices and water management, to architects, urban and infrastructure designers that shape our cities and regions today.

In many ways the climate crisis is a water crisis. As we enter the next decade, there are big questions to answer around how we can work with our waterways and natural systems instead of fighting against them. We need research, community and Indigenous knowledge, and engagement to support these decisions.”

– Dr Irene Perez Lopez, Senior Lecturer,
School of Architecture and Built Environment



Hydrological, geomorphological, and cultural systems in the Hunter Bioregion, part of the Sydney Bioregion (and Sedimentary Basin).

	<p>370 Scholarly outputs</p>	<p>2.57 Field-Weighted Citation Impact</p>
<p>2018-2022 Universty of Newcastle SDG 6: Clean Water and Sanitation (2023)</p>		



3rd in Australia

In 2023 the University climbed to 15th globally to 5th in Australia.

COMMUNITY OUTREACH

UNIVERSITY OF NEWCASTLE PARTNERS WITH COOK ISLANDS

The University of Newcastle formalised a new partnership with the Cook Islands National Environment Service (NES) through the signing of a Memorandum of Understanding (MOU). The National Environment Service is established to protect, conserve and ensure the Cook Islands' environment is managed sustainably.

Training courses on freshwater ecology and water resource management will be provided by the University to Cook Islands' communities. These courses will better equip residents to identify and monitor detrimental impacts on biodiversity, ecosystem services, food production systems and water security caused by unsustainable land use practices.

The University will work closely with National counterparts to lead water catchment audits on Rarotonga Island as part of national capacity-building efforts, to identify key pollutants impacting these catchments.

OPERATIONS

WATER MANAGEMENT SOLUTIONS

Water security is the fundamental goal of our society to ensure we all can benefit from water, manage destructive impacts and risks, and maintain an acceptable quantity and quality of water. The University of Newcastle is focused on the sustainable management of water through world-leading research and education, industry partnerships, on-campus water consumption tracking and water re-use initiatives, wastewater treatment and prevention of water system pollution, and water-conscious planting and buildings on all campuses. The University partnered with Hunter Water to undertake a detailed water usage audit and installed real-time water meter monitoring devices across all campuses to understand water consumption and identify water efficiencies. The audit highlighted water leaks and identified water efficiency measures. The University has now installed water meters with alarm notifications across all its campuses to alert university staff to unexpected usage rates and internal water mains failures.

NATURAL IRRIGATION FOR BUSHLAND CAMPUSES

In the face of a warming global climate, the University of Newcastle has committed to using and monitoring natural irrigation for our extensive native bushland campuses to reduce demand for potable water. Our focus will be integrating best-practice water-efficiency measures across infrastructure and aim for Green Star ratings in new builds. We have a range of water tanks across our campus with our newest ones capable of storing over 2 million liters of water.

24%

reduction in mains water usage as part of our Environmental Sustainability Plan



Hunter Water have partnered with the University of Newcastle



AFFORDABLE AND CLEAN ENERGY

RESEARCH


THE UNIVERSITY OF NEWCASTLE SIGNS UP TO NEW GLOBAL PARTNERSHIP FOR HYDROGEN INNOVATION

The University of Newcastle is one of more than a dozen international signatories to a [new Global Partnership for Hydrogen Innovation](#). An official signing of the partnership agreement took place on 10 May 2023 at the World Hydrogen Summit in Rotterdam in the Netherlands. The partnership sees universities, innovation hubs and international ports from Australia, Brazil, Chile, Portugal, the United Kingdom and the Netherlands commit to working together to accelerate innovation for green hydrogen. The University of Newcastle is committed to sharing, scaling and supporting hydrogen innovations on a global scale, and will commit innovation capabilities and industry relationships to the partnership to help accelerate innovation for green hydrogen.

DIFFUSE ENERGY

Engineers at the University of Newcastle, including Joss Kesby, James Bradley, and Sam Evans, founded the firm [Diffuse Energy](#), which uses a customised diffuser to improve wind turbine energy production. By sucking in more air, this clever aerodynamic device boosts the turbine's efficiency. Joss, a University of Newcastle mechanical engineering PhD graduate, sought commercialisation of his research journey. He took part in the CSIRO's ON Prime and ON Accelerate programs, and he even received a scholarship to Stanford Graduate School of Business. Diffuse Energy plans to grow abroad and explore other uses for their technology with the help of the NSW Government's MVP grant. Their long-term goals include becoming a renewable energy corporation, promoting energy independence, and contributing to the grid.



	579 Scholarly outputs	2.17 Field-Weighted Citation Impact
2018-2022 University of Newcastle SDG 7: Affordable and Clean Energy (2023)		

Novocastrian engineers Joss Kesby (middle), James Bradley (left) and Sam Evans (right) are the three founders behind the startup Diffuse Energy.



9th in Australia

In 2023 the University was 79th globally and 9th in Australia.

TEACHING AND LEARNING

TRAILBLAZER RECYCLING AND CLEAN ENERGY PROGRAM (TRACE)

The [University of Newcastle](#), together with [UNSW](#), have launched the collaborative [TRaCE program](#). This program aims to revolutionise industries by offering alternatives to fossil fuels, and accounts for over 40% of Australia's efforts in recycling and clean energy research. Areas of focus for the program include next generation solar, sustainable fuels and chemical manufacturing, electrification, energy systems and storage. The program is offering an opportunity to join a collaborative network of government, academia, and industry. The University will provide best practice training programs for your workforce and a pipeline of potential new talent.



NIER ASCON

OPERATIONS

COMMITTED TO RENEWABLE ENERGY

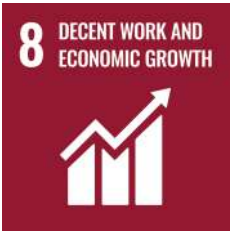
The university is committed to [renewable energy sources](#) and carbon emission reduction. As a part of our commitments from January 2020, the University campuses are using 100% renewable electricity. This is another step to our carbon neutrality by 2025 target. The university publicly reports greenhouse gas emissions as a part of the National Greenhouse and Energy Reporting Scheme at the facility level for the Callaghan campus. Additionally, the university reports its broader carbon emissions to the university council. The university established a dedicated Energy Management Project Board to oversee the development and implementation of the Energy and Carbon Management Strategy, including the investigation of energy self-generation, storage, feedback to the network grid and building strategic relationships with the retailers.

UNIVERSITY OF NEWCASTLE SWITCHES FLEET TO ELECTRIC

Our university has taken another step towards achieving our sustainability targets by switching our fleet vehicles to electric. Our goal is to create a campus that's electric vehicle-friendly, making green driving accessible to everyone here – staff, students, and visitors. The university has installed new charging stations on campus and offers free charging for all-electric vehicles. The university also encourages staff and students to get familiar with the charging process and where the stations are located.



University of Newcastle electric vehicle charging station.



DECENT WORK AND ECONOMIC GROWTH

TEACHING AND LEARNING

TRANSGRID AND THE UNIVERSITY OF NEWCASTLE PARTNERSHIP TO CREATE ENERGY JOBS FOR HUNTER GRADUATES

Transgrid has established a formal partnership with the University of Newcastle to create education, training and employment opportunities for students and support future energy projects in the Hunter. Transgrid’s new Transmission Testing and Commissioning Lab at its Newcastle depot will be a key facility for student training and career development. The partnership will see development of new opportunities for electrical engineering students including cadetships, scholarships, research, and employment as Australia transitions to a clean energy future.

	<p>302 Scholarly outputs</p>	<p>3.45 Field-Weighted Citation Impact</p>
<p>2018-2022 University of Newcastle SDG 8: Decent Work and Economic Growth (2023)</p>		

COMMUNITY OUTREACH

HUNTER INSIGHT SERIES: GEOGRAPHY OF JOBS

The Hunter Insight Series brings together the Hunter Research Foundation Centre’s wealth of data and the latest research from the Institute for Regional Futures. Through this series, the Institute delves into the social, economic and environmental factors at play in the Hunter and other regions. We highlight key considerations for decision-makers, and the challenges and opportunities for the road ahead.

In the Geography of Jobs, delivered in May 2023, it was noted that for the first time, knowledge-producing jobs in the local Newcastle and Lake Macquarie regions such as those in the professional and information services, outnumber goods-generating jobs like manufacturing and mining.

Speaking at ‘Hunter Insight: The Geography of Jobs,’ Director of the University of Newcastle’s Institute for Regional Futures, Professor Roberta Ryan, said the Hunter’s changing employment profile highlighted an urgent need to focus planning and investment towards building cross-sector human capital.

A growing body of international research demonstrates that regions where the same workers can be employed across different sectors are well-equipped for social and economic transition.



(L-R) Professor Kent Anderson, Newcastle MP Sharon Claydon, Professor Roberta Ryan, Amanda Wetzel, Cessnock MP Clayton Barr and Professor Mark Hoffman



13th in Australia

In 2023 the University slipped to 101-200th globally and slipped to 13th in Australia.

GEN Z AND BUSINESS TRANSFORMATION ON THE AGENDA AT INDUSTRY OPEN DAY

The Industry Open Day attracted over 300 industry, community and government partners to strengthen connections and create opportunities to add value to our communities.

With a strong focus on the next generation of dynamic professionals entering the workplace, the event presented insight into growing industries such as cyber security and professional services and the importance of industry-led research.

Through a vast array of experienced voices and networking opportunities throughout the day, industry leaders were able to forge and build connections with the University that promise to generate outcomes that will shape the future of our regions.

“ Our region has continued to grow from strength to strength with new and emerging industries leading the way forward. The connections between local industry and the University of Newcastle are some of the strongest in the country. Industry Open Day is a link between research and education with the needs of the business community in mind”

– Professor Alex Zelinsky AO, Vice-Chancellor

OPERATIONS

NURTURING INNOVATION AND ENTERPRISE

The University offers extensive assistance to the surrounding community, with a focus on the establishment of financially and socially viable businesses. The Integrated Innovation Network (I2N) is a University of Newcastle institution that connects entrepreneurs with carefully selected mentor teams and other services to assist founders in their for-profit or nonprofit enterprise journey. I2N Hub Honeysuckle is a purpose-built facility meant to aid in the development of enterprise skills, the formation of new ventures, and the scaling-up of existing businesses. For pre-startups, I2N Hub Honeysuckle provides free coworking and conference rooms. The I2N helps innovators and entrepreneurs succeed by linking them to community, clients, coaching, and capital. We assist people improve their enterprise skills and impact potential, validate ideas, and accelerate to market, regardless of their affiliation to the University.



Minister Husic presents with Sharon Claydon MP, VC Alex Zelinsky and Bob Hawes CEO Business Hunter at University of Newcastle's Industry Open Day

INDUSTRY, INNOVATION AND INFRASTRUCTURE

RESEARCH

\$18 MILLION RESEARCH PARTNERSHIPS BETWEEN THE UNIVERSITY OF NEWCASTLE AND AUSTRALIAN COMPANY ELEMENT ONE, AND THE AUSTRALIAN GOVERNMENT

The University of Newcastle, Element One, and the Australia Government, have partnered under the TRaCE program between the University of Newcastle and UNSW to deliver a project titled: AMMONIAC: A Chemical Looping-Based Process for Production of Green Ammonia. AMMONIAC will be a multi-phase project concerned with the production of green ammonia as a hydrogen carrier, and one that lead researcher Laureate Professor Moghtaderi said will have impact on a global scale. The ammonia product developed through the AMMONIAC project will be able to be used either as a hydrogen carrier for direct power generation applications or as feedstock in renewable fertiliser and explosive manufacturing, with significant domestic and export market potentials.



(L-R) University of Newcastle Vice-Chancellor Professor Alex Zelinsky, Laureate Professor Behdad Moghtaderi and Element One Founder and Managing Director Phil Matthews.

PROFESSOR ANNA GIACOMINI ELECTED AS AN ATSE FELLOW

Australia’s leading expert on rockfall mechanics and protection design, Professor Anna Giacomini, is among the distinguished cohort of Fellows elected to the Australian Academy of Technological Sciences and Engineering (ATSE) this year. Professor Giacomini and her team at the University of Newcastle built advanced testing facilities, including a world-first rock fragmentation facility, where they have unearthed important details of rockfall dynamics and fragmentation. Professor Giacomini’s research has wide-ranging applications with substantial economic, social and environmental benefits. Her findings are invaluable to the mining and geotechnical industries, where workers operate in close proximity to rockfaces.

“It is a proud moment to be elected by your peers and acknowledged for your lifelong achievements. ATSE Fellows are truly exceptional at what they do, and are devoted to making Australia better through their work.”

– Professor Anna Giacomini



Professor Anna Giacomini



377
Scholarly outputs

1.99
Field-Weighted
Citation Impact

2018-2022 University of Newcastle
SDG 9: Industry, Innovation and Infrastructure (2023)

\$63.8 million

Central Coast Campus construction to begin 2023



5th in Australia

In 2023 the University remained in the band 201-300 globally but climbed to 5th in Australia.



Participants at the International Symposium for Sustainable Cokemaking and Ironmaking

COMMUNITY OUTREACH

EXPERTS COME TOGETHER AT INTERNATIONAL SYMPOSIUM FOR SUSTAINBLE COKEMAKING AND IRONMAKING

World-leading researchers and industry joined together at the International Symposium for Sustainable Cokemaking and Ironmaking to discuss technological developments to decarbonise the steel industry. The Centre for Ironmaking Materials Research (CIMR), led by Professor Tom Honeyands and Dr Arash Tahmasebi, received support from the ACARP, BHP, Hatch, the Association for Iron and Steel Technology, and the University to host the event over two days at the Newcastle City Hall. With 130 participants (20 international), including 50 presenters, the symposium was very successful in bringing together the global experts in the field. The symposium builds on and expands upon the successful partnership between CIMR and its industry partners in the resources and steel sectors. It provided a greatly needed opportunity for world leaders in the cokemaking and ironmaking fields to collaborate on creating a more sustainable resource future.

UNIVERSITY OF NEWCASTLE EXTENDS THEIR SUPPORT TO 6 YOUNG ENTREPRENEURS THROUGH THEIR I2N VENTURE

The University of Newcastle is thrilled to assist six exceptional young entrepreneurs who are making a big impact in disciplines as diverse as tourism, pharmaceuticals, food science, and mental health. These people personify entrepreneurship as more than merely taking financial risks for profit. It is about believing in one's own ideas, meeting basic requirements, and displaying passion, vision, creativity, and adaptability. While the startup industry can be intimidating due to the jargon, the University's Integrated Innovation Network (I2N) serves as a beacon, linking these ambitious entrepreneurs to important resources like as coaching and capital in Newcastle's dynamic creative area.

OPERATIONS

ENGINEERING INNOVATION PUTS AWARDS INTO SAFE HANDS

The University of Newcastle proudly acknowledges the innovative achievement of Josh Bywater, a fourth-year Mechanical Engineering student. He's been honoured for his outstanding contribution to student safety, creating the "Competency Access Isolators" system during a directed-reading project within NU Teams. Under the guidance of Dr. Alexander Gregg and in collaboration with CESE WHS and Technical Services teams, Josh's ingenuity shines as he addresses high-risk equipment concerns on campus. The system ensures the health and safety of students and staff as well as improving efficiency in work practices. The isolators are currently being piloted in three spaces across the Engineering precinct. His dedication and commitment have now been celebrated with a well-deserved award, recognising the University's commitment to a safer learning environment.



(L-R) Debbie Delbridge, Andrea Thomas, Amanda Hill, Josh Bywater, Alexander Gregg, Lachlan Barrell.



REDUCED INEQUALITIES



HIGHLIGHT

University of Newcastle Professor Appointed UNESCO Chair

The University of Newcastle’s Professor Penny Jane Burke has been appointed a UNESCO Chair in Equity, Social Justice and Higher Education – a globally-prestigious role that will see her working to improve the lives of marginalised groups around the world, including victim-survivors of gender-based violence.

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) is a specialised agency of the United Nations, with Chairs appointed to create a network by partnering with institutions across the globe to address pressing challenges, reduce inequalities and improve equitable access to education.

Professor Burke, who has 25 years’ experience in the field of equity, social justice and higher education said she was thrilled to take on the role, which will extend the work of the University of Newcastle’s Centre of Excellence for Equity in Higher Education (CEEHE).

“As a UNESCO Chair, we will have the collaborative networks and resources to build on the work we have already done to make a real difference to communities facing social, cultural, political and environmental injustice.”

– Professor Penny Jane Bourke
UNESCO Chair in Equity Social
Justice and Higher Education

RESEARCH

GENDER BASED VIOLENCE AND HIGHER EDUCATION

CEEHE is a site of innovative research and practice, brought together in critical thought to generate transformative impact for equity in and beyond higher education. The work—in practice, research, facilitation and support—aims to address persistent inequalities and is grounded in a unique ‘praxis-based’ social justice framework. While they are situated within the University of Newcastle, their work extends through connection and collaboration with local, national and international networks committed to social justice.

TEACHING AND LEARNING

UNIVERSITY AWARDED FIRST NATIONAL CYGNET AWARD FOR INDIGENOUS CULTURAL COMPETENCY

The University of Newcastle is the first Australian university to be recognised with a ‘Cygnet Award’ for Indigenous Cultural Competency. The university’s commitment to cultural competence training reflects its commitment to helping Aboriginal and Torres Strait Islander students and staff. This acknowledgement comes at a critical time in Australian history, as the institution works to foster reconciliation for First Nations Peoples.

The Cygnet Award strengthens the university’s position as a leader in Indigenous student enrollments and pathways. The institution aims to establish a culturally sensitive atmosphere through a variety of initiatives, including Indigenous Cadetships and Cultural Capability training.

This is the University of Newcastle’s third Cygnet award, demonstrating its commitment to tackling gender equity, diversity, and inclusion across all disciplines.

CULTURAL CAPABILITY

Aboriginal and Torres Strait Islander cultural knowledge and understanding is important to how we conduct teaching and learning, how we support students and staff, and how we design and conduct research. Culture is important in how we lead reconciliation and how we collaborate with our partners to achieve reconciliation in our region and our spheres of influence.

Our Cultural Capability Framework establishes a roadmap for the University to become a culturally responsive and capable institution. Utilising the Cultural Capability Framework is the responsibility of all staff within the University, as culturally capable individuals build a culturally responsive environment. Importantly there is a priority focus on supporting staff to move beyond cultural awareness and along the continuum towards responsiveness. In support of this, the Office of Indigenous Strategy and Leadership developed a three-part training package. The training has been delivered to more than 3000 staff since March 2021, and involves completing online learning modules, an in-person workshop, and a half day or full day on Country experience, facilitated by local Indigenous community members who have in-depth cultural knowledge.



325
Scholarly outputs

1.15
Field-Weighted
Citation Impact

2018-2022 University of Newcastle
SDG 10: Reduced Inequality (2023)



13th in Australia

In 2023 the University remained in the band 101-200 globally but climbed to 13th in Australia.

COMMUNITY OUTREACH

OUT(FIT) YARNING CIRCLE BUILDS COMMUNITY CONNECTION

A new Yarning Circle has been constructed at the First Steps Count Child and Community Centre in Taree, thanks to the generosity of Terry and Bob Kennedy AM and a team of dedicated out(fit) builders and volunteers. The Yarning Circle is a circular space where people can come together to share stories and learn from one another. It is a place of equality and respect, where everyone has a voice. The Yarning Circle was built in collaboration with local Taree artists Steve Williams and Ali Haigh, and Indigenous students from Chatham High School.

OPENING DOORS TO OPPORTUNITY WITH JOBLINK PLUS

Scholarships have been developed through a collaborative effort between Joblink Plus and the University of Newcastle to assist underprivileged students in pursuing tertiary education. These scholarships, are critical in lowering educational barriers. Dannielle Wilson, a rural NSW Bachelor of Education (Primary) student, has overcome various obstacles, including disabilities and learning issues. The Joblink Plus scholarship has given her the ability to focus on her studies by providing her the necessary equipment and automobile maintenance. Dannielle hopes to inspire her future students and other disadvantaged people by demonstrating that success is possible. Joblink Plus, a non-profit company, is committed to providing job services and vocational training in NSW, thereby building communities and fostering potential.

OPERATIONS

LAUNCH OF EQUITY, DIVERSITY AND INCLUSION STRATEGY

The Equity, Diversity and Inclusion Unit, under the management of Rachel Fowell, has been working with colleagues across the University, as well as consulting extensively with staff and students, to develop an Equity, Diversity and Inclusion (EDI) Strategy 2023-2025 and Action Plan.

This strategy, and its five action plans, was launched on the 4th of August 2023 and will be central to embedding equitable, just and accessible practices, and creating an academic institution that represents and supports our diverse and talented community.

“Our University’s commitment to equity, diversity and inclusiveness is fundamental to everything we do. Together our commitment is to empower the social, economic, and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion, financial status, sexuality or gender.”

– Professor Alex Zelinsky AO, Vice-Chancellor



The launch of the Equity, Diversity and Inclusion Strategy with esteemed Paralympian and politician, Liesl Tesch MP with members of the EDI committee.



THE WOLLOTUKA INSTITUTE CELEBRATES 40-YEAR ANNIVERSARY

In 2023, The Wollotuka Institute celebrates its 40th Anniversary with events and activities that bring together Elders, community, alumni, students, staff, allies, and guests as part of the extended Wollotuka Family to recognise 40 years of Indigenous Excellence in Higher Education at the University of Newcastle. This milestone marks four decades of unwavering commitment to supporting Aboriginal and Torres Strait Islander students and advancing Indigenous research. It is a testament to the collective efforts that have shaped our Institute and what has been achieved through the wisdom of our Elders, the support of our community, the dedication of our staff, and the determination of our students.

PATHWAYS AND UNIVERSITY OF NEWCASTLE ACADEMIC SUPPORT

The University of Newcastle now offers a unified, flexible 40-unit Open Foundation enabling program that is free to study. With a commitment to delivering University education to anybody with the talent and drive to succeed - our pathways programs are at the heart of that promise. Following a thorough evaluation that included input from current and former students, our university's staff, and external higher education experts, we combined Newstep and Open Foundation to form a single program which began in 2022. As a result, we are providing more people with equal access to our enabling program, as well as flexible study alternatives at more places to people seeking a start in their university journey. Students who complete the program successfully are assured admission to over 40+ degrees.



SUSTAINABLE CITIES AND COMMUNITIES

RESEARCH

AUSTRALIA-FIRST RESEARCH INTO FIRST NATIONS AND CITY PLANNING

Developed in partnership between [The Wollotuka Institute](#) and the [Institute for Regional Futures](#), [Partnering with First Nations communities in City and Regional Planning](#) offers best practice approach for partnering with Indigenous communities in urban planning.

The report features case studies in efforts to embed Indigenous perspectives in the built environment and addresses the challenges that can often hamper Indigenous-inclusive planning as well as the opportunities to create new connections.

Commissioned by the Greater Cities Commission and encompassing Australia, New Zealand, Canada and the Sápmi (the lands of the Sápmi peoples) this report offers recommendations that are of national significance and will be key to future partnerships in future policy and planning internationally.



(L-R) Mia Tulumović, Greater Cities Commission, Matt Endacott, Greater Cities Commission, Nicola Nelson, Greater Cities Commission, Amanda Wetzel, Institute for Regional Futures, University of Newcastle, Dena Fam, University of Technology Sydney, Professor Alex Zelinsky, Vice-Chancellor, University of Newcastle, Heather Kember, Institute for Regional Futures, Chris Hanger, Greater Cities Commission, Associate Professor Kathleen Butler, The Wollotuka Institute.

A NEW, SUSTAINABLE DESIGN APPROACH FOR RESILIENT RAILWAY FORMATIONS

Part of the \$1.7million ARC Linkage funding awarded to the University of Newcastle in 2023 include three projects aimed at engineer sustainable solutions for Australia. One of the projects on resilient railway formations aims to validate a new design approach for more sustainable and resilient railway formations. The railway network underpins the Australian economy and its maintenance costs tens of millions of dollars every year. This cost will increase with the growing frequency and intensity of climatic events. The ARC Linkage research funding aims to help transform industries, enhance environmental sustainability and strengthen the Australian economy.

HOUSING NEED SIGNIFICANTLY UNDERESTIMATED

Analysis released by the University of Newcastle's [Institute for Regional Futures](#) into the national housing shortage shows that the projected supply of [housing needed in Australia's cities](#) and regions falls significantly short of demand. The Institute's Director of Research Programs, Amanda Wetzel, said the current level of government resources aiming to increase housing supply was unprecedented, but the evidence upon which need is assessed was fundamentally flawed. The Institute for Regional Futures is one of the University of Newcastle's flagship research institutes. The Institute has partnered with governments, industries and communities providing evidence and strategy to support them to make the best decisions for their future and the future of their regions.



Analysis shows that the projected supply of housing needed in Australia's cities and regions falls significantly short of demand.



288
Scholarly outputs

1.61
Field-Weighted Citation Impact

2018-2022 University of Newcastle
SDG 11: Sustainable Cities and Communities (2023)



2nd in Australia

In 2023 the University climbed to 6th globally to 2nd in Australia.

TEACHING AND LEARNING

LOCALISING THE SDGS: TOWARDS TRANSFORMATIVE ACTIONS AND BASE PLANNING

The “iCities Workshop: Localising the SDGs towards Transformative Actions” is a collaborative effort led by the UNESCO Chair for Intermediate Cities, the City of Singleton, and the University of Newcastle. Its goal is to create a network that solves issues in intermediate cities, discusses best practices, and teaches local government professionals about the Sustainable Development Goals (SDGs), with a focus on SDG 11 (Sustainable cities and communities) and SDG 13 (Climate action). The workshop adopts the “Base Plan” technique to identify strategic urban interventions, with the significance of intermediate cities in global urban-rural networks being highlighted. It brings together many stakeholders to evaluate local plans and projects in the context of the SDGs and i-City development needs in various urban settings and systems.

SANDBAR STUDIO PROJECT

The University of Newcastle collaborated with architecture students on a project for Paspaley Pearls Properties to turn the Sandbar site on the Barrington Coast into an eco-friendly tourism attraction. The project sought to improve local environment, diversify the economy, and establish a nature-based platform for visitors. It promoted respectful interaction with indigenous communities and nature. This alliance has the potential to change tourism on the MidCoast.

OPERATIONS

PORT STEPHENS COACHES, UNIVERSITY OF NEWCASTLE AND FOTON MOBILITY DISTRIBUTION JOIN FORCES IN ELECTRIC BUS TRIAL

Leading Hunter Region transport operator Port Stephens Coaches is partnering with the University of Newcastle and zero-emissions transport supplier Foton Mobility Distribution to run a short trial of a battery electric city bus. The trial, to be run over approximately four weeks, will test the suitability of the vehicle for regular scheduled passenger services between Newcastle City and the University of Newcastle Callaghan Campus. The trial is part of the University's commitment to sustainability and its goal of achieving carbon neutrality by 2030. It is also an opportunity for Port Stephens Coaches to assess the feasibility of introducing electric buses into its fleet.

6 star

All new buildings will achieve a minimum six-star Green Star ‘Design & As Built’ by 2025.



Electric vehicle trial with Port Stephens Coaches



RESPONSIBLE CONSUMPTION AND PRODUCTION

RESEARCH

ARC DISCOVERY GRANT AWARDED TO PROJECT FOCUSING ON PLASTIC SOLUTIONS


Roughly 350 million tons of petroleum-derived plastics are produced globally each year, and up to 60% of it ends up in landfill or as microplastics in our waterways and soils. Australian Research Council Discovery Project grant has been awarded to the project, *An in-built depolymerisation solution for polyethylene waste*. This project will embed specifically designed enzymes into polyethylene, which will decompose the plastic to small molecules via elevated temperatures of a compost heap. The resulting 'green' polyethylene should produce no microplastic pollution and reduce tremendous pressures on recycling infrastructure.

REVOLUTIONARY AUSTRALIAN BATTERY RECYCLING TECHNOLOGY STARTUP ADVANCES ITS BREAKTHROUGH BATTERY METALS RECOVERY PROCESS

The University of Newcastle is pleased to announce in 2023 a cooperation agreement with Battery Pollution, a forward-thinking Australian battery recycling technology firm. This collaboration aims to develop exclusive technologies for extracting important battery metals such as cobalt, lithium, graphite, and nickel from spent EV and ESS batteries. This ground-breaking effort is expected to have a substantial influence on sustainable battery recycling and responsible resource management whilst contributing to a greener future.



Revolutionary Australian Battery Recycling Technology

	287 Scholarly outputs	2.87 Field-Weighted Citation Impact
33% increase in FWCI over the period 2017-2021		
2018-2022 University of Newcastle SDG 12: Responsible Consumption and Production (2023)		

RESEARCHERS AWARDED OVER HALF A MILLION DOLLARS TO ESTABLISH A CENTRE FOR CONSTRUCTION SAFETY AND WELL-BEING

The University of Newcastle's Construction Management research team received a \$620,000 grant to create the Centre for Construction Safety and Well-being (CCSW) at the School of Architecture and Built Environment. The goal of the Centre is to improve construction industry health and safety management, which would benefit both present practices and future generations of construction management graduates. It was made feasible through a successful relationship with construction business Hansen Yuncken (HY), which was made possible by the Enforceable Undertaking between HY and SafeWork NSW. Initial projects included the creation of a Worker Insights Training Simulation, a Technology-Enabled Worker Insight Application, animated learning videos for high-risk construction work, two specific PhD student projects investigating site management and health and safety leadership, and best practices for supporting families after workplace incidents. The Centre aspired to have a substantial impact on the safety and well-being practices of the construction sector.



Centre for Construction Safety team Members (L-R): Associate Professor Thayaparan Gajendran, Dr Buddhini Ginigaddara Appuhamilage, Dr Maggie Tang, Dr Tanvi Newaz, Dr Sittimont Kanjanabootra, and Dr Marcus Jefferies



9th in Australia

In 2023 the University remained in the band 101-200 globally but climbed to 9th in Australia.

BUILD BETTER, BUILD SAFE

Tanvi Newaz, a devoted Lecturer at the University of Newcastle's School of Architecture and Environment, leads the Construction Health and Safety Research Team. His guidance has resulted in the acclaimed Centre for Construction Safety and Well-being (CCSW), a pioneering academic research institute for construction safety in New South Wales. The second award, in cooperation with the University of New South Wales, intends to create a Health and Safety Maturity Framework for small businesses, potentially changing WHS legislation to improve safety for small and medium-sized construction firms. Newaz's foresight and relentless work have paid off, guaranteeing a bright future for the construction industry's health and safety management, benefiting both individuals and communities.

“Through my research, I am trying to improve the culture and communications on construction sites so that we can achieve better health and safety outcomes to make significant changes in the lives of people and their families engaged in construction.”

– Dr Tanvi Nawaz



COMMUNITY OUTREACH

TRANSFORMING FURNITURE INTO CONVERSATION FOR OUR FUTURE

I2N Accelerator is designed to provide a guided experience to quickly and cost-effectively validate your business idea or solution and get your investment ready. Over the course of this program founders will experience hands-on learning and high-quality support. At I2N's Startup Stories at I2N Hub Honeysuckle on Wednesday 7th of June, 2023, Jess Hodge, participant in I2N's Accelerator, shared how she set out to find a sustainable solution to the environmental plastic burden, finding an approach which provides plastic a second, third, even up to a tenth life, as an alternate product to waste. Jess is a co-founder of Resourceful Living, is pioneering a solution to the plastic challenge by developing sustainable plastic waste channels.

OPERATIONS

SIMPLY CUPS INITIATIVE

According to a recent University audit, coffee cups account for 3% of general garbage and 2% of recycling. We have established different waste recycling programs to improve our campus waste recycling efforts and attain the objective of 70% waste recycling as mentioned in our Environmental Sustainability Plan 2019-2025. While carrying your own cup is the most environmentally friendly option for your daily coffee, we recognise sometimes your plans or situations change. Therefore, the University has collaborated with Simply Cups to recycle throwaway coffee cups and keep them out of landfills. These recycled coffee cups are used to make the rCup, the world's first reusable coffee cup manufactured from recycled coffee cups, as well as other products.



Jess Hodge, co-founder of Resourceful Living



CLIMATE ACTION

RESEARCH

THE RIPPLE EFFECT OF DROUGHT

Drought has prompted researchers Dr Emma Austin and Associate Professor Anthony Kiem to create an Employability and Wellbeing Toolkit with the assistance of Southern Queensland University. Their effort aims to help drought-prone areas prepare for the psychological and financial problems of drought by listening to and learning from frontline farmers.



Associate Professor Anthony Kiem is the Centre Director for the Centre for Water, Climate and Land

CENTRE FOR WATER CLIMATE AND LAND (CWCL)

In collaboration with Alluvium Consulting Australia, the University of Newcastle leads the Centre for Water, Climate, and Land (CWCL). The objective of CWCL is to understand and mitigate the implications of climate variability in the Asia-Pacific region, with a focus on hydroclimatic extremes, future trends, and climate-smart agriculture. CWCL also actively participates in consultancy projects, providing insights to public and private sector stakeholders for informed climate risk assessment and strategy creation. Aside from research, the centre promotes education and capacity building in water, climate, and land management through professional development, undergraduate training, and postgraduate research supervision.

	407 Scholarly outputs	2.46 Field-Weighted Citation Impact
	18% increase in FWCI over the period 2017-2021	
2018-2022 University of Newcastle SDG 13: Climate Action (2023)		

IMPROVING LOCAL RESILIENCE TO FLOODS IN THE HUNTER REGION

This research project led by Associate Professor Ifte Ahmed, sought to explore the impact flood events had on communities in the Hunter Valley Region and its relationship to Sustainable Development Goal 13, with the aim to find ways to improve community resilience. Two Local Government Areas, Cessnock and Singleton were targeted due to recent, ongoing flood events impacting the areas.

The research in the Hunter Valley established the importance of identifying existing community resilience and gaps. It was also observed the need to involve the community at all levels. This included having early warning systems and evacuation protocols in place to improve community access to information and warnings. The lessons learnt can be applied to other urban regions impacted by floods including New Zealand who have



also been impacted by recent flooding events.

This project received a prestigious Emerald Real Impact award.

Associate Professor Ifte Ahmed



Disruption by floods to the road connection to Aberdeen, Hunter Valley. Image supplied by A/Prof Ifte Ahmed.



4th in Australia

In 2023 the University climbed to 12th globally but slipped to 4th in Australia.

TEACHING AND LEARNING

UNIVERSITY OF NEWCASTLE CHAMPIONS CLIMATE ACTION AT APRC SYMPOSIUM

We emphasise our dedication to the Sustainable Development Goal (SDG) of Climate Action as a proud supporter of the [APRC Symposium on Climate Change and Humanity](#) in the Asia Pacific Region. This gathering of creative minds is in line with our commitment to building a sustainable future and addresses the urgent problems of our day. We stand with the community in promoting climate action and partnerships as well as tackling the effects of climate change on livelihoods, peace, and justice. We firmly commit to supporting responsible consumption and production, sustainable cities and communities, and the crucial role that high-quality education plays in advancing climate action. We're paving the way for a greener, more just future together.

100%

of electricity from low-carbon sources

COMMUNITY OUTREACH

THE AUSTRALIAN RESILIENCE CORPS

In 2023, [CIFAL Newcastle](#) established a new partnership with the [Australian Resilience Corps](#) to provide University of Newcastle staff and students opportunities to volunteer on resilience building community projects.

The Australian Resilience Corps mobilises teams of volunteers by bringing together corporate and volunteer partners and community members, to reduce the impact of fire and flood disasters before extreme weather events happen. These events are called Musters. University of Newcastle staff and students volunteered on musters in our local area of the Central Coast and Mid-Coast in August and September 2023.

These musters involved bushfire preparedness, clearing, cutting, trimming excess vegetation and also flood preparedness alongside a waterway. Work includes cutting back excess vegetation, trimming tree branches, weed control, revegetation and stabilisation of riverbanks. These activities help to make a practical difference in reducing risks of future disasters occurring.

OPERATIONS

PACIFIC PARTNERSHIP: BUILDING A SUSTAINABLE FUTURE FROM THE UNIVERSITY OF NEWCASTLE

The University of Newcastle is steadfast in its commitment to aiding our Pacific neighbours in facing urgent difficulties. This commitment is part of our 'Looking Ahead' Strategic Plan 2020-2025 with an Asia Pacific focus. As we work with regional partners to address environmental, social, and economic issues under the direction of the Pacific Research Roadmap, we promote equitable prosperity and resilient communities. We have established the [Pacific Node](#) in Apia, Samoa, in collaboration with the Secretariat of the Pacific Regional Environment Programme (SPREP). To address important concerns, such as climate resilience, ecosystem conservation, waste management, and environmental governance, this hub promotes collaboration between academia, industry, government, and communities. We pave the way for a peaceful and sustainable Pacific future by working together.

We also have CIFAL Newcastle, a training and research centre partnered with the United Nations through their research and training arm (UNITAR). CIFAL Newcastle delivers capacity building training programs with a focus on Australia and the Asia Pacific region. 2023, saw an increase in CIFAL Newcastle's activities in the delivery of disaster waste management and public health programs in the Pacific region.





LIFE BELOW WATER

RESEARCH

UNIVERSITY OF NEWCASTLE MONITORS OYSTER REEF RESTORATION

The Oyster Reef Restoration project is being closely watched by the University of Newcastle. To encourage the development of a lively living structure, we have incorporated live oysters from oyster leases. By lowering the amount of sediment entering the Wallamba River and improving water quality, this intervention fights riverbank erosion. The well-known filter feeder oysters are essential to the process of purifying the water. These oyster reefs provide a favorable environment for a variety of marine animals, which is advantageous to both commercial and leisure fishers. Our site monitoring, done in conjunction with Hunter LLS and TIDE, shows encouraging results: live oysters flourish, enhancing the structure's ability to protect young mangroves and the riverbank. Oysters and the structure have survived despite difficulties like bushfires and flooding in 2020, ushering in optimism for a sustainable ecology at Gereeba Island, where mangroves and oysters coexist and provide sanctuary to fish and invertebrates.



Oyster reef restoration project

SUCCESSFUL ARC DISCOVERY PROJECT TO FOCUS ON CORAL BLEACHING

The coral reefs of Australia contribute over \$6 bn each year to the economy. However, the reefs of Australia, in addition to those worldwide, are threatened by coral bleaching driven by anthropogenic climate change. If we are to preserve the economic, social and ecosystem value of these environments, it is essential that we are able to better manage the recovery of reefs from bleaching events. This ARC Discovery project, led by A/Prof Bill Leggat, will utilise a variety of multi-disciplinary approaches, ranging from future climate models, historical satellite data to in-field experimentation to fill fundamental knowledge gaps in our understanding of coral bleaching recovery and delivery a variety of management and stakeholder relevant outputs.

This project was granted \$660k in funding and joined 9 other successful University of Newcastle research projects aiming to innovate and expand our knowledge of the universe through the Australian Research Council (ARC) Discovery Projects Scheme.

TEACHING AND LEARNING

MICROBIAL BEASTS, YEASTS AND ANCIENT REEFS

Laureate Professor Neilan is an expert in molecular microbiology, genetic and genomic engineering and microbial chemistry. From the deep-sea, to hot springs, to the human gut, a massive and diverse range of diminutive life forms on this planet has been left largely unprobed, and that is where Prof Neilan steps into the picture. Prof Neilan, molecular biologist and microbial chemist, brings his considerable skillset to the University of Newcastle. The identification and genetic manipulation of unexplored microorganisms could revolutionise everything from polymer production to pharmacology to sun protection. New technology in the field of genomics has allowed scientists to begin molecular bioprospecting - looking for undiscovered microorganisms, fungi and bacteria, for utilisation in industry and medicine. Australia is at the forefront of the research into the genetics of toxic bacteria and algae, with Prof Neilan part of the group that first identified the genes that make these toxins. L/Prof Neilan is leading a 2023 ARC Discovery Project on Biosynthetic Hooks for an Enigmatic Marine Toxin. The data generated will enable improved management of seafood safety and



provide a foundation for the future development of novel neuroactive compounds.

Professor Brett Neilan

	195 Scholarly outputs	2.19 Field-Weighted Citation Impact
2018-2022 University of Newcastle SDG 14: Life Below Water (2023)		



9th in Australia

In 2023 the University slipped to 90th globally but climbed to 9th in Australia.

COMMUNITY OUTREACH

OZ-FISH UNLIMITED AND THE UNIVERSITY OF NEWCASTLE COLLABORATE ON A FISHING EVENT WITH A CONSERVATION THEME

At Burrill Lake on the NSW South Coast, the University of Newcastle partnered with [OzFish Unlimited](#) to stage a world-class fishing competition in March 2023. This open community event invited nearby anglers to spend the day fishing while supporting crucial conservation initiatives. Participants participated in a fun competition while learning about top fishing places. Ryan Lungu, the OzFish Program Manager, underlines the significance of this event in blending fun and research. By donating fish flesh samples, anglers can assist researchers in studying the importance of saltmarsh environments in fish diets. More than 70% of saltwater fish species that are hunted for fun have a portion of their life cycle in saltmarshes. This occasion was an opportunity to go fishing with friends and family while encouraging neighbourhood participation in scientific conservation.

OPERATIONS

COMMITTED TOWARD SAVING WATER

Water conservation is a critical component of the University of Newcastle's Environmental Sustainability Plan. We are dedicated to adopting sustainable urban design and natural irrigation systems throughout our sprawling native bushland campus, reducing the requirement for potable water. Our organisation closely follows the Environmental Protection Agency's water requirements, ensuring water quality while also protecting ecosystems and public health. This policy demonstrates our commitment to environmental stewardship and a sustainable future.



Burrill Lake citizen science project.



LIFE ON LAND

RESEARCH

ARC LINKAGE GRANT FUNDING AWARDED TO PROTECT THREATENED SPECIES

Biodiversity faces a suite of threats caused by the burgeoning human population, including habitat loss and degradation, introduced predators, illegal harvesting and pollution. One of the many challenges of threatened species conservation is effectively communicating with communities to enact 'on ground' change.

Led by Communication and Media scholar, Professor Phillip McIntyre, this cross-disciplinary project combines the expertise of communication academics and conservation scientists to create participatory communities invested in protecting threatened species. Collaborating partners for this project include the University of Newcastle; Griffith University; NSW Department of Planning and Environment.

SUCCESSFUL ARC DISCOVERY PROJECT TO FOCUS ON USING AUSTRALIAN CLAY AS RAW MATERIALS OF SLOW-RELEASE FERTILISER

Australian clays as raw materials of slow-release phosphate fertiliser. Phosphorus (P) fertiliser input in Australia is a significant problem for its inefficient plant uptake, leaching to natural water bodies and stocking of insoluble P in soil. The ARC Discovery Project, led by Prof Ravi Nadu and Dr Bhaba Biswas aims to develop activated clays using Australian raw clay minerals to formulate effective slow-release phosphate (P) fertilisers (SRF) and delivery material for P-solubilising bacteria. Composite of these will supply P controllably even amid environmental fluctuations but when a plant needs as it grows. Development of multifunctional, nontoxic and plant growth-driven P fertiliser would benefit improve soil fertility in a sustainable way where efficiency of P input is maximised with a minimised environmental burden.

DRONES USED TO THERMALLY DETECT KOALAS IN AID TO CONSERVATION EFFORTS

Our conservation biologists at the University of Newcastle are developing a ground-breaking strategy to support koala conservation in the Port Stephens LGA. We've transformed koala population monitoring by utilising advanced heat-detecting drones. These drones are more effective than conventional techniques like spotlighting and acoustic recordings at finding koalas in dense foliage. The priceless information gathered is essential for building a complete model of the koala population in Port Stephens LGA. Our research encourages thoughtful choices for successful conservation planning. This drone survey is a crucial part of our larger program, which is kindly sponsored by the NSW Government's Saving Koalas Fund and aims to improve our understanding of the koala populations in the Hunter Region.

TEACHING AND LEARNING

ASSOCIATE PROFESSOR HANNAH POWER COLLABORATES WITH LOCAL GOVERNMENT TO MAINTAIN THE COAST AND BEACHES AROUND NEWCASTLE WHERE OUR CAMPUSES ARE BASED

Coastal morphologist and geologist Dr Hannah Power is translating her research by collaborating with governments and councils so they can better manage coastal environments. Hannah researches the processes and morphology of coastal environments by utilising field studies, remote sensing and modelling to investigate a range of diverse environments and processes such as tropical coral reefs, sandy beaches and hazards such as tsunamis. This work enables us to understand the drivers that impact erosion and deliver the evidence needed for coastal risk assessment and long-term planning.

“ In Australia we’ve been so lucky that we have such beautiful coastlines that we’ve been able to preserve for so long. Culturally we’re just not used to the idea of the actual beach being a highly modified environment.”

– Associate Professor Hannah Power

	309 Scholarly outputs	1.91 Field-Weighted Citation Impact
2018-2022 University of Newcastle SDG 15: Life on Land (2023)		



Associate Professor Hannah Power



7th in Australia

In 2023 the University slipped to 55th globally but climbed to 7th in Australia.

INAUGURAL COASTAL ACHIEVEMENT INTERNATIONAL AWARD GOES TO UNIVERSITY OF NEWCASTLE ACADEMIC

Dr Mike Kinsela from the School of Environmental and Life Sciences received the inaugural Coastal Achievement Award. This award is to recognise an achievement in the coastal geoscience and engineering disciplines of international significance. The award was presented at the Coastal Sediments Conference 2023. It is the first time the award has been presented and is an enormous honour.

COMMUNITY OUTREACH

LAUNCH OF FROG ‘HOTELS’ IN OLNEY STATE FOREST

Olney State Forest is now home to a series of frog ‘hotels’ designed to support threatened frog species, thanks to a partnership between Forestry Corporation of NSW and the University of Newcastle.

The new artificial ponds form a network of breeding habitat for iconic species such as the Littlejohn’s tree frog and the giant burrowing frog, said Forestry Corporation Senior Ecologist Chris Slade.

“The habitat ponds have been strategically placed to give more breeding opportunities for threatened frog species, which in turn will help increase their population and persistence in the environment,” Mr Slade said.

“We’re excited to be collaborating with the University of Newcastle and other project partners to develop this infrastructure and monitor the population response over coming years. Projects like this take effort from a lot of people from idea to implementation, and this result is a credit to the community, the University of Newcastle, our staff and many others involved.”



The new Littlejohn’s walking trail at Olney State Forest



Delprat Garden

DELPRAT COTTAGE LANDSCAPE REMEDIATION PROJECT WINS PRESTIGIOUS GOOD DESIGN AWARD

The University of Newcastle’s Delprat Cottage landscape remediation project has received a distinguished award from the 2023 Australian Good Design Awards: a Good Design Award Gold Winner Accolade in the Architectural Design category. The Newcastle Industrial Heritage Association, Landcom, the University of Technology Sydney, and our School of Architecture and Build Environment worked diligently together to achieve this exceptional success. Our collaborative initiative, which is funded by the Newcastle Port Community Contribution Fund, aims to use landscape architecture’s transformative ability for environmental healing.

Through phytoremediation, which is a low cost, natural process where plants are strategically incorporated into landscape design to absorb harmful toxins from the soil. Delprat Garden is located in Mayfield North, on former BHP steelworks land, it cleverly restores degraded, neglected land in a beautiful, expressive, and educational manner.

The Delprat Gardens have been featured on Gardening Australia as presenter Costa Georgiadis caught up with the team behind the project to discuss all things soil and phytoremediation. They also have held open days throughout the year so that the local community can enjoy the educational experience on soil remediation as well as enjoying and exploring the grounds.

OPERATIONS

BUSHLAND CAMPUSES

The University of Newcastle has campuses that sit in unique bush and wetland settings. The Environmental and Sustainability Policy outline our commitment to biodiversity and landscaping on our campuses including integrating Indigenous knowledge into the management of our bushland campuses; proactively preparing for bushfires; continuing to plan to protect and conserve the biodiversity of the native flora and fauna on our campuses; and continue to plan to protect and conserve the wetlands and aquatic ecosystems upon which we operate.



PEACE, JUSTICE AND STRONG INSTITUTIONS

TEACHING AND LEARNING

UNIVERSITY OF NEWCASTLE ALGORITHMIC JUSTICE SYMPOSIUM

At our prestigious Sydney Campus, the University of Newcastle proudly hosted the [Algorithmic Justice Symposium](#). This symposium, which was organised by the Centre for Law and Social Justice, who brought top experts together for four thought-provoking sessions that explored important topics like risk assessment and AI regulation, governance, decision-making, and vulnerability, AI systems, and court systems alongside alternative legal services. It provided as a forum for talks about encouraging justice, morality, and accountability in the field of artificial intelligence, demonstrating our dedication to constructing a more fair and informed future.



Dr Christine Armstrong at the Algorithmic Justice Symposium

	<p>353 Scholarly outputs</p>	<p>2.70 Field-Weighted Citation Impact</p>
<p>2018-2022 University of Newcastle SDG 16: Peace, Justice and Strong Institutions (2023)</p>		

COMMUNITY OUTREACH

FIGHT FOR JUSTICE

The fight to [free Kathleen Folbigg](#) – the woman once dubbed Australia’s worst female serial killer – started in 2013 with the [University’s Legal Centre](#) and its law students helping to drive the movement. After serving 20 years behind bars, Kathleen Folbigg was released from gaol on June 5 this year.

Kathleen’s path to freedom was long, arduous and fought in a [David and Goliath-type battle](#) to seek a fair system of law and due process. A Newcastle team of barristers, academics and law students was integral to the fight. With a proud tradition of taking on high profile public interest cases and supporting marginalised people in accessing the legal system, the University of Newcastle Legal Centre identified Kathleen’s case as one it could support. In 2013 the Legal Centre announced it would seek a judicial review of the case, in collaboration with three Newcastle barristers, providing unpaid support to build the submission. Over the last decade a large number of law students worked on the Kathleen Folbigg case at the University of Newcastle Legal Centre and on placement with the solicitors and barristers acting in the judicial inquiries into the convictions.

“ The Legal Centre takes the view it’s the human right of every person to have their day in court if there is fresh evidence which casts doubt over the original convictions.”

– Shaun McCarthy



Criminologist Associate Professor Xanthe Mallett and University of Newcastle Legal Centre Director Associate Professor Shaun McCarthy.



4th in Australia

In 2023 the University climbed to 77th globally climbed to 4th in Australia.

CONTRIBUTION TO GOVERNMENT INQUIRY INTO THE AUSTRALIAN HUMAN RIGHTS FRAMEWORK

The Centre for Law and Social Justice coordinated one submission and co-authored another to the federal government's inquiry into Australia's Human Rights Framework. The submissions advocate for the need for a national Human Rights Act, recognising the full range of Australia's human rights obligations, particularly in relation to groups with particular vulnerabilities to human rights abuses, including people with disabilities, First Nations peoples, and refugees.

LAW ON THE BEACH

The University of Newcastle School of Law and Justice's flagship clinic, Law on the Beach, gives community members the opportunity to seek free legal advice on how to deal with scams, or to ask questions about any kind of legal matter, from traffic fines to employment discrimination. Staffed by law students and University of Newcastle Legal Centre lawyers at Merewether Surf Club, the clinics aim to provide a casual setting to hold legal conversations and make seeking legal advice more approachable.



Law on the beach

PARTNERSHIPS FOR THE GOALS

RESEARCH

PARTNERSHIPS MAKING REAL IMPACT

The University of Newcastle's Pacific students and researchers are working with partners across the region to address critical issues such as climate change, waste management, and invasive species. These partnerships are having real impact, making a difference to the lives of Pacific Islanders and helping to build a more sustainable future for the region. The University's Pacific Node is working with the Government of Fiji to develop climate-resilient coastal communities. The Pacific Node is a strategic initiative of the Newcastle Institute for Energy and Resources (NIER) at the University of Newcastle, in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP). The Pacific Node provides a flexible research framework for collaborative engagement between academia, industry, government and communities. These partnerships are making a real difference to the lives of Pacific Islanders and helping to build a more sustainable future for the region.



8,454
Scholarly output

2018-2022 University of Newcastle
SDG 17: Partnership for the Goals (2023)

TEACHING AND LEARNING

CIFAL NEWCASTLE

CIFAL Newcastle is the University of Newcastle's training and research center in partnership with the United Nations through the United Nations Institute for Training and Research (UNITAR). For CIFAL Newcastle, 2023 has been another successful year including establishing new collaborations and increasing the numbers of training activities and events delivered to over 3000 participants on sustainable development topics such as climate change, disaster resilience and social inclusion. The achievements for CIFAL Newcastle have included working in partnership with UNITAR, the Department of Foreign Affairs and Trade (DFAT) and SPREP as well as increasing our work in the Asia Pacific regions.

Highlights have included the collaboration with UNITAR and the School of Nursing and Midwifery on an e-learning course as part of the Global Breastfeeding Initiative. The free course, "The Magic Drop: Supporting Mothers along the Breastfeeding Journey" was launched on 30 March 2023. Another highlight was collaborating with DFAT on a learning and networking event for 150 Australian Award students on the SDGs and equity.

A focus for 2023 is a training activity with SPREP to Design, Develop, and Deliver a Regional Virtual Vocational Training Program on waste management in the Pacific region. It involves four different training modules on: Project Management, Sustainable Financing for Waste Management, Used Oil Management and Disaster Waste Management in the context of the Pacific. These courses are aimed at government, private and corporate organisations in the Small Island Developing States in the Pacific region.



Dr Sascha Fuller with the Hon. Pat Conroy and University of Newcastle Vice-Chancellor, Professor Alex Zelinsky at the Wantok Pasifika event



12th in Australia

In 2023 the University moved to 100th globally and 12th in Australia.

A NEW TRANS-TASMAN PARTNERSHIP

The University of Newcastle and University of Waikato have partnered with the aim of creating new avenues for collaboration. There was a clear focus on increasing research capabilities and engagement with teaching and learning. The two tertiary providers have several research commonalities, particularly across the Indigenous engagement, social sciences and engineering disciplines. The first round of seed funded projects have been announced in areas of supporting staff at the University of Newcastle and the University of Waikato to develop collaborative research, teaching and/or professional services projects that clearly demonstrate measurable outcomes and a plan for how the collaboration will develop going forward.



An official signing of the partnership agreement took place on 10 May 2023 at the World Hydrogen Summit in Rotterdam in the Netherlands.

OPERATIONS

UNIVERSITY OF NEWCASTLE SPEARHEADING THE SDG LEADERSHIP PROGRAM IN THE HEART OF THE HUNTER REGION

The University of Newcastle, a prominent institution setting the standard for climate action on the national, regional, and worldwide stages, is a patron member of the Hunter Region SDG Task Force. The University focuses on the development of innovative, resourceful, and creative graduates and future leaders in industry, the profession, and the community. The University believes in providing research-led teaching and providing solutions to real world problems such as climate change. The partnership between University of Newcastle and Hunternet's partnership goes a long way as The University's Environmental Sustainability Plan 2019-2025 is guided by the United Nations' Sustainable Development Goals and is the roadmap to contributing to the solutions, through Hunternet operations. The University will be playing a significant role in the program of 2022 as it will help various participants taking part in the SDG program with the implementation of SDG in their selected companies. The Hunter Region SDG Task Force was created in 2020. The task force is a collection of neighbourhood companies, government agencies, and not-for-profit organisations that are cooperating to advance the UN SDGs in the Hunter Region. While the organisations work together to fulfill the 17 SDGs, the taskforce's main objective is to hasten SDG progress in the area.

COMMUNITY OUTREACH

UNIVERSITY TAKES ANOTHER STEP IN ITS EFFORTS TO DELIVER HYDROGEN INNOVATIONS ON A GLOBAL SCALE

The University of Newcastle is one of more than a dozen international signatories on a new Global Partnership for Hydrogen Innovation, which aims to accelerate innovation for green hydrogen. The partnership sees universities, innovation hubs and international ports from Australia, Brazil, Chile, Portugal, the United Kingdom and the Netherlands commit to working together to share, scale and support hydrogen innovations on a global level. The University of Newcastle has a strong track record in hydrogen research, development and innovation. It is home to the Newcastle Institute for Energy and Resources (NIER), which has expertise in hydrogen production, storage, utilisation and cross-cutting technologies. The University is also a partner in the Trailblazer for Recycling and Clean Energy (TRaCE) program, which aims to transform the way technology readiness, commercialisation and industry-led research is delivered to support SMEs and large industries. The University of Newcastle is committed to educating the next generation of hydrogen industry leaders. It offers a Bachelor of Renewable Energy Engineering degree and supports industry embedded PhD programs in energy. The University's collaboration with the Port of Newcastle and other industry partners is helping to advance new energy opportunities, education and innovation programs.



FEATURED STATISTICS AND FACTS HAVE BEEN DRAWN FROM THE FOLLOWING SOURCES:

- Times Higher Education Impact Rankings 2023
- QS World University Rankings 2024
- Environmental Sustainability Plan 2019-2025
- The Good Universities Guide 2022
- The University of Newcastle Data Warehouse
- 2024 THE Impact submission
- Elsevier
- Performance and Completions Power BI
- Scopus Tear Range 2018-2022 scholarly Output vs Field-Weighted Citation Impact vs Publications in All Journal Quartiles by CiteScore vs Publications in All Journal Quartiles by CiteScore (%)
- Infrastructure and Facilities Services for metrics on Waste Diversion, Energy & Water usage and Composting
- Strategy, Planning and Performance who collected Student, Staff and Expenditure data
- Research Performance, Excellence and Impact (RPEI) from Office of Pro Vice Chancellor Research, for identifying relevant articles and bibliometric data

REPORT PREPARED BY

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